CONTRACT #9
RFS # 343.10-21112
Edison # 28672

Department of Health

VENDOR:
Optimum Technology, Inc.

STATE OF TENNESSEE
DEPARTMENT OF HEALTH

JOHN J. DREYZEHNER, MD, MPH
COMMISSIONER

BILL HASLAM
GOVERNOR

May 1, 2015

Mr. Jeff Spalding, Director
Fiscal Review Committee
320 Sixth Avenue North, 8th Floor
Nashville, TN 37243

Mike Perry, Chief Procurement Officer
Department of General Services
Tennessee Tower, Third Floor
Nashville, TN 37243

Dear Director Spalding and CPO Perry,

This request is for approval to execute an amendment number three (3) to the non-competitive sole source contract with Optimum Technology, Inc. (RFS # 34310-21112, Edison # 28672) to reflect a change in ownership of the Optimum Technology, Inc., intellectual property known as the prescription monitoring program software. The Tennessee Department of Health was informed by Optimum Technology, Inc. that it sold its interest in their prescription monitoring program intellectual property to Appriss, Inc., effective April 24, 2015. This amendment modifies the contract to reflect that ownership change. No other terms and conditions changed.

We appreciate you consideration of our request for approval to proceed with this contract amendment.

Sincerely,

John J. Dreyzehner, MD, MPH, FACOEM
Commissioner

JJD/tls

5th Floor, Andrew Johnson Tower
710 James Robertson Parkway * Nashville, TN 37243
(615) 741-3111 * www.tn.gov/health

Supplemental Documentation Required for Fiscal Review Committee

*Contact Name:	David Todd Bess	*Contact Phone:	615-253-1300
*Presenter's name(s):	Eugene Neubert		
Edison Contract Number: (*if applicable*)	28672	RFS Number: (*if applicable*)	34310-21112
*Original or Proposed Contract Begin Date:	9/12/11	*Current or Proposed End Date:	9/11/16
Current Request Amendment Number: (*if applicable*)		3	
Proposed Amendment Effective Date: (*if applicable*)		July 1, 2015	
*Department Submitting:		Tennessee Department of Health	
*Division:		Health Licensure and Regulations	
*Date Submitted:		5/1/15	
*Submitted Within Sixty (60) days:		Yes	
If not, explain:			
*Contract Vendor Name:		Appriss, Inc. (formerly Optimum Technology, Inc.)	
*Current or Proposed Maximum Liability:		$1,876,250	
*Estimated Total Spend for Commodities:		$1,374,625	

*Current or Proposed Contract Allocation by Fiscal Year:
(as Shown on Most Current Fully Executed Contract Summary Sheet)

FY:2012	FY:2013	FY:2014	FY:2015	FY:2016	FY:2017
$152,000	$558,200	$478,525	$311,400	$311,400	$64,725

*Current Total Expenditures by Fiscal Year of Contract:
(attach backup documentation from Edison)

FY:2012	FY:2013	FY:2014	FY:2015	FY:2016	FY:2017
$48,000	$590,100	$502,975	$233,550	$	$

IF Contract Allocation has been greater than Contract Expenditures, please give the reasons and explain where surplus funds were spent:	The contract allocation was based on an estimated multi-year distribution of funds and any unobligated funds were not spent.
IF surplus funds have been carried forward, please give the reasons and provide the authority for the carry forward provision:	N/A
IF Contract Expenditures exceeded Contract Allocation, please give the reasons and explain how funding	N/A

Supplemental Documentation Required for Fiscal Review Committee

was acquired to pay the overage:			
*Contract Funding Source/Amount:			
State:	$476,025	Federal:	$0.00
Interdepartmental:	$440,225	*Other*:	$960,000
If "*other*" please define:		Other funds from fee supported state appropriation of Health Related Boards.	
If "*interdepartmental*" please define:		Interdepartmental funds from Mental Health and TennCare	

Dates of All Previous Amendments or Revisions: (*if applicable*)	Brief Description of Actions in Previous Amendments or Revisions: (*if applicable*)
9/1/12	Amendment #1: To ensure compliance with the intent of Public Chapter 880.
9/1/13	Amendment #2: To make changes to the Controlled Substance monitoring Database (CSMD) System.

Method of Original Award: (*if applicable*)	RFP
*What were the projected costs of the service for the entire term of the contract prior to contract award? How was this cost determined?	$960,000 The estimated cost was determined from the competitive bid process.
*List number of other potential vendors who could provide this good or service; efforts to identify other competitive procurement alternatives; and the reason(s) a sole-source contract is in the best interest of the State.	N/A

Unit	Fiscal Year	From Period	To Period	Voucher ID	Line	istribution	Invoice #	PO No	Vendor ID	Vendor Name	Address 1	City	St	Postal	Merchandise Amt	Pymnt Date	ymnt Meth	mnt ID/Wrr	Pay Status	Deemed Sta	edeemed D	Handling
34301	2012	1	993	317501	1	1	23596	58731	18489	Optimum Tecnology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$48,000.00	16-Mar-12	System	2021169	Paid	Reconcile	3/21/2012	RG
	2012														$48,000.00							
34301	2013	1	993	361286	1	1	23737	58731	18489	Optimum Tecnology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$48,000.00	30-Jul-12	System	2284749	Paid	Reconcile	8/8/2012	RG
34301	2013	1	993	361289	1	1	23667	58731	18489	Optimum Tecnology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$48,000.00	30-Jul-12	System	2284749	Paid	Reconcile	8/8/2012	RG
34301	2013	1	993	379259	1	1	23797	70278	18489	Optimum Tecnology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$5,867.00	03-Oct-12	System	2410879	Paid	Reconcile	10/11/201	RG
34301	2013	1	993	379257	1	1	23796	70278	18489	Optimum Tecnology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$10,133.00	03-Oct-12	System	2410879	Paid	Reconcile	10/11/201	RG
34301	2013	1	993	401280	1	1	23790	70278	18489	Optimum Tecnology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$16,000.00	28-Nov-12	System	2514621	Paid	Reconcile	12/5/2012	RG
34301	2013	1	993	401281	1	1	23831	70278	18489	Optimum Tecnology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$16,000.00	28-Nov-12	System	2514621	Paid	Reconcile	12/5/2012	RG
34301	2013	1	993	404997	1	1	23853	70278	18489	Optimum Tecnology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$16,000.00	13-Dec-12	System	2545151	Paid	Reconcile	12/21/201	RG
34301	2013	1	993	425034	1	1	23910	70278	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,200.00	04-Feb-13	System	2637821	Paid	Reconcile	2/12/2013	RG
34301	2013	1	993	440893	1	1	23923	70278	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,200.00	15-Mar-13	System	2717304	Paid	Reconcile	3/20/2013	RG
34301	2013	1	993	450369	1	1	23933	70278	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$15,000.00	04-Apr-13	System	2752184	Paid	Reconcile	4/11/2013	RG
34301	2013	1	993	452980	1	1	23956	70278	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,200.00	15-Apr-13	System	2771102	Paid	Reconcile	4/20/2013	RG
34301	2013	1	993	455202	1	1	23877	70278	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$16,000.00	16-Apr-13	System	2772743	Paid	Reconcile	4/23/2013	RG
34301	2013	1	993	460331	1	1	24000	81212	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,200.00	06-May-13	System	2810260	Paid	Reconcile	5/13/2013	RG
34301	2013	1	993	460262	1	1	24002	81211	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$44,500.00	06-May-13	System	2810260	Paid	Reconcile	5/13/2013	RG
34301	2013	1	993	470700	1	1	24021	82934	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,200.00	04-Jun-13	System	2862283	Paid	Reconcile	6/10/2013	RG
	2013														$361,500.00							
34301	2014	1	993	479667	1	1	24038	84257	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,200.00	22-Jul-13	System	2945902	Paid	Reconcile	7/27/2013	RG
34301	2014	1	993	479976	1	1	24077	84721	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,200.00	02-Aug-13	System	2969593	Paid	Reconcile	8/7/2013	RG
34301	2014	1	993	518043	1	1	24140	90457	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	07-Nov-13	System	3138004	Paid	Reconcile	11/14/201	RG
34301	2014	1	993	518046	1	1	24120	90457	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	07-Nov-13	System	3138004	Paid	Reconcile	11/14/201	RG
34301	2014	1	993	518051	1	1	24098	84720	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	07-Nov-13	System	3138004	Paid	Reconcile	11/14/201	RG
34301	2014	1	993	533918	1	1	24157	84720	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$24,450.00	18-Dec-13	System	3200948	Paid	Reconcile	12/26/201	RG
34301	2014	1	993	533918	2	1	24157	92060	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$1,500.00	18-Dec-13	System	3200948	Paid	Reconcile	12/26/201	RG
34301	2014	1	993	533915	1	1	24167	92210	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$126,000.00	20-Dec-13	System	3206574	Paid	Reconcile	12/26/201	RG
34301	2014	1	993	547785	1	1	24206	94248	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$41,125.00	03-Feb-14	System	3274866	Paid	Reconcile	2/10/2014	RG
34301	2014	1	993	558901	1	1	24203	96091	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	12-Mar-14	System	3333872	Paid	Reconcile	3/18/2014	RG
34301	2014	1	993	558903	1	1	24228	96091	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	12-Mar-14	System	3333872	Paid	Reconcile	3/18/2014	RG
34301	2014	1	993	562237	1	1	24185	96364	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	18-Mar-14	System	3344741	Paid	Reconcile	3/26/2014	RG
34301	2014	1	993	569473	1	1	24247	97627	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	10-Apr-14	System	3387012	Paid	Reconcile	4/16/2014	RG
34301	2014	1	993	571070	1	1	24262	98122	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	15-Apr-14	System	3395243	Paid	Reconcile	4/22/2014	RG
34301	2014	1	993	578784	1	1	24282	99975	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	23-May-14	System	3454567	Paid	Reconcile	5/30/2014	RG
34301	2014	1	993	589280	1	1	24307	101424	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	20-Jun-14	System	3503720	Paid	Reconcile	6/25/2014	RG
	2014														$502,975.00							
34301	2015	1	993	609024	1	1	24368	104817	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	28-Aug-14	System	3617658	Paid	Reconcile	9/5/2014	RG
34301	2015	1	993	614586	1	1	24338	105870	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	15-Sep-14	System	3639977	Paid	Reconcile	9/23/2014	RG
34301	2015	1	993	619500	1	1	24405	104817	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	02-Oct-14	System	3669086	Paid	Reconcile	10/9/2014	RG
34301	2015	1	993	628822	1	1	24451	104817	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	29-Oct-14	System	3712489	Paid	Reconcile	11/6/2014	RG
34301	2015	1	993	635605	1	1	24492	104817	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	02-Dec-14	System	3762351	Paid	Reconcile	12/10/201	RG
34301	2015	1	993	646803	1	1	24524	104817	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	26-Dec-14	System	3797856	Paid	Reconcile	1/1/2015	RG
34301	2015	1	993	656022	1	1	24555	104817	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	10-Feb-15	System	3869490	Paid	Reconcile	2/19/2015	RG
34301	2015	1	993	663860	1	1	24604	104817	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	09-Mar-15	System	3906429	Paid	Reconcile	3/16/2015	RG
34301	2015	1	993	668184	1	1	24636	104817	18489	Optimum Technology Inc	100 E Campus View Blvd Ste 380	Columbus	OH	43235	$25,950.00	30-Mar-15	System	3938351	Paid	Reconcile	4/7/2015	RG
	2015														$233,550.00							
	Grand														$1,146,025.00							

* An invoice in the amount of $228,600 paid in FY13 was not paid correctly against the contract.

Invoices paid against the contract	$1,146,025.00
Invoice # 23791	$228,600.00
Total	$1,374,625.00

GL Unit	Account	Fund	Dept	Location CF	UCNull	6-digit User	User Code	PgmNull	digit Progra	Program	Contract	PO Ref
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	70803000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	70803000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	70803000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	70803000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100045	100045	100045	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112
34301	72203000	11000	34310330	19000	100046	100046	100046	100027	100027	100027	28672	34310-21112

Amendment Request

This request form is not required for amendments to grant contracts. Route a completed request, as one file in PDF format, via e-mail attachment sent to: Agsprs.Agsprs@tn.gov

APPROVED	
CHIEF PROCUREMENT OFFICER	DATE

Agency request tracking #	34310-21112
1. Procuring Agency	Tennessee Department of Health (TDH)
2. Contractor	Appriss, Inc.
3. Edison contract ID #	28672
4. Proposed amendment #	3
5. Contract's Effective Date	September 12, 2011
6. Current end date	September 11, 2016
7. Proposed end date	N/A
8. Current Maximum Liability or Estimated Liability	$ 1,876,250.00
9. Proposed Maximum Liability or Estimated Liability	$ 1,876,250.00
10. Office for Information Resources Pre-Approval Endorsement Request *– information technology service (N/A to THDA)*	☐ Not Applicable ☒ Attached
11. eHealth Pre-Approval Endorsement Request *– health-related professional, pharmaceutical, laboratory, or imaging*	☒ Not Applicable ☐ Attached
12. Human Resources Pre-Approval Endorsement Request *– state employee training service*	☒ Not Applicable ☐ Attached

13. Explain why the proposed amendment is needed

Name change: Original vendor (Optimum Technology Inc.) sold their interest in the services connected with the State's CSMD to Appriss, Inc.

14. If the amendment involves a change in Scope, describe efforts to identify reasonable, competitive, procurement alternatives to amending the contract. N/A

Agency request tracking #	34310-21112
Signature of agency head or designee and date	4 May 15

CONTRACT AMENDMENT COVER SHEET

Agency Tracking #	Edison ID	Contract #	Amendment #
34310-21112	28672	FA1236909	3

Contractor Legal Entity Name	Edison Vendor ID
Appriss, Inc.	121147

Amendment Purpose & Effect(s)

Name change: Original vendor (Optimum Technology Inc.) sold their interest in the services connected with the State's CSMD to Appriss, Inc. All software services will now be provided by Appriss, Inc.

Amendment Changes Contract End Date: ☐ YES ☒ NO **End Date:** September 11, 2016

TOTAL Contract Amount INCREASE or DECREASE per this Amendment (zero if N/A)**:** **$ 0.00**

Funding —

FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
2012				$152,000	$152,000
2013	$93,100		$273,100	$192,000	$558,200
2014	$119,400		$167,125	$192,000	$478,525
2015	$119,400			$192,000	$311,400
2016	$119,400			$192,000	$311,400
2017	$ 24,725			$40,000	$64,725
TOTAL:	**$476,025**		**$440,225**	**$960,000**	**$1,876,250**

American Recovery and Reinvestment Act (ARRA) Funding: ☐ YES ☒ NO

Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.

CPO USE

Speed Chart (optional)

Account Code (optional)

AMENDMENT THREE
OF CONTRACT FA1236909

This Amendment is made and entered by and between the State of Tennessee, Department of Health, hereinafter referred to as the "State" and Appriss, Inc., (as amended herein) and referred to as the "Contractor." For good and valuable consideration, the sufficiency of which is hereby acknowledged, it is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

1. The following is added as contract section E.18.

E.18. Contractor Name. All references to Optimum Technology, Inc. shall be deleted and replaced with Appriss, Inc.

2. The following is added as contract section E.19.

E.19. Edison Vendor ID. All references to Edison Vendor ID (EVID) 18489 shall be deleted and replaced with EVID 121147.

Required Approvals. The State is not bound by this Amendment until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

Amendment Effective Date. The revisions set forth herein shall be effective July 1, 2015. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

IN WITNESS WHEREOF,

Appriss, Inc.:

SIGNATURE **DATE**

PRINTED NAME AND TITLE OF SIGNATORY (above)

DEPARTMENT OF HEALTH:

John J. Dreyzehner, MD, MPH, FACOEM, Commissioner **DATE**

OIR Pre-Approval Endorsement Request
E-Mail Transmittal

TO : Mark Rampey, OIR Contracts
Department of Finance & Administration
E-mail : Mark.Rampey@tn.gov

FROM : Carole Sumner, ITSD Administrative Services
Department of Health
E-mail : Carole.Sumner@tn.gov

DATE : May 1, 2015

RE : Request for OIR Pre-Approval Endorsement

Applicable RFS # 34310-21112

OIR Endorsement Signature & Date:

MR Bengel (MR) 5/1/15

Chief Information Officer

NOTE: Proposed contract/grant support is applicable to the subject IT service technical merit.

Office for Information Resources (OIR) pre-approval endorsement is required pursuant to procurement regulations pertaining to contracts with information technology as a component of the scope of service. This request seeks to ensure that OIR is aware of and has an opportunity to review the procurement detailed below and in the attached document(s). This requirement applies to any procurement method regardless of dollar amount.

Please indicate OIR endorsement of the described procurement (with the appropriate signature above), and return this document via e-mail at your earliest convenience.

Contracting Agency	**Health**
Agency Contact (name, phone, e-mail)	**Mike Newman, CIO**

Attachments Supporting Request (mark all applicable)

Note: The complete draft procurement document and the applicable documents listed below must accompany this request when submitted to OIR. Special Contract Requests and Amendment Requests without Agency Head signature are acceptable. OIR is aware that these documents will not have CPO signature when submitted with this request.

- ☐ Solicitation Document
- ☐ Special Contract Request
- ☒ Amendment Request
- ☐ Proposed Contract/Grant or Amendment
- ☐ Original Contract/Grant and Previous Amendments (if any)

Applicable RFS # 34310-21112

Information Systems Plan (ISP) Project Applicability

To avoid delay of OIR pre-approval, the applicability of an ISP project to the procurement must be confirmed with agency IT staff prior to submitting this request to OIR. If necessary, agency IT staff should contact OIR Planning with questions concerning the need for an ISP project.

IT Director/Staff Name Confirming (required):

☐ Applicable – Approved ISP Project#

☒ Not Applicable

Subject Information Technology Service Description

Provide a brief summary of the information technology services involved. Clearly identify included technologies such as system development/maintenance, security, networking, *etc.* As applicable, identify the contract or solicitation sections related to the IT services.

Vendor Name Change Only: Original vendor Optimum Technology, Inc. sold their interest in the services connected with the State's Controlled Substance Monitoring Database (CSMD) to Appriss, Inc. The software developers and resources from Optimum Technology Inc. transitioned to Appriss, Inc. and will continue the maintenance and support for the State's CSMD system.

GENERAL ASSEMBLY OF THE STATE OF TENNESSEE
FISCAL REVIEW COMMITTEE

320 Sixth Avenue, North – 8th Floor
NASHVILLE, TENNESSEE 37243-0057
615-741-2564

Sen. Bill Ketron, Chairman
Senators
Douglas Henry, Reginald Tate
Brian Kelsey, Ken Yager
Steve Southerland
Randy McNally, *ex officio*
Lt. Governor Ron Ramsey, *ex officio*

Rep. Mark White, Vice-Chairman
Representatives
Charles Curtiss, Pat Marsh
Jeremy Faison, Mark Pody
Brenda Gilmore, David Shepard
Matthew Hill, Tim Wirgau
Charles Sargent, *ex officio*
Speaker Beth Harwell, *ex officio*

MEMORANDUM

TO: Mike Perry, Chief Procurement Officer
Department of General Services

FROM: Senator Bill Ketron, Chairman BK
Representative Mark White, Vice-Chairman MW

DATE: July 25, 2013

SUBJECT: **Contract Comments**
(Fiscal Review Committee Meeting 7/15/13)

RFS# 343.10-21112 (Edison # 28672)
Department: Health
Division: Health Related Boards - Pharmacy
Vendor: Optimum Technology, Inc.
Summary: The vendor is responsible for information technology services in connection with the Controlled Substance Monitoring Database (CSMD). The proposed amendment provides enhancements and tools to the CSMD users; increases the maximum liability by $167,125; and revises payment methodology to provide for the one-time payment for these enhancements.
Current maximum liability: $1,709,125
Proposed maximum liability: $1,876,250

After review, the Fiscal Review Committee voted to recommend approval of the contact amendment.

cc: The Honorable John J. Dreyzehner, MD, MPH, Commissioner

STATE OF TENNESSEE
DEPARTMENT OF HEALTH

JOHN J. DREYZEHNER, MD, MPH
COMMISSIONER

BILL HASLAM
GOVERNOR

Mr. Lucian Geise, Director
Fiscal Review Committee
Rachel Jackson Building, 8th Floor
320 Sixth Avenue North
Nashville, TN 37243

and

Mike Perry, Chief Procurement Officer
Department of General Services
Tennessee Tower, Third Floor
Nashville, TN 37243

Dear Director Geise and CPO Perry:

The Tennessee Department of Health competitively awarded a contract in September of 2011 to Optimum Technology, Inc. (Contract FA-12-36909) for the information technology consulting services for the Controlled Substance Monitoring Database (CSMD), including development and maintenance. It is in the best interest of the State to amend the current contract to facilitate necessary changes to the CSMD to provide enhancements and tools to the CSMD administrators, providers and dispensers of controlled substances that simplify administration, improve audit reporting, expand reporting capabilities and improve problem tracking and resolution. The modifications to the CSMD will require one-time costs of $167,125 which will be funded with interdepartmental revenues the department will receive from the Department of Finance and Administration, Office of eHealth, using the federal American Recovery and Reinvestment Act (ARRA) grant. **No board revenues will be used to fund the costs associated with this amendment.** Therefore we request approval to amend the current contract to make necessary enhancements to the CSMD which will improve the overall customer services experience, data collection and reporting.

We appreciate your approval to proceed with this amendment and thank you for your consideration.

Sincerely,

John J. Dreyzehner, MD, MPH
Commissioner

3rd Floor, Cordell Hull Building
425 5th Avenue North * Nashville, TN 37243
(615) 741-3111 * www.tn.gov/health

Supplemental Documentation Required for Fiscal Review Committee

*Contact Name:	Mike Newman Andrew Holt	*Contact Phone:	(615) 253-5417 (615) 253-1300
*Original Contract Number:	FA1236909	*Original RFS Number:	34310-21112
Edison Contract Number: *(if applicable)*	28672	Edison RFS Number: *(if applicable)*	34310-21112
*Original Contract Begin Date:	September 12, 2011	*Current End Date:	September 11, 2016
Current Request Amendment Number: *(if applicable)*		#2	
Proposed Amendment Effective Date: *(if applicable)*		September 1, 2013	
*Department Submitting:		Health	
*Division:		BHLR/Health Related Boards/Pharmacy	
*Date Submitted:			
*Submitted Within Sixty (60) days:			
If not, explain:			
*Contract Vendor Name:		Optimum Technology, Inc.	
*Current Maximum Liability:		$1,876,250	

*Current Contract Allocation by Fiscal Year:
(as Shown on Most Current Fully Executed Contract Summary Sheet)

FY:2012	FY:2013	FY:2014	FY:2015	FY2016	FY2017
$152,000	$558,200	$478,525	$311,400	$311,400	$64,725

*Current Total Expenditures by Fiscal Year of Contract:
(attach backup documentation from STARS or FDAS report)

FY:2012	FY:2013	FY:2014	FY:2015	FY:2016	FY:2017
$207,633	$458,767 (up to May 24, 2013)				

IF Contract Allocation has been greater than Contract Expenditures, please give the reasons and explain where surplus funds were spent:	N/A
IF surplus funds have been carried forward, please give the reasons and provide the authority for the carry forward provision:	N/A
IF Contract Expenditures exceeded Contract Allocation, please give the	

Supplemental Documentation Required for Fiscal Review Committee

reasons and explain how funding was acquired to pay the overage:				
*Contract Funding Source/Amount:	State:	$476,025	Federal:	$167,125
Interdepartmental:		$273,100	*Other*:	$960,000
If "*other*" please define:				

Dates of All Previous Amendments or Revisions: *(if applicable)*	Brief Description of Actions in Previous Amendments or Revisions: *(if applicable)*
Amendment # 2 effective September 1, 2013	Modifications and enhancements to the Controlled Substance Monitoring Database (CSMD) to provide tools to the CSMD Administrators that simplify administration, improve audit capabilities, expand reporting capabilities and provide improved problem tracking capabilities.

Method of Original Award: *(if applicable)*	Request for Proposal
*What were the projected costs of the service for the entire term of the contract prior to contract award?	$960,000

Supplemental Documentation Required for Fiscal Review Committee

For all new non-competitive contracts and any contract amendment that changes Sections A or C.3. of the original or previously amended contract document, provide estimates based on information provided the Department by the vendor for determination of contract maximum liability. Add rows as necessary to provide all information requested.

If it is determined that the question is not applicable to your contract document attach detailed explanation as to why that determination was made.

Planned expenditures by fiscal year by deliverable. Add rows as necessary to indicate all estimated contract expenditures.

Deliverable description:	FY: 2012	FY: 2013	FY:2014	FY: 2015	FY:2016	FY:2
Quarterly System Maintenance and support of the Database	$21,000 per Quarter (4 times a year) = $84,000	$21,000 per Quarter (4 times a year) = $84,000	$21,000 per Quarter (4 times a year) = $84,000	$21,000 per Quarter (4 times a year) = $84,000	$21,000 per Quarter (4 times a year) = $84,000	$21,000 p Quarter
Quarterly Collection of Data from the Dispenser, cleansing of Data collected & Transmission of that Data to the State by the Contractor	$27,000 per Quarter (4 times a year) = $108,000	$27,000 per Quarter (4 times a year) = $108,000	$27,000 per Quarter (4 times a year) = $108,000	$27,000 per Quarter (4 times a year) = $108,000	$27,000 per Quarter (4 times a year) = $108,000	$27,000 p Quarter
Initial One-Time Costs for Computer Hardware and Software Installation and Implementation		$228,6000 One Time Payment	$167,125 One Time Payment			
Initial One-Time Costs for OTECH-PMIX Interface Component HUB for Interstate Data Sharing		$44,500 One Time Payment				
Quarterly System Maintenance		$27,600 per Quarter (4 times a	$27,600 per Quarter (4 times a	$27,600 per Quarter (4 times a	$27,600 per Quarter (4 times a year) =	$27,600 p Quarter

Supplemental Documentation Required for Fiscal Review Committee

and Support of the Microsoft		year) = $110,400	year) = $110,400	year) = $110,400	$110,400	
Quarter Maintenance and Support of the OTECH-PMIX Interface Component HUB for Interstate Data Sharing		$2,250 per Quarter (4 times a year) = $10,000	$2,250 per Quarter (4 times a year) = $10,000	$2,250 per Quarter (4 times a year) = $10,000	$2,250 per Quarter (4 times a year) = $10,000	$2,250 pe Quarter
Initial One Time Costs to develop, implement and host a CSMD Training Database		$15,000 One Time Payment				
Proposed savings to be realized per fiscal year by entering into this contract. If amendment to an existing contract, please indicate the proposed savings to be realized by the amendment. Add rows as necessary to define all potential savings per deliverable.						
Deliverable description:	FY:	FY:	FY:	FY:	FY:	
* See last page						
Comparison of cost per fiscal year of obtaining this service through the proposed contract or amendment vs. other options. List other options available (including other vendors), cost of other options, and source of information for comparison of other options (e.g. catalog, Web site). Add rows as necessary to indicate price differentials between contract deliverables.						
Proposed Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:	
*						
Other Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:	
*						
Other Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:	
*						

Supplemental Documentation Required for Fiscal Review Committee

* Were the department to put this contract out for bid, then there could be additional development costs from a new contractor. Having the database is a statutory requirement, so the costs would have to be borne by either department staff or a new contractor. Optimum developed the database for Tennessee and has been collecting and cleansing data throughout the term of the contract, so continuing services with the same contractor is more efficient.

PAYMENT HISTORY FOR OPTIMUM TECHNOLOGY

FFY	ALLOT	COST	OBJR\	BATCHID	TCD	INVOICE	REFDOC	REFS	CURDOC	GRANT	SUBGR	VENDOR	VNDNO	VSUF	EXP	MONTH	YEAR	SERVDATE	WARRANT
12	34310	46	08			23596	FA1236909	00				Optimum Technology	V311231081	00	$48,000.00	9	12	12/11/2011	
12	34310	46	08			23616	FA1236909	00				Optimum Technology	V311231081	00	30,000.00	11	12	2/20/2012	
12	34310	46	08			23617	FA1236909	00				Optimum Technology	V311231081	00	23,500.00	11	12	2/20/2012	
12	34310	46	08			23667	FA1236909	00				Optimum Technology	V311231081	00	48,000.00	12	12	3/11/2012	
12	34301	46	08			23737	FA1236909	00				Optimum Technology	V311231081	00	48,000.00	3	12	6/11/2012	
12	34301	46	08			23796	FA1236909	00				Optimum Technology	V311231081	00	10,133.00	6	12	6/30/2012	
													FY12 Payments		**207,633.00**				
13	34301	46	08			23797	FA1236909					Optimum Technology	V311231081		5,867.00	7	12	7/11/2012	
13	34301	46	08			23790	FA1236909					Optimum Technology	**V311231081**		16,000.00	7	12	8/11/2012	
13	34301	46	08			23791	FA1236909					Optimum Technology	**V311231081**		228,600.00	8	12	1/7/2013	
13	34301	46	08			23831	FA1236909					Optimum Technology	**V311231081**		16,000.00	8	12	9/11/2012	
13	34301	46	08			23853	FA1236909					Optimum Technology	**V311231081**		16,000.00	9	12	10/11/2012	
13	34301	46	08			23910	FA1236909					Optimum Technology	**V311231081**		25,200.00	2	13	12/31/2012	
13	34301	46	08			23923	FA1236909					Optimum Technology	**V311231081**		25,200.00	12	12	1/31/2013	
13	34301	46	08			23933	FA1236909					Optimum Technology	**V311231081**		15,000.00	1	13	1/31/2013	
13	34301	46	08			23956	FA1236909					Optimum Technology	**V311231081**		25,200.00	2	13	2/28/2013	
13	34301	46	08			23877	FA1236909					Optimum Technology	**V311231081**		16,000.00	11	12	11/30/2012	
13	34301	46	08			24002	FA1236909					Optimum Technology	**V311231081**		44,500.00	3	13	3/31/2013	
13	34301	46	08			24006	FA1236909					Optimum Technology	**V311231081**		25,200.00	3	13	3/31/2013	
													FY13 Payments		**458,767.00**	**Up until May 24)**			

Non-Competitive Amendment Request

NOT required for a contract with a federal, Tennessee, or Tennessee local government entity or a grant.
Route a completed request, as one file in PDF format, via e-mail attachment sent to: Agsprs.Agsprs@state.tn.us

APPROVED
COMMISSIONER OF FINANCE & ADMINISTRATION

Request Tracking #	**34310-21112-01**
1. Procuring Agency	**Health**
2. Contractor	**Optimum Technology, Inc.**
3. Contract #	**FA1236909**
4. Proposed Amendment #	**2**
5. Edison ID #	**18489**
6. Contract Begin Date	**September 12, 2011**
7. Current Contract End Date *– with ALL options to extend exercised*	**September 11, 2016**
8. Proposed Contract End Date *– with ALL options to extend exercised*	**September 11, 2016**
9. Current Maximum Contract Cost *– with ALL options to extend exercised*	**$ 1,709,125**
10. Proposed Maximum Contract Cost *– with ALL options to extend exercised*	**$ 1,878,250**
11. Office for Information Resources Endorsement *– information technology service (N/A to THDA)*	☐ Not Applicable ☒ Attached
12. eHealth Initiative Support *– health-related professional, pharmaceutical, laboratory, or imaging*	☐ Not Applicable ☒ Attached
13. Human Resources Support *– state employee training service*	☒ Not Applicable ☐ Attached

14. Explanation Need for the Proposed Amendment

This amendment is necessary to make necessary changes to the Controlled Substance Monitoring Database (CSMD) system that will provide tools for the CSMD Administrators that simplify administration, improve audit capabilities, expand reporting and provide improved problem tracking capabilities. Examples of these enhancements include a faster way to identify users in the system, reporting capabilities to identify abusers of the system and capabilities to identify potential individuals to investigate. In addition, authorized out of state users' registration will be simplified and more securely managed.

Request Tracking #	34310-21112-01

15. Name & Address of the Contractor's Principal Owner(s)
– NOT required for a TN state education institution

Josh Davda, President Optimum Technology, Inc. 100 E. Campus View Blvd., Suite 380 Columbus OH 43235

16. Evidence Contractor's Experience & Length Of Experience Providing the Service

The contractor was founded in 1984 and has been providing services for over 25 years.

17. Efforts to Identify Reasonable, Competitive, Procurement Alternatives

The Optimum Technology, Inc. Controlled Substance Monitoring Database software is proprietary and can only be maintained by Optimum technology, Inc.

18. Justification *– specifically explain why non-competitive negotiation is in the best interest of the state*

An RFP was issued for a Controlled Substance Monitoring Database (CSMD) system and through this competitive process a contract was awarded to Optimum Technology, Inc. Enhancements to the CSMD are necessary to simplify administration, improve audit capabilities, expand reporting and provide improved problem tracking capabilities.

Agency Head Signature and Date *– MUST be signed by the ACTUAL agency head as detailed on the current Signature Certification. Signature by an authorized signatory is acceptable only in documented exigent circumstances*

25 June 13

CONTRACT AMENDMENT

Agency Tracking #	Edison ID	Contract #	Amendment #
34310-21112	28672	FA1236909	2

Contractor Legal Entity Name	Edison Vendor ID
Optimum Technology, Inc.	18489

Amendment Purpose & Effect(s)

This amendment is necessary to make necessary changes to the Controlled Substance Monitoring Database (CSMD) system that will provide tools for the CSMD Administrators that simplify administration, improve audit capabilities, expand reporting and provide improved problem tracking capabilities. Examples of these enhancements include a faster way to identify users in the system, reporting capabilities to identify abusers of the system and capabilities to identify potential individuals to investigate. In addition, authorized out of state users' registration will be simplified and more securely managed.

Amendment Changes Contract End Date: ☐ YES ☒ NO **End Date:** September 11, 2016

TOTAL Contract Amount INCREASE or DECREASE per this Amendment (zero if N/A): **$ 167,125**

Funding —

FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
12				152,000	152,000
13	93,100		273,100	192,000	558,200
14	119,400		167,125	192,000	478,525
15	119,400			192,000	311,400
16	119,400			192,000	311,400
17	24,725			40,000	64,725
TOTAL:	**476,025**		**440,225**	**960,000**	**1,876,250**

American Recovery and Reinvestment Act (ARRA) Funding: ☒ YES ☐ NO

Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.

OCR USE

FA1236910902

Speed Chart (optional)

Account Code (optional)

AMENDMENT TWO
OF CONTRACT FA1236909

This Amendment is made and entered by and between the State of Tennessee, Department of Health, hereinafter referred to as the "State" and Optimum Technology, Inc., hereinafter referred to as the "Contractor" It is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

The following section and attachment has been added to the contract:

A12. Controlled Substance Monitoring Database 2013 Enhancements: Enhancements to the Controlled Substance Monitoring Database (CSMD) will be developed and maintained as described in Attachment Six, Sections 6.1 thru 6.21.

The text of Contract Section C.1 has been deleted and replaced with the following:

C.1. Maximum Liability. In no event shall the maximum liability of the State under this Contract exceed One Million Eight Hundred and Seventy Six Thousand Two Hundred and Fifty Dollars ($1,876,250). The payment rates in section C.3 shall constitute the entire compensation due the Contractor for all service and Contractor obligations hereunder regardless of the difficulty, materials or equipment required. The payment rates include, but are not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor.

The Contractor is not entitled to be paid the maximum liability for any period under the Contract or any extensions of the Contract for work not requested by the State. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the State requests work and the Contractor performs said work. In which case, the Contractor shall be paid in accordance with the payment rates detailed in section C.3. The State is under no obligation to request work from the Contractor in any specific dollar amounts or to request any work at all from the Contractor during any period of this Contract.

The text of Contract Section C.3 has been deleted and replaced with the following:

C.3. Payment Methodology. The Contractor shall be compensated based on the payment rates herein for units of service authorized by the State in a total amount not to exceed the Contract Maximum Liability established in section C.1.

a. The Contractor's compensation shall be contingent upon the satisfactory completion of units, milestones, or increments of service defined in section A.

b. The Contractor shall be compensated for said units, milestones, or increments of service based upon the following payment rates:

Service Description	**Amount** (per compensable increment)*
Quarterly System Maintenance and Support of the Database (ref *Proforma* Contract Sections A.1.b, A.3., and A.4.)	$ 21,000 per Quarter
Quarterly Collection of Data from the Dispenser, Cleansing of Data collected, Data archiving, Data reporting, and Loading of that Data to the Controlled Substance Monitoring Database (CSMD) (ref *Proforma* Contract Sections A.1.c. and A.2.)	$ 27,000 per Quarter

Initial One-Time Costs for 2013 CSMD Enhancements (*ref Proforma Contract Attachment Six Sections 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.12, 6.14, 6.16, 6.19, 6.20, 6.21, 6.22.) Payable upon completion date 9/30/2013.*	$126,000 One-Time Payment
Initial One-Time Costs for 2013 CSMD Enhancements (ref Proforma Contract Attachment Six 6.2, 6.11, 6.13, 6.15, 6.17, 6.18.) Payable upon completion date 12/31/2013.	$41,125 One-Time Payment
Quarterly System Maintenance and Support of the Microsoft Software (*ref Proforma Contract Sections A.1.i.(d), A.1.i.(e), A.1.i.(f), A.1.i.(g).)*	$27,600 per Quarter
Quarterly Maintenance and Support of the OTECH-PMIX Interface Component HUB for Interstate Data Sharing *(ref Proforma Contract section A.1.j.(b).)*	$2,250 per Quarter

* NOTICE: The amount(s) per compensable increment detailed above shall be contingent upon the State's receipt of an invoice (as required in section C.5., below) for said service(s) within thirty (30) days after the end of the calendar quarter in which the service(s) were rendered. At the sole discretion of the State, the amount per compensable increment of any service for which the State receives an invoice later than prescribed herein shall be subject to a reduction in amount of up to 100%. In the case of an untimely invoice, before any payment will be considered by the State, the Contractor must submit a written request regarding the untimely invoice, which shall detail the reason the invoice is untimely as well as the Contractor's plan for submitting all future invoices no later than prescribed herein, and it must be signed by an individual empowered to bind the Contractor to this Contract.

C.5. Invoice Requirements. The Contractor shall invoice the State only for completed increments of service and for the amount stipulated in section C.3, above, and present said invoices no more often than monthly, with all necessary supporting documentation, to:

Department of Health
Andrew Holt, PharmD, Executive Director Board of Pharmacy
TN Board of Pharmacy
227 French Landing Drive, Suite 300
Nashville, TN 37243

a. Each invoice shall clearly and accurately detail all of the following required information (calculations must be extended and totaled correctly).

(1) Invoice Number (assigned by the Contractor)
(2) Invoice Date
(3) Contract Number (assigned by the State)
(4) Customer Account Name: Department of Health, Board of Pharmacy
(5) Customer Account Number (assigned by the Contractor to the above-referenced Customer)
(6) Contractor Name
(7) Contractor Federal Employer Identification, Social Security, or Tennessee Edison Registration ID Number Referenced in Preamble of this Contract
(8) Contractor Contact for Invoice Questions (name, phone, and/or fax)
(9) Contractor Remittance Address
(10) Description of Delivered Service
(11) Complete Itemization of Charges, which shall detail the following:

i. Service or Milestone Description (including name & title as applicable) of each service invoiced
ii. Number of Completed Units, Increments, Hours, or Days as applicable, of each service invoiced

iii. Applicable Payment Rate (as stipulated in Section C.3.) of each service invoiced
iv. Amount Due by Service
v. Total Amount Due for the invoice period

b. The Contractor understands and agrees that an invoice under this Contract shall:

(1) include only charges for service described in Contract Section A and in accordance with payment terms and conditions set forth in Contract Section C;
(2) only be submitted for completed service and shall not include any charge for future work;
(3) not include sales tax or shipping charges; and
(4) initiate the timeframe for payment (and any discounts) only when the State is in receipt of the invoice, and the invoice meets the minimum requirements of this section C.5.

Required Approvals. The State is not bound by this Amendment until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

Amendment Effective Date. The revisions set forth herein shall be effective September 1, 2013. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

IN WITNESS WHEREOF,

CONTRACTOR/GRANTEE LEGAL ENTITY NAME:

06-02-2013

SIGNATURE **DATE**

JOSH M. DAVDA, President

PRINTED NAME AND TITLE OF SIGNATORY (above)

STATE AGENCY NAME:

John J. Dreyzehner, MD, MPH 8/5/13

AGENCY HEAD NAME & TITLE **DATE**

Commissioner BAR

Attachment Six
2013 CSMD Enhancement Requirements

6.1 Automated way for users to retrieve their username (HIGH)

a. Security Suggestion on How to Accomplish: Provide First Name, Last Name and email address and if that email address is in the system plus answer one security question it would send username to the email account that matches the one in User Profile.

6.2 Create feature/tool that allows CSMD Admin to search all user profiles by email address (Low)

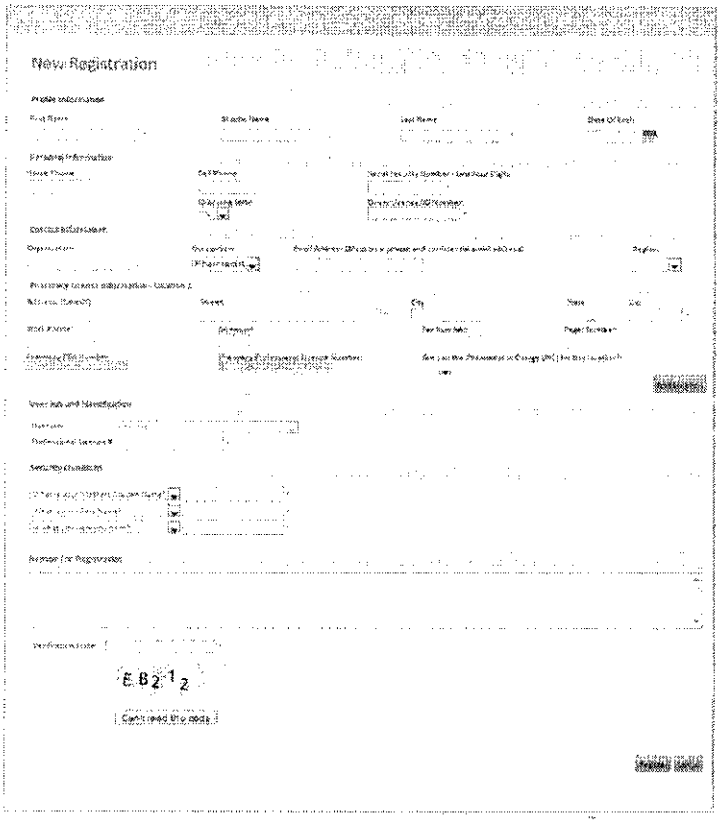
a. Any screen where search is a feature for the CSMD Admin the email field should be present to be used as a search criteria

6.3 Create new User Type for those users/potential users who have out of state data elements (if they have TN Professional License but Out of State Driver License that is already handled in the system it bypasses validating the Driver License) (High)

a. Out of State Professional License but TN Driver License
b. Out of State Professional License and out of state TN Driver License
    i. Include a drop down for user to indicate which state issued their professional license

6.4 Practitioner/Pharmacist Multiple Locations (High)

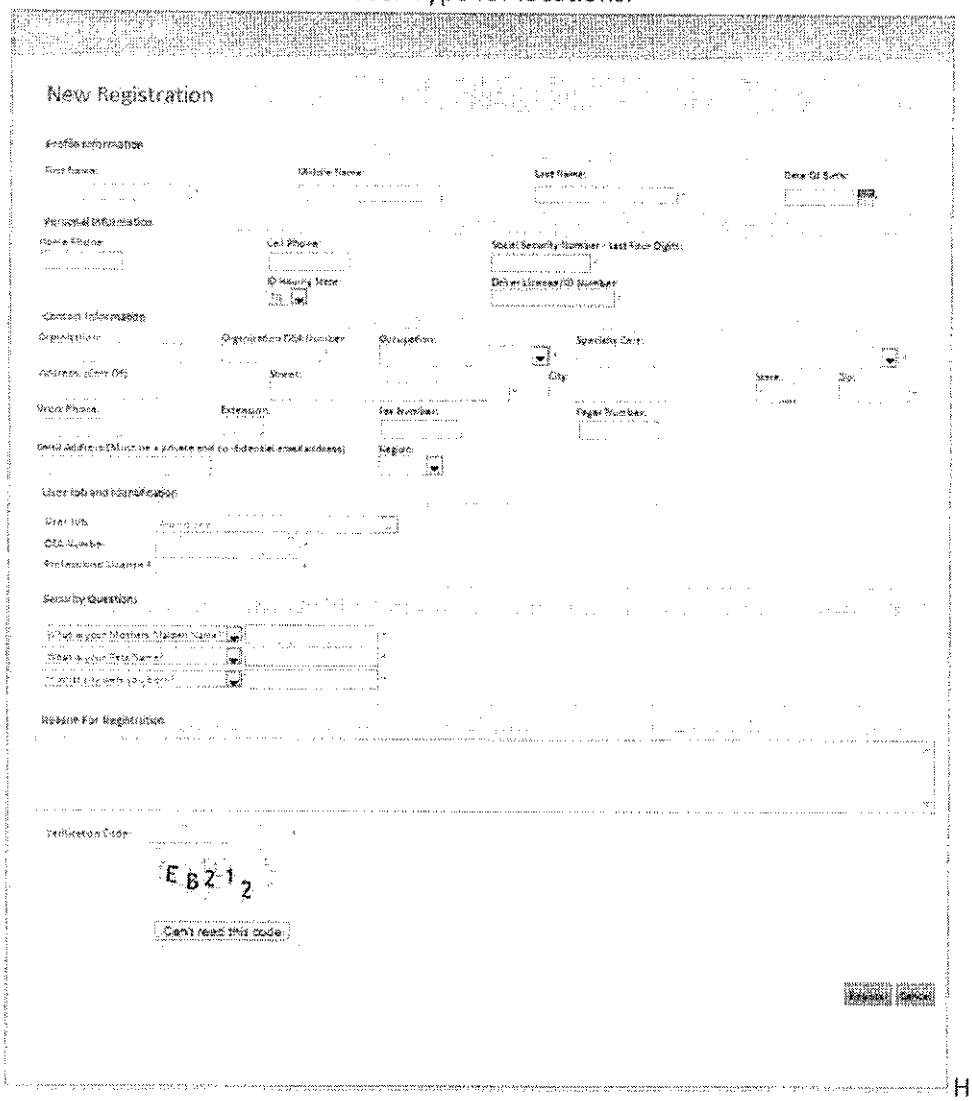
a. Each User Type can have multiple locations
b. Pharmacist User Type – Each Location must contain Organization name as part of each location
c. Screenshot below of showing fields needed for every Location. All yellow fields are required and purple fields are optional.



d. Practitioner can have multiple locations
    i. Each practitioner location must include Organization

Attachment Six
2013 CSMD Enhancement Requirements

ii. Question included for each location
   1. Do you have a separate DEA number for this location
      a. Yes- provide box for entry of DEA for this location (It appears you may be able to use the Organization DEA Number that is already include in the database for this but since I do not have a data dictionary be sure.
      b. No – Box either does not appear or is grayed out.
      c. Screen shot following and all yellow fields are required. If APN/PA becomes separate User Type these fields would also apply to that User Type for locations.



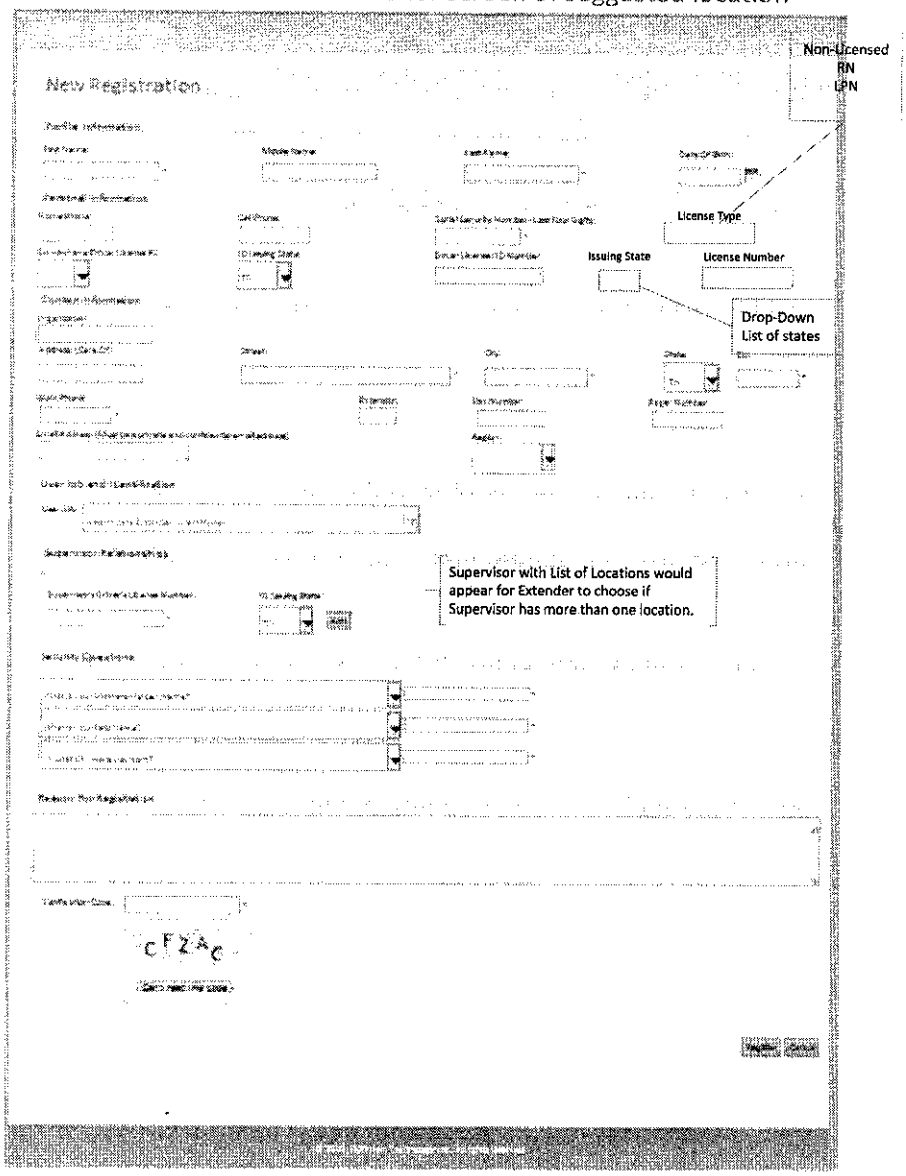
Health Care Extenders (All items HIGH in this numbered item)

e. Health Care Extender Registration and User Profile should include field to capture if the extender is a licensed professional (RN, Licensed Pharmacy Tech, etc.) include state drop down for this license. Need to include or indicate in text if Non-License what should be entered (EX: NA, Not applicable, etc.).
   i. Need field to capture Health Care Extender – Practitioner could have: Registered Nurse (RN); Licensed Practical Nurse (LPN); Nurse Aid; Emergency Medical

Attachment Six
2013 CSMD Enhancement Requirements

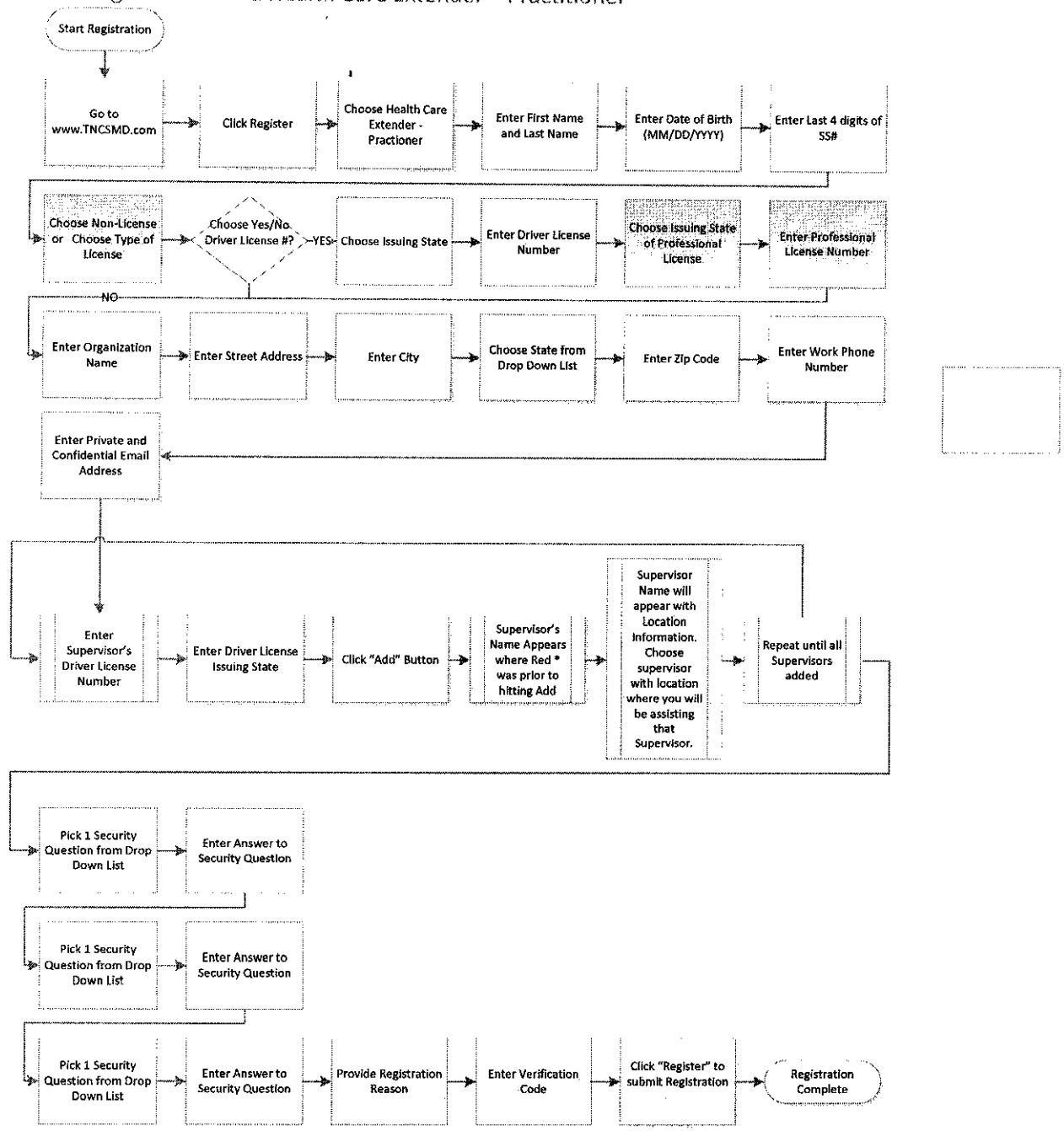
Technician (EMT) and Health Care Extender – Pharmacist could have Registered Pharmacy Technician (RPT) and each Extender category should have a Non-Licensed option in the list (See following Visio screen captures for examples) Need flexibility to add additional licensed categories as the need arises.

Health Care Extender – Practitioner Screen of suggested location



Attachment Six
2013 CSMD Enhancement Requirements

Flow of Registration for a Health Care Extender – Practitioner



Attachment Six
2013 CSMD Enhancement Requirements

Health Care Extender – Pharmacist Screen of suggested location

New Registration

Non-Licensed Registered Pharmacy Technician

License Type

Issuing State

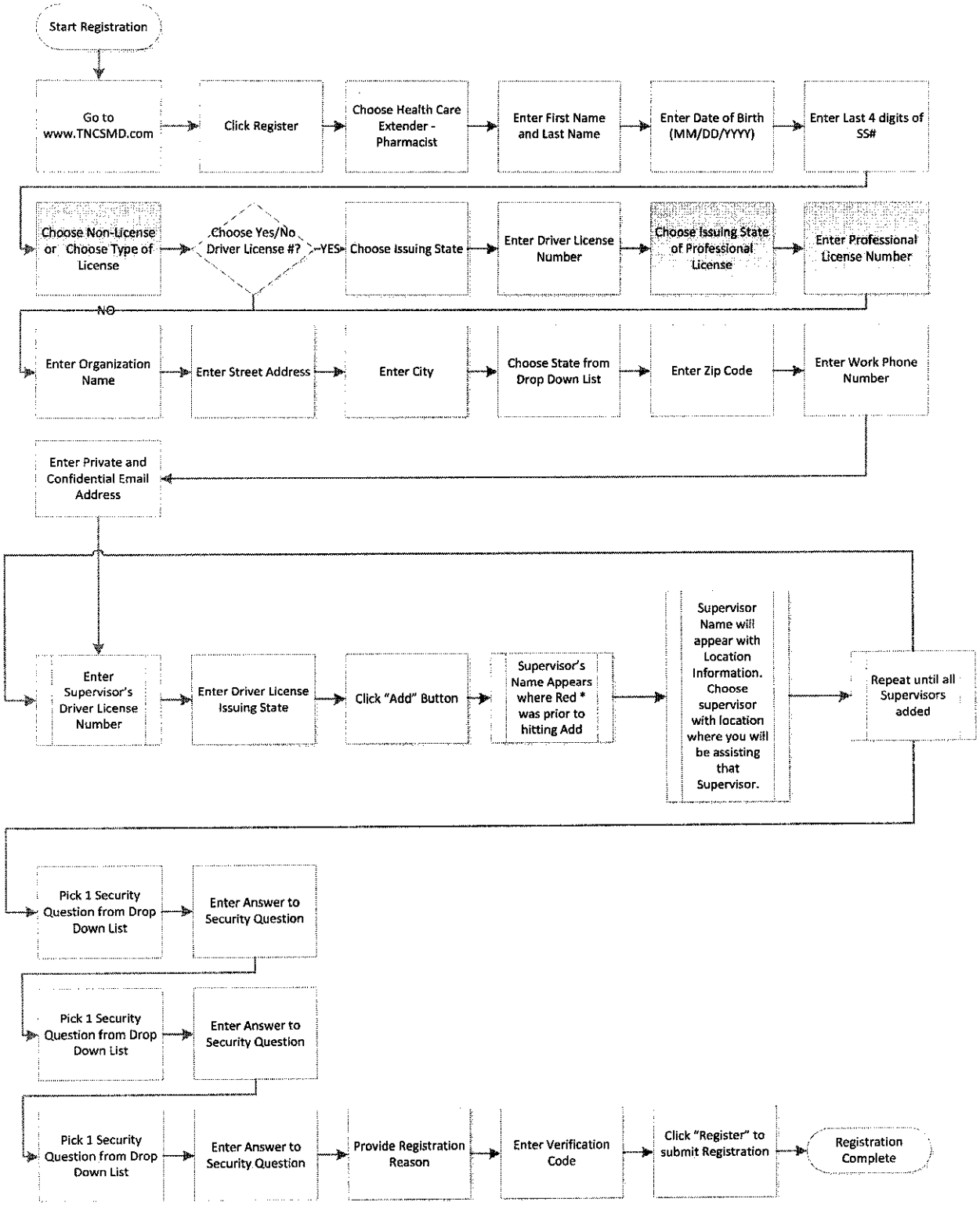
License Number

Drop-Down List of states

Supervisor with List of Locations would appear for Extender to choose if Supervisor has more than one location.

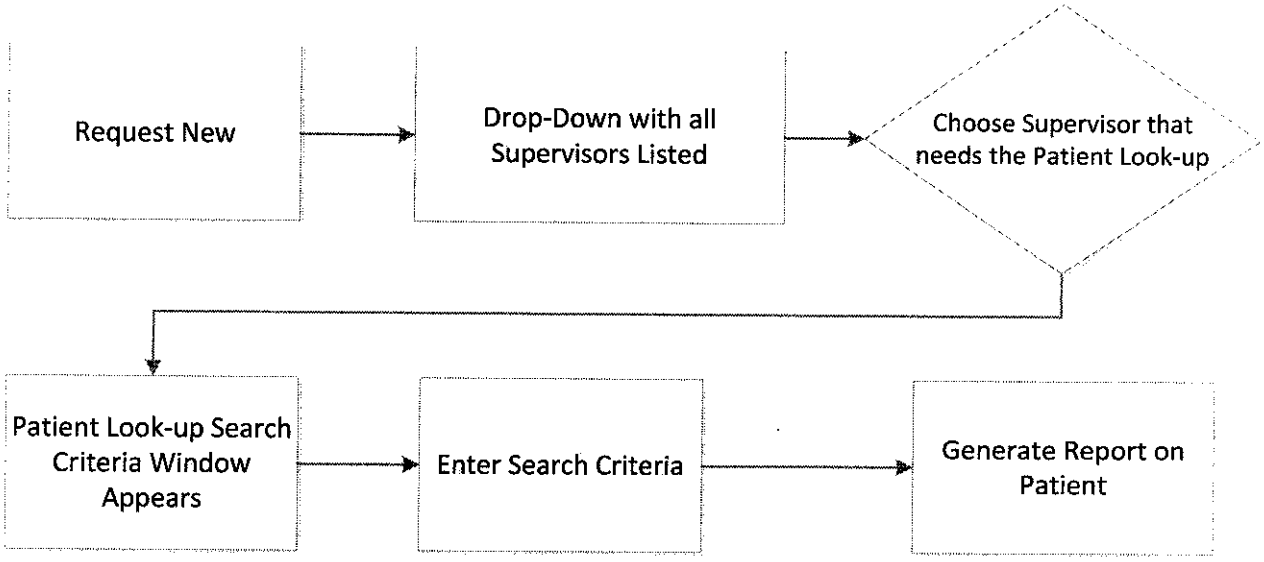
Attachment Six
2013 CSMD Enhancement Requirements

Flow of Registration for a Health Care Extender – Pharmacist



Attachment Six
2013 CSMD Enhancement Requirements

f. Health Care Extenders need to be connected in such a way to their supervisor that the supervisor will be able to view in a summary all requests/reports/lookups that his extenders have performed by day or date range on his/her behalf (EXAMPLE: User Betty White logs in and Dr. Smith walks up and ask Betty to look up patient. Betty hits New Request and the first thing she does is pick Dr. Smith + location if he has more than one location from a drop down that list all of the prescribers that she can act on their behalf. Enters patient data and creates report. Dr. Smith can log on and click View Request and he will see the report that Betty White generated on his behalf.
Next Dr. Jones walks up and Betty clicks New Request and now she picks Dr. Jones + location if he has more than one location from her list and repeats the process. Betty does not have to log out to generate reports for the different prescribers that she is a Health Care Extender.



g. Health Care Extenders can have multiple supervisors (self-explanatory from above example. Health Care Extenders Practitioner/Pharmacist could have any number of supervisors.
h. When Health Care Extender performing request (patient look up) functionality needed to select which supervisor this work is on behalf of without logging in and out of the system (see Example in b.)
    i. If one supervisor revokes they would disappear from the list of choices for the extender to make request on behalf of them
i. Health Care Extender Registration should allow for multiple supervisors (see Example b.)
j. Health Care Extenders once in the system should be able to delete/add supervisors from their "My Account" area
    i. Ability for Health Care Extender Practitioner/Pharmacist to add additional supervisors or remove supervisors (Example – they change employers and before they leave Employer A they delete all their supervisors at Employer A. They go to work for Employer B and need to add all their Supervisors now at Employer B.)

Attachment Six
2013 CSMD Enhancement Requirements

Welcome, PractitionerExt1 | MY ACCOUNT | LOGOUT

Request | Notification | Help

Home > My Account

- Change Password
- Security Questions

Other Links

- Messages (1)
- Info Center
- FAQ
- Related Links

Latest News

My Account

Username: PractitionerExt1

Job: Health Care Extender - Practitioner

Profile Information

First Name: Practitioner

Middle Name:

Last Name: Delegates

Date Of Birth: 01/01/1980

Personal Information

Home Phone:

Cell Phone:

Social Security Number - Last Four Digits: 1234

ID Issuing State: TN

Driver License/ID Number: 345667

Contact Information

Organization:

Address: (Care Of): 100 E Campus view Bl

Street:

City: Columbus

State: TN

Zip: 43235

Work Phone: 1111111111

Extension:

Fax Number:

Pager Number:

Email Address:[Must be a private and confidential email address]: test@tncsmd.com

Region: East

Supervisors

Supervisor 1	Delete
Supervisor 2	Delete
Supervisor 3	Delete
Supervisor 4	Delete
Supervisor 5	Delete

Save

Add Supervisor would open New Page

Add Supervisor

NEW PAGE:

Supervisor Relationships

License Type: | License Number: | ID Issuing State: TN | Add

Supervisor with List of Locations would appear for Extender to choose if Supervisor has more than one location.

Security Questions

Extender would continue to Add Supervisors until all were added. Would not have access for that Supervisor until that Supervisor logged in and Approved Extender. Once Extender approved by Supervisor that Supervisor would appear in list for Extender to choose when creating a Request New (Patient Look-up)

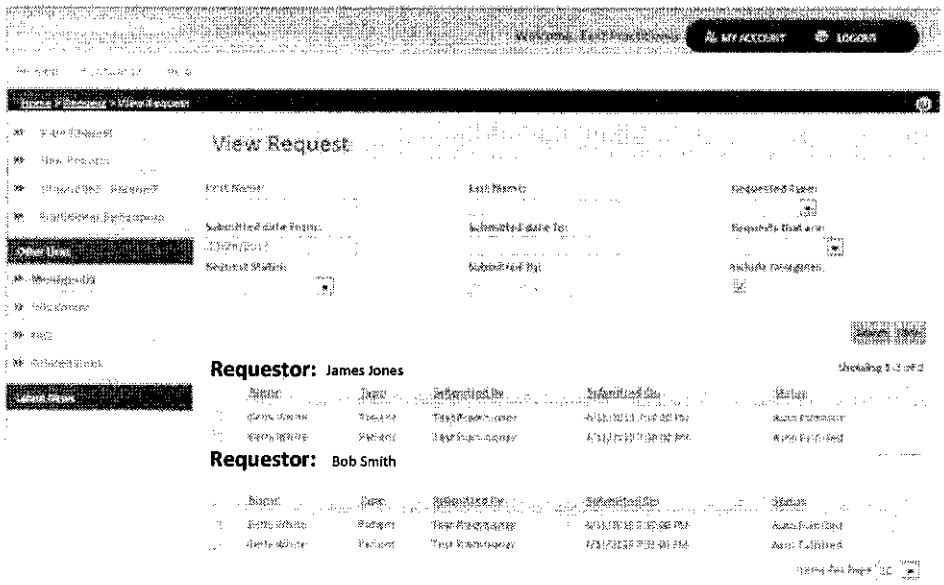
This also affects the Supervisors when they want to View Request. They should be able to pick Extender and be able to review all of the Patient Look-ups /Reports created by Extenders. This would also include all Patient Look-ups/Reports create by Advance Nurse Practitioners and Physician Assistants being supervised by that Physician. Need complete report view that starts

Attachment Six
2013 CSMD Enhancement Requirements

with Supervisor and would show all Health Care Extenders, APNs and Physician Assistants associated with the Supervisor

This is the view now:

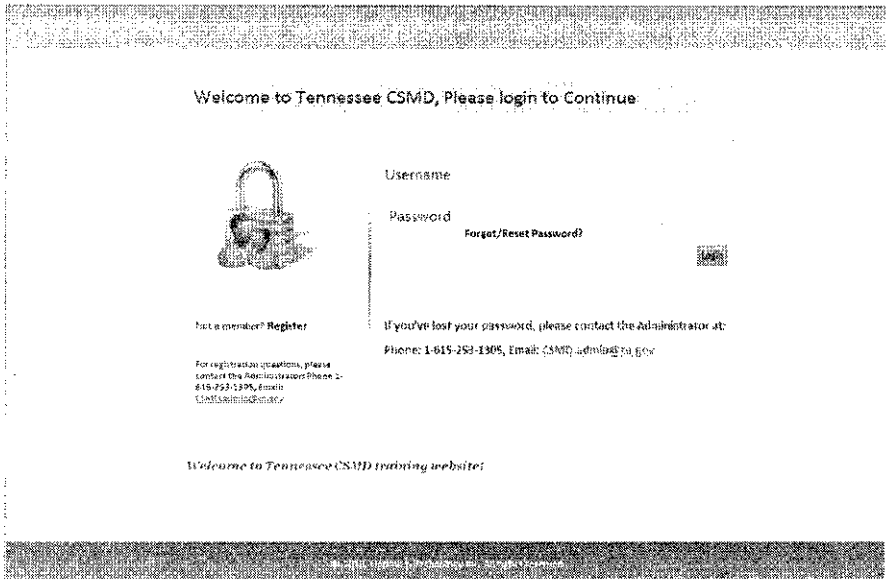
In the lower section it would need to Show the Name of the person who created the request and then the information that appears in the screen shot (Example Below). The supervisor could select reports if he wanted to view them. Supervisor could choose to check mark one or all of the boxes and this would give him an option to Export to Excel (not the reports only the table data as shown below). This could be used by supervisor to compare against his patient database to ensure only his patients are being looked up by his extenders.



Attachment Six
2013 CSMD Enhancement Requirements

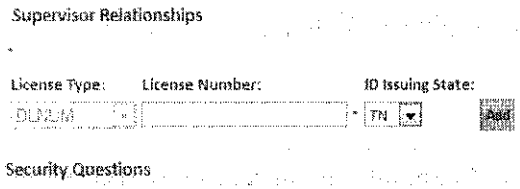
Health Care Extenders if revoked by one supervisor should still be able to log in system if extender has other supervisors that they are still performing wok on their behalf. The revoked supervisors would no longer appear in the list for the Extender to choose when creating a Request New (Patient Look-up)

ii. If Health Care Extender who has only one supervisor and that supervisor revokes access for a prompt to appear when Health Care Extender enters user name and password a question would appear "Do you have a New Supervisor" Response would be Yes/No.



iii. Extender hits Login and if they do not have an Active Supervisor in the system then the box would appear that says "Do you have a new Supervisor"

Response Yes = Window popping for them to enter New Supervisor



They would enter information but would not be allowed to enter CSMD until New Supervisor approved them.

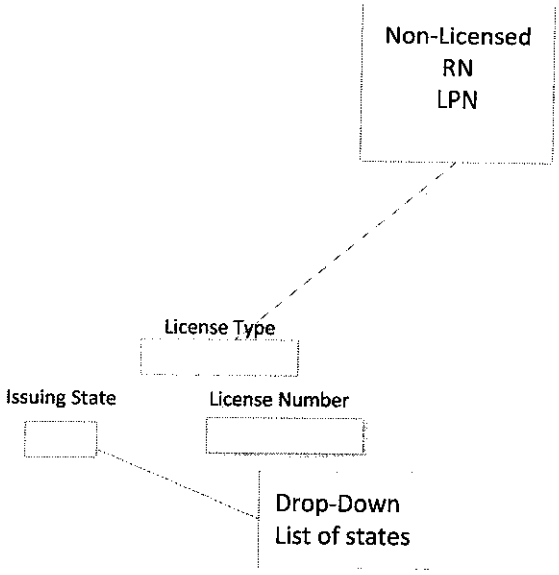
RESPONSE No = Provide a message that they will be unable to access the system until they have a Supervisor.

1. Wording to be provided by Executive Director for CSMD

k. Create limit of two on Health Care Extenders non-licensed (based this on information that will now be captured upon registration)

i. Since capturing licensure status was not in previous version a box would need to pop with data fields pictured below when logging in to capture information on existing Health Care Extenders in the system (whether licensed or non-licensed and

if licensed their license information. Need a prompt when they log in after these new fields are added)



ii. Create way to capture location of Practitioner/Pharmacist as number of non-licensed could be based on 2 non-licensed per location. When Extender is picking Supervisor before creating request it would show Supervisor and location in the pick list.

l. Need report for CSMD Admin to run that would show each supervisor and all of their extenders. Report would include (this would be used to audit health care extenders in the system)
   i. User Identification
   ii. How many Licensed and how many unlicensed associated with each supervisor

m. Prompt for supervisors to verify that delegates should still be active with this supervisor
   i. Determine frequency (EX – Every X (variable with limit of 12 months)-We would determine frequency
   ii. At log in box or prompt to take them to their list of delegates and they would need approve/revoke as appropriate
   iii. By pass box XX number of times but then if no action taken in those times the delegate will be locked out until action is taken on Health Care Extender status by the supervisor

6.5 User Type Practitioner/Occupation/APN or PA - fields to allow Physician Assistants (PA) and Accredited Practical Nurses (APN) to enter Supervisor Information (HIGH)

a. APN or PA can have multiple supervisors like Health Care Extenders and would need to be connected to supervisor in similar way as Health Care Extender
   i. Distinction for APN and PA as they area prescribers and have their own DEA but law still requires them to have a Supervising Prescriber

b. APN and PA can have Health Care Extenders so this creates a tree of connections (EXAMPLE: Practitioner Supervisor- could have APN or PA connected as well as Health Care Extenders and then APN or PA could have Health Care Extenders connected to them. In essence they are all tied to Practitioner Supervisor

Attachment Six
2013 CSMD Enhancement Requirements

        i. Possible creation of new User Type for APN and PA occupation type to accommodate functionality
    c. Supervisor must be able to audit APN and PA under their supervision (Scripts written and or Requests Generated)
    d. View request option should show the supervising prescriber for the APN/PA
    e. Supervisor must be able to view all of his APN/PA requests
    f. This would affect new registrations and existing users (User Profiles)
    g. Registration for APN or PA should have fields to provide Supervisor's Driver License
    h. User Profile for APN or PA should show supervising prescriber
    i. Supervising prescriber has right to revoke APN or PA from his supervision.

CLINICAL NOTIFICATIONS (HIGH per sub items marked – remainder = LOW)

6.6 Definitions – Clinical Notification will only generate if the patient is below the threshold and then exceeds the threshold
    a. Report of Clinical Notifications to show patient, type of notification, date notification generated and all users in system that received the notification for that particular patient (Ensure this has a tight audit trail)
        i. Report should be exportable to PDF, Excel or Comma Delimited Format
        ii. Functionality for CSMD Admins to search Clinical Notifications generated by patient, prescriber or dispenser
        iii. Search should include date range
    b. Rolling list, status and history of Clinical Notifications and provide link to actual data.

6.7 Give nature of Clinical Notification (Morphine Equivalents, Multiple Providers and Multiple Pharmacies, etc.)
    a. Would like these to appear on the Dashboard that users see when they log in (Could we pre-index these to make them faster for the user.
    b. Process for Clinical Notifications would run nightly
    c. Clinical Notification Preferences: When Clinical Notifications initially in place a box would pop for them to choose how to receive Clinical Notifications and check boxes for them to choose who should receive Clinical Notifications (Need to make sure we can have tight audit trail on the **Clinical Notification Preferences (HIGH)**
        i. Who (Default = Myself)
            1. Myself
            2. Health Care Extender (need to specify extender if they have more than one and they could multiple extender receive)
            3. Both
    d. Clinical Notifications will be on Dashboard and presented upon login (Possibly use Alert area of Dashboard since TN does not user that functionality in the system.) (HIGH)
    e. Clinical Notifications not checked within X (make variable so it can be changed but originally we will use 3 days) days an email would be sent to say they have clinical notifications.(would go to whoever was selected in the Clinical Notification Preferences)
    f. Clinical Notification Preferences added to Registration forms for Practitioner, Pharmacist and Resident Fellows for the choices of who receives and how for new registrants (Default =Myself) (HIGH)
    g. Clinical Notifications could be Red, Yellow or Green based on definitions particular to the type of Clinical Notification. (HIGH)

Attachment Six
2013 CSMD Enhancement Requirements

h. Clinical Notification could cause an email to generate and be sent to all users in the system connected to the patient (prescriber or pharmacy) OR to CSMD Admin depending on type of Clinical Notification
    i. If prescription attributed to wrong DEA when revision occurs and if that prescription recipient was included in a Clinical Notification that Clinical Notification would now go to the appropriate individual identified by the correct DEA.

i. Clinical Notifications would be presented upon login to the user as the Default setting and appear in the Dashboard area

j. Clinical Notification - Extra heading at top that flashes saying you have Clinical Notification. EXAMPLE: I need to look at or I need to assign to Health Care Extender Clinical Notification(s). Build this as an item that can be turned off or on by State or request from State to OTech

k. Clinical Notification viewed for a specific person and specific drug a practitioner could mark and it would not pop up again.(if they moved below threshold and then exceeded threshold they would pop up again)

l. Practitioner does not log on in X amount of time and X number of prescriptions being prescribed. (Would need to look at their Health Care Extenders to ensure patient lookups are being performed if not then item i. and ii below would need to happen)
    i. Refills will count toward the variable
    ii. Would generate on a report on a monthly basis and email sent to CSMD ADMIN to pick up report
        1. Generate an automated letters list that the CSMD ADMIN could review and select who should receive letters generated from the System
        2. New Letter needed for placement into CSMD for this functionality.

m. Clinical Notifications and recipients: (HIGH)
    i. Morphine Equivalent sent to those defined in the User's Clinical Notification Preferences
    ii. Excessive lookup of patients sent to CSMD Admin

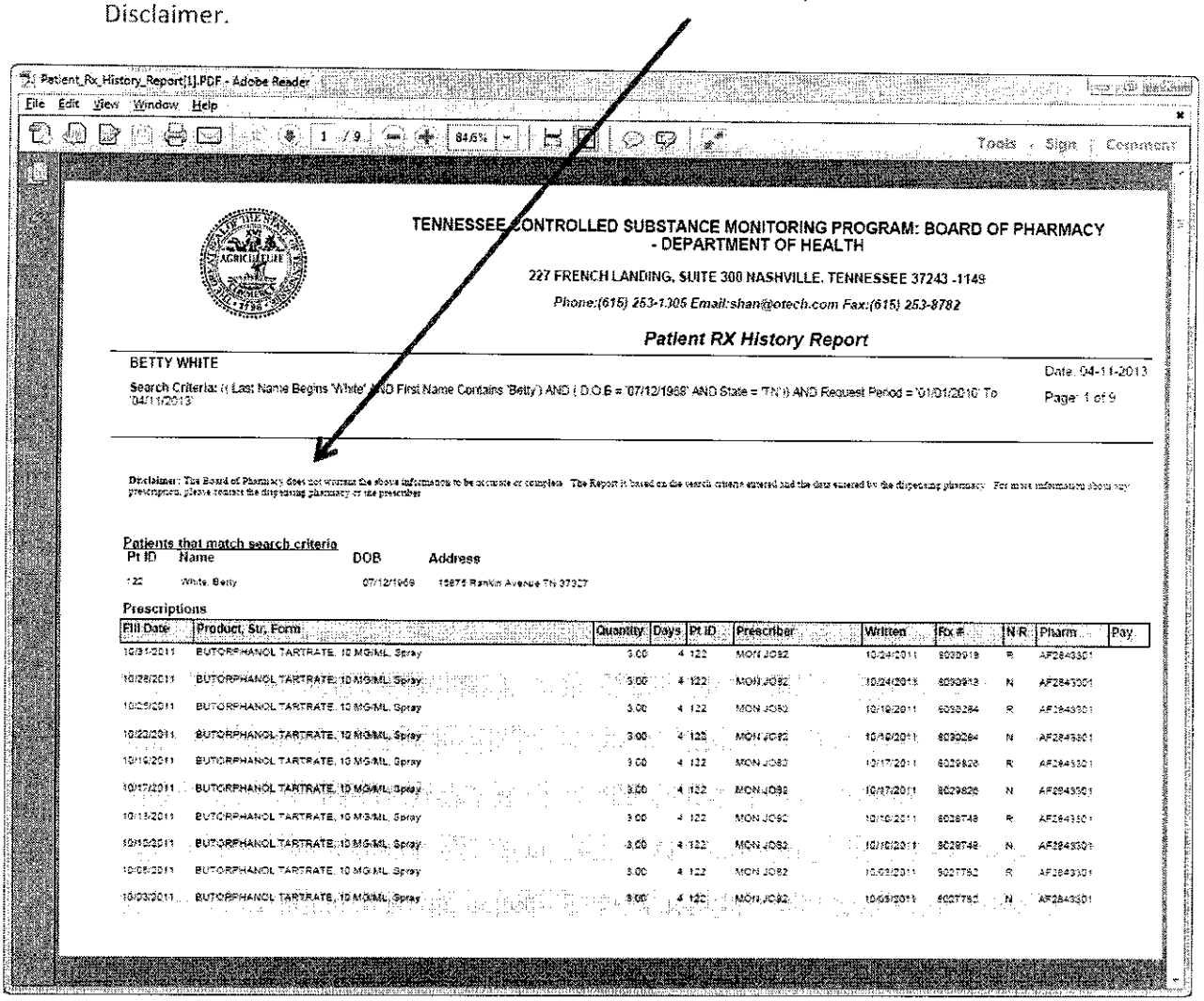
6.8 Clinical Notification – Morphine Equivalents - would be generated based on patients prescription data in the system and daily dosage based on days' supply and generate a morphine equivalent number based on the morphine equivalent calculator developed by the University of Washington. (HIGH)
    i. Threshold parameter should be variable based on research
    ii. Must presented to CSMD Advisory Committee for Approval on variables to use in system

b. Clinical Notifications –Red or Yellow
    i. An action would occur after X amount of time if no action was taken on Clinical Notification (Action still TBD)
    ii. CSMD Admin would get a report on Red and Yellow Clinical Notifications not viewed by associated health care professional in the system

6.9 Clinical Notification - Excessive look up of patients (Would appear in Dashboard) (HIGH)
    i. Clinical Notification would appear in CSMD Admin Dashboard when user looks up over X (Threshold needs to be determined) number of patients in a given timeframe

6.10 Clinical Notification – Pregnant
    i. Indicate in system if female and child bearing age (15-45 years of age) by a type of color different from normal (possibly pink)
    ii. Text warning (bold or red) that appears when patient is looked up that is female and between (15-45 years of age): Possible text: "Please remember that narcotic

prescriptions for women of child bearing age could result in Neonatal Abstinence Syndrome (NAS) should pregnancy occur; please discuss with your patient methods to prevent unintended pregnancy." This would print on the report above the Disclaimer.



Patient_Rx_History_Report[1].PDF - Adobe Reader

File Edit View Window Help

TENNESSEE CONTROLLED SUBSTANCE MONITORING PROGRAM: BOARD OF PHARMACY - DEPARTMENT OF HEALTH

227 FRENCH LANDING, SUITE 300 NASHVILLE, TENNESSEE 37243 -1149

Phone:(615) 253-1305 Email:shan@otech.com Fax:(615) 253-8782

Patient RX History Report

BETTY WHITE

Date: 04-11-2013

Search Criteria: ((Last Name Begins 'White' AND First Name Contains 'Betty') AND (D.O.B = '07/12/1969' AND State = 'TN')) AND Request Period = '01/01/2010' To '04/11/2013'

Page: 1 of 9

Disclaimer: The Board of Pharmacy does not warrant the above information to be accurate or complete. The Report is based on the search criteria entered and the data entered by the dispensing pharmacy. For more information about any prescription, please contact the dispensing pharmacy or the prescriber.

Patients that match search criteria

Pt ID	Name	DOB	Address
122	White, Betty	07/12/1969	15875 Rankin Avenue TN 37027

Prescriptions

Fill Date	Product, Str, Form	Quantity	Days	Pt ID	Prescriber	Written	Rx #	N/R	Pharm	Pay
10/31/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/24/2011	6039919	R	AF2843301	
10/28/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/24/2011	6039919	N	AF2843301	
10/25/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/19/2011	6039284	R	AF2843301	
10/22/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/19/2011	6039284	N	AF2843301	
10/19/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/17/2011	6029826	R	AF2843301	
10/17/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/17/2011	6029826	N	AF2843301	
10/13/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/10/2011	6028748	R	AF2843301	
10/10/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/10/2011	6028748	N	AF2843301	
10/06/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/03/2011	6027752	R	AF2843301	
10/03/2011	BUTORPHANOL TARTRATE, 10 MG/ML, Spray	3.00	4	122	MON JO92	10/03/2011	6027752	N	AF2843301	

1. Text should be editable for future flexibility

6.11 Clinical Notification– Multiple prescribers and dispensers

i. X number of doctors, X number of years, X of pharmacies and X number of morphine equivalents in a twelve month period of time. (Need the X's to be variables as they may need to be changed based on the information we are able to mine from the data over time – Variable not yet determined

ii. Variables will need CSMD Advisory Board Approval

6.12 Clinical Notification would appear in CSMD Admin Dashboard when user looks up over X (Threshold needs to be determined) patients in a weekend time period

6.13 TOOL: Morphine Equivalent Calculator

a. Tool for Users to calculate morphine equivalents

i. Tool taken from University of Washington : http://www.agencymeddirectors.wa.gov/opioiddosing.asp

6.14 Reports

Attachment Six
2013 CSMD Enhancement Requirements

a. Graphical Reports (Bar, Pie, etc.) with clickable regions to drill down to the data
    i. Who could generate?
        1. User –Defined list of reports
        2. CSMD Admin
        3. Reports: Practitioner vs. Peers by Occupation and Specialty
            a. Who can generate is TBD
b. Report fields
    i. User
        1. Patients
        2. Drugs Prescribed
        3. Date Range
        4. Reports should show NDC and drug name (not just NDC – these appear in Rx Analysis and Patient Search)
c. Top X report revised to also include the fields listed below and be able to be run based on these fields with the ability to base Top X on either Occupation, Specialty or both and provide export functionality to Excel
    i. Practitioner Street
    ii. Practitioner City
    iii. Practitioner State
    iv. Practitioner Zip
    v. Number of Patients
    vi. Number of Prescriptions
    ii. Occupation
    iii. Specialty

6.15 DATA COLLECTION Database: Need two boxes in the system to denote that a dispenser has received an Exemption or a Waiver from the Controlled Substance Advisory Committee. This Exemption allows them to not report and would need to expire it either at the end of the calendar (verify rule) The Waiver requires them to report in a manual way but they would still have to report and this would also expire at the end of the calendar year (verify rule). Fields needed for start and end date as these can have varying lengths before dispenser has to reapply for the Exemption/Waiver. This affects the Delinquent Pharmacy report; need OTech to determine where these sit in either tnrxreport.com or tncsmd.com.

a. Need ability to report on who has an Exemption or Waiver or both
b. If exempted they would never appear in Delinquent Pharmacy Report
c. If Waiver could still appear in Delinquent Pharmacy Report
d. DATA COLLECTION: Validate DEA number being submitted from dispenser against DEA data to ensure a valid DEA is being used
e. Change the template color (blue) to a different shade or a different color altogether to distinguish it from the CSMD view database.

6.16 Need popup to ask practitioners if they dispense

a. If they dispense mark the box in the system
    - Need way if Practitioner DEA is used as an upload as a dispenser that the Pharmacy table is updated with appropriate information on the practitioner acting as a dispenser (somewhat same as when prescriber answers question except this would come into the tnrxreport.com site)
b. Once box is marked the pharmacy table needs to populate with the practitioner information
c. Need to be able to run report to show all practitioners who are dispensing

d. Need report to show all practitioners who mark they dispense who have not reported in XX timeframe

6.17 Reports

a. Need for reports that are large to be able to run in the background and notify person when report ready for viewing. Ability to run multiple patients at same time but they would generate as separate reports and these would run in the background (TN Care needs this)

b. Change Report by Region Title to say "Report by County" as that is appropriate and correct. If region is used in generating this report then West/Middle/East should be available options for generating report.

6.18 Portal Messages (CHECK TO SEE WHAT FEATURES OF THIS ARE NOT IN THE NEW VERSION OF THIS FEATURE)

a. Need Organization and User Name to appear on screen as many users in system with same first name and last name (HIGH)

b. When you choose a User Type to send a message it should cause the users to appear in the screen. This would allow you to pick users from a particular user type to send a message more easily

c. When message sent need a report showing list that that the message was sent and success/failure on each user who should have receive the message

d. If recipient responds to the message it needs to put in some type of identification so you can respond to them (currently it does not show the person and does not include user name or email.)

6.19 Manual override on the validation process for scenarios that do not fall into the current rules of validation. There is always an exception to every rule. (HIGH)

6.20 DASHBOARD - Reports/Patient Lookup (Could this become part of the Dashboard or appear on Navigation Bar?)

a. Practitioner/Pharmacist report to show the last X number of people they looked or their Extender has looked up that would be presented when they log in

6.21 APPLICATION CHANGE: Disengage the "I certify" from the New Request window and present it after the user puts in User Name and Password and hits "Submit" and that information is correct. Present them with the "I Certify" statement that they check and it will apply for their entire session within the CSMD. (HIGH)

OIR Pre-Approval Endorsement Request
E-Mail Transmittal

TO : Jane Chittenden, OIR Procurement & Contract Management Director
Department of Finance & Administration
E-mail : Jane.Chittenden@tn.gov

FROM : Carole Sumner
E-mail : Carole.Sumner@tn.gov

DATE : 06252013

RE : Request for OIR Pre-Approval Endorsement

Applicable RFS #	**34310-21112**
OIR Endorsement Signature & Date:	
Mark Bengel 6/24/13	
Chief Information Officer	
NOTE: Proposed contract/grant support is applicable to the subject IT service technical merit.	

Office for Information Resources (OIR) pre-approval endorsement appears to be required pursuant to professional service contracting regulations pertaining to procurements with information technology as a component of the scope of service. This request seeks to ensure that OIR is aware of and has an opportunity to review the procurement detailed below and in the attached documents.

Please document OIR endorsement of the described procurement (with the appropriate signature above), and return this document via e-mail at your earliest convenience.

Contracting Agency	**Health**
Agency Contact (name, phone, e-mail)	**Mike Newman, 253-5417, mike.newman@tn.gov**

Subject Procurement Document (mark one)

- ☐ RFP
- ☐ Competitive Negotiation Request
- ☐ Alternative Procurement Method Request
- ☐ Non-Competitive Contract Request
- ☐ Non-Competitive Amendment Request
- ☐ Contract
- ☒ Contract Amendment
- ☐ Grant
- ☐ Grant Amendment

Information Systems Plan (ISP) Project Applicability

- ☐ Not Applicable to this Request
- ☒ Applicable– ISP Project# DC04C

Response Confirmed by IT Director/Staff (name): **Mike Newman**

Applicable RFS # **34310-21112**
Required Attachments (as applicable – copies without signatures acceptable) ☐ RFP, Competitive Negotiation Request, Alternative Procurement Method Request, Non-Competitive Contract Request, Non-Competitive Amendment Request ☐ Original Contract/Grant or Amendment ☐ Proposed Contract/Grant or Amendment
Subject Information Technology Service Description (Brief summary of information technology services involved. Clearly identify included technologies such as system development/maintenance, security, networking, *etc.* As applicable, identify the contract & solicitation sections related to the IT services.)

E-Health Pre-Approval Endorsement Request
E-Mail Transmittal

TO : Lovel VanArsdale, Office of e-Health Initiatives
Department of Finance & Administration
E-mail : Lovel.Vanarsdale@tn.gov

FROM : Carole Sumner
E-mail : Carole.Sumner@tn.gov

DATE : 06252013

RE : Request for eHealth Pre-Approval Endorsement

Applicable RFS # 34310-21112	
Office of e-Health Initiatives Endorsement Signature & Date:	
William Kim	6/25/2013
Office of e-Health Initiatives	

Office of e-Health Initiatives (eHealth) pre-approval endorsement appears to be required pursuant to professional service contracting regulations pertaining to procurements with medical/mental health-related professional, pharmaceutical, laboratory, or imaging type services as a component of the scope of service. This request seeks to ensure that eHealth is aware of and has an opportunity to review the procurement detailed below and in the attached document(s).

Please indicate eHealth endorsement of the described procurement (with the appropriate signature above), and return this document via e-mail at your earliest convenience.

Contracting Agency	**Health**
Agency Contact *(name, phone, e-mail)*	**Mike Newman, 253-5417, mike.newman@tn.gov**

Required Attachments *(as applicable – copies without signatures acceptable)*

- ☐ RFP, Competitive Negotiation Request, Alternative Procurement Method Request, or Non-Competitive Contract/Amendment Request
- ☒ proposed contract or amendment

Medical/Mental Health-Related Service Description

This amendment is necessary to make necessary changes to the Controlled Substance Monitoring Database (CSMD) system that will provide tools for the CSMD Administrators that simplify administration, improve audit capabilities, expand reporting and provide improved problem tracking capabilities. Examples of these enhancements include a faster way to identify users in the system, reporting capabilities to identify abusers of the system and capabilities to identify potential individuals to investigate. In addition, authorized out of state users' registration will be simplified and more securely managed.

GENERAL ASSEMBLY OF THE STATE OF TENNESSEE
FISCAL REVIEW COMMITTEE

320 Sixth Avenue, North – 8th Floor
NASHVILLE, TENNESSEE 37243-0057
615-741-2564

Sen. Bill Ketron, Chairman
Senators
Douglas Henry, Reginald Tate
Brian Kelsey, Ken Yager
Eric Stewart
Randy McNally, *ex officio*
Lt. Governor Ron Ramsey, *ex officio*

Rep. Curtis Johnson, Vice-Chairman
Representatives
Tommie Brown, David Shepard
Jim Coley, Tony Shipley
Charles Curtiss, Curry Todd
Johnny Shaw, Mark White
Charles Sargent, *ex officio*
Speaker Beth Harwell, *ex officio*

MEMORANDUM

TO: The Honorable Mark Emkes, Commissioner
Department of Finance and Administration

FROM: Senator Bill Ketron, Chairman
Representative Curtis Johnson, Vice-Chairman

DATE: July 10, 2012

SUBJECT: **Contract Comments**
(Fiscal Review Committee Meeting 7/9/12)

RFS# 343.10-21112 (Edison # 28672)
Department: Health
Vendor: Optimum Technology, Inc.
Summary: The vendor is responsible for information technology services in connection with the Controlled Substance Monitoring Database (CSMD). The proposed amendment includes upgrades to increase the CSMD capacity; increases the reporting frequency for dispensers; requires interstate data exchange; increases the maximum liability by $749,125; includes payments for new services; and updates the contract contact information.
Current maximum liability: $960,000
Proposed maximum liability: $1,709,125

After review, the Fiscal Review Committee voted to recommend approval of the contract amendment.

cc: The Honorable John Dreyzehner, Commissioner
Ms. Jessica Robertson, Chief Procurement Officer

STATE OF TENNESSEE
DEPARTMENT OF HEALTH

JOHN J. DREYZEHNER, MD, MPH
COMMISSIONER

BILL HASLAM
GOVERNOR

Mr. Lucian Geise, Director
Fiscal Review Committee
Rachel Jackson Building, 8th Floor
320 Sixth Avenue North
Nashville, TN 37243

and

Jessica Robertson, Chief Procurement Officer
Department of General Services
Tennessee Tower, Third Floor
Nashville, TN 37243

Dear Director Geise and CPO Robertson:

The Tennessee Prescription Safety Act of 2012, Public Chapter 880, was signed into law by Governor Bill Haslam on May 9, 2012. This law revised the Controlled Substance Monitoring Act of 2002 by emphasizing the importance of the controlled substance monitoring database (CSMD) as a public health and safety tool among healthcare providers and law enforcement. The law requires prescribers to check the CSMD before prescribing certain controlled substances, increase the frequency that dispensers report to the CSMD, and allows the sharing of data between states. All of these changes to current law will increase the traffic to the CSMD at a far greater rate than the current CSMD configuration can support. Therefore modifications will be required to the CSMD to support the increased usage of the CSMD and to support interstate data sharing of the CSMD.

The Department of Health competitively awarded a contract in September of 2011 to Optimum Technology, Inc. (Contract FA-12-36909) for the provision of information technology consulting services for the CSMD, including development and maintenance. It is in the best interest of the State to amend the current contract to facilitate necessary changes to the CSMD to comply with the newly enacted law. The modifications to the CSMD will require one-time costs of $281,700; $273,100 of which will be funded with interdepartmental revenues the department will receive from the Department of Mental Health using the administrative portion of the federal Substance Abuse Prevention and Treatment block grant. The remaining one-time costs of $15,000 and the annual recurring costs of $119,400 will be funded using general fund state appropriations included in the Department's fiscal year 2013 recurring budget. **No board revenues will be used to fund the costs associated with this amendment.** Therefore we request approval to amend the current contract to make the necessary changes to the CSMD to comply with the Prescription Safety Act of 2012.

We appreciate your approval to proceed with this amendment and thank you for your consideration.

Sincerely,

John J. Dreyzehner, MD, MPH
Commissioner

3rd Floor, Cordell Hull Building
425 5th Avenue North * Nashville, TN 37243
(615) 741-3111 * www.tn.gov/health

Supplemental Documentation Required for Fiscal Review Committee

*Contact Name:	Mike Newman Andy Holt	*Contact Phone:	253-5417 253-1300
*Original Contract Number:	28672	*Original RFS Number:	34310-21112
Edison Contract Number: *(if applicable)*	same	Edison RFS Number: *(if applicable)*	same
*Original Contract Begin Date:	September 12, 2011	*Current End Date:	September 11,2016
Current Request Amendment Number: *(if applicable)*		#1	
Proposed Amendment Effective Date: *(if applicable)*		September 1, 2012	
*Department Submitting:		Health	
*Division:		DHLR/Health Related Boards	
*Date Submitted:		June 29, 2012	
*Submitted Within Sixty (60) days:		Yes	
If not, explain:			
*Contract Vendor Name:		Optimum Technology	
*Current Maximum Liability:		$960,000	

*Current Contract Allocation by Fiscal Year:
(as Shown on Most Current Fully Executed Contract Summary Sheet)

FY: 2012	FY: 2013	FY: 2014	FY: 2015	FY: 2016	FY: 2017
$152,000	$192,000	$192,000	$192,000	$192,000	$40,000

*Current Total Expenditures by Fiscal Year of Contract:
(attach backup documentation from STARS or FDAS report)

FY: 2012	FY:	FY:	FY:	FY	FY
$48,000	$	$	$	$	$

IF Contract Allocation has been greater than Contract Expenditures, please give the reasons and explain where surplus funds were spent:	N/A
IF surplus funds have been carried forward, please give the reasons and provide the authority for the carry forward provision:	N/A
IF Contract Expenditures exceeded Contract Allocation, please give the reasons and explain how funding was acquired to pay the overage:	N/A

*Contract Funding	State:		Federal:	

Supplemental Documentation Required for Fiscal Review Committee

Source/Amount:			
Interdepartmental:		*Other*:	$960,000
If "*other*" please define:		Dedicated State Appropriations (Board Fees)	

Dates of All Previous Amendments or Revisions: (*if applicable*)	Brief Description of Actions in Previous Amendments or Revisions: (*if applicable*)
N/A	

Method of Original Award: (*if applicable*)	RFP
*What were the projected costs of the service for the entire term of the contract prior to contract award?	$960,000

Supplemental Documentation Required for Fiscal Review Committee

For all new non-competitive contracts and any contract amendment that changes Sections A or C.3. of the original or previously amended contract document, provide estimates based on information provided the Department by the vendor for determination of contract maximum liability. Add rows as necessary to provide all information requested.

If it is determined that the question is not applicable to your contract document attach detailed explanation as to why that determination was made.

Planned expenditures by fiscal year by deliverable. Add rows as necessary to indicate all estimated contract expenditures.

Deliverable description:	FY:2012	FY:2013	FY:2014	FY:2015	FY:2016	FY:2017
Data base	152,000	558,200	311,400	311,400	311,400	64,725

Proposed savings to be realized per fiscal year by entering into this contract. If amendment to an existing contract, please indicate the proposed savings to be realized by the amendment. Add rows as necessary to define all potential savings per deliverable.

Deliverable description:	FY:	FY:	FY:	FY:	FY:	
N/A						

Comparison of cost per fiscal year of obtaining this service through the proposed contract or amendment vs. other options. List other options available (including other vendors), cost of other options, and source of information for comparison of other options (e.g. catalog, Web site). Add rows as necessary to indicate price differentials between contract deliverables.

Proposed Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:
Other Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:
Other Vendor Cost: (name of vendor)	FY:	FY:	FY:	FY:	FY:

Vouchers For a Payment

View/Add Related Documents

Back To Payment Inquiry

Bank Name: STATE TRUST

Bank Account #: 00538

Pay Cycle: WRNTS **Seq Num:** 2062

Vendor Name: Optimum Tecnology Inc

Address: 100 E Campus View Blvd Ste 380

Columbus OH 43235 USA

Pymnt Ref ID: 0002021169

Accounting Date: 03/16/2012

Payment Date: 03/16/2012

Days Outstanding: 4

Payment Clear Date: 03/20/2012

Reconcile Date: 03/21/2012

Value Date: 03/16/2012

Payment Amount: 78,000.00 USD **Payment Method:** CHK

Description

Business Unit	Voucher ID	Advice Seq	Advice Date	Invoice Number	Gross Paid Amount	Paid Amount	Currency	Discount Taken	Late Charge	Source
34301	00317501	1	12/30/2011	23596	48,000.00	48,000.00	USD			Accounts Payable Vouchers

6/28/12

This is the only payment made to date against this contract.

OIR Pre-Approval Endorsement Request
E-Mail Transmittal

TO : Jane Chittenden, OIR Procurement & Contract Management Director
Department of Finance & Administration
E-mail : Jane.Chittenden@tn.gov

FROM : Mike Newman
E-mail : Mike.Newman@Tn.Gov

DATE : 06/27/2012

RE : Request for OIR Pre-Approval Endorsement

Applicable RFS #	**34310-21112**
OIR Endorsement Signature & Date:	
Mark Bengel (GP)	6/28/12
Chief Information Officer	
NOTE: Proposed contract/grant support is applicable to the subject IT service technical merit.	

Office for Information Resources (OIR) pre-approval endorsement appears to be required pursuant to professional service contracting regulations pertaining to procurements with information technology as a component of the scope of service. This request seeks to ensure that OIR is aware of and has an opportunity to review the procurement detailed below and in the attached documents.

Please document OIR endorsement of the described procurement (with the appropriate signature above), and return this document via e-mail at your earliest convenience.

Contracting Agency	**Health**
Agency Contact (name, phone, e-mail)	**Mike Newman**

Subject Procurement Document (mark one)

- ☐ RFP
- ☐ Competitive Negotiation Request
- ☐ Alternative Procurement Method Request
- ☐ Non-Competitive Contract Request
- ☒ Non-Competitive Amendment Request
- ☐ Contract
- ☒ Contract Amendment
- ☐ Grant
- ☐ Grant Amendment

Information Systems Plan (ISP) Project Applicability

- ☒ Not Applicable to this Request
- ☐ Applicable– ISP Project#

Response Confirmed by IT Director/Staff (name):

Applicable RFS # 34310-21112

Required Attachments (as applicable – copies without signatures acceptable)

- ☒ RFP, Competitive Negotiation Request, Alternative Procurement Method Request, Non-Competitive Contract Request, Non-Competitive Amendment Request
- ☒ Original Contract/Grant or Amendment
- ☐ Proposed Contract/Grant or Amendment

Subject Information Technology Service Description
(Brief summary of information technology services involved. Clearly identify included technologies such as system development/maintenance, security, networking, *etc.* As applicable, identify the contract & solicitation sections related to the IT services.)

We currently have a contract with Optimum Technology, Inc. for the provision of information technology services to remotely host the Control Substance Monitoring Database (CSMD) required by TCA 53-10-304. This contract amendment is made in order to ensure compliance with the intent of Public Chapter 880, which was signed into law by Governor Haslam on May 9, 2012. The law emphasizes the importance of the controlled substance monitoring database (CSMD) as a public health and safety tool among healthcare providers and law enforcement. The law requires prescribers to check the CSMD before prescribing certain controlled substances, increases the frequency that dispensers report to the CSMD, and allows the sharing of data between states. All of these changes to current law will increase traffic to the CSMD at a far greater rate than the current configuration can support. This scenario has been presented to our vendor and appropriate changes to the hardware and software have been proposed to accommodate the increased traffic and maintain performance expectations.

The CSMD is remotely hosted by Optimum Technology, Inc. and does not use NetTN. All services are provided and maintained by Optimum Technology, Inc.

E-Health Pre-Approval Endorsement Request
E-Mail Transmittal

TO : Lovel VanArsdale, Office of e-Health Initiatives
Department of Finance & Administration
E-mail : Lovel.Vanarsdale@tn.gov

FROM : Mike Nerwman
E-mail : Mike.Newman@Tn.Gov

DATE : 06/27/2012

RE : Request for eHealth Pre-Approval Endorsement

Applicable RFS # 34310-21112	
Office of e-Health Initiatives Endorsement Signature & Date:	
William Kin	6/27/2012
Office of e-Health Initiatives	

Office of e-Health Initiatives (eHealth) pre-approval endorsement appears to be required pursuant to professional service contracting regulations pertaining to procurements with medical/mental health-related professional, pharmaceutical, laboratory, or imaging type services as a component of the scope of service. This request seeks to ensure that eHealth is aware of and has an opportunity to review the procurement detailed below and in the attached document(s).

Please indicate eHealth endorsement of the described procurement (with the appropriate signature above), and return this document via e-mail at your earliest convenience.

Contracting Agency	**Health**
Agency Contact *(name, phone, e-mail)*	**Mike Newman**

Required Attachments *(as applicable – copies without signatures acceptable)*

- ☒ RFP, Competitive Negotiation Request, Alternative Procurement Method Request, or Non-Competitive Contract/Amendment Request
- ☒ proposed contract or amendment

Medical/Mental Health-Related Service Description

We currently have a contract with Optimum Technology, Inc. for the provision of information technology services to remotely host the Control Substance Monitoring Database (CSMD) required by TCA 53-10-304. This contract amendment is made in order to ensure compliance with the intent of Public Chapter 880, which was signed into law by Governor Haslam on May 9, 2012. The law emphasizes the importance of the controlled substance monitoring database (CSMD) as a public health and safety tool among healthcare providers and law enforcement. The law requires prescribers to check the CSMD before prescribing certain controlled

Applicable RFS # 34310-21112

substances, increases the frequency that dispensers report to the CSMD, and allows the sharing of data between states. All of these changes to current law will increase traffic to the CSMD at a far greater rate than the current configuration can support. This scenario has been presented to our vendor and appropriate changes to the hardware and software have been proposed to accommodate the increased traffic and maintain performance expectations.

The CSMD is remotely hosted by Optimum Technology, Inc. and does not use NetTN. All services are provided and maintained by Optimum Technology, Inc.

Non-Competitive Amendment Request

NOT required for a contract with a federal, Tennessee, or Tennessee local government entity or a grant.
Route a completed request, as one file in PDF format, via e-mail attachment sent to: Agsprs.Agsprs@state.tn.us

APPROVED
COMMISSIONER OF FINANCE & ADMINISTRATION

Request Tracking #	34310-21112-01
1. Procuring Agency	Health
2. Contractor	Optimum Technology Inc.
3. Contract #	FA1236909
4. Proposed Amendment #	1
5. Edison ID #	18489

6. Contract Begin Date	September 12, 2011
7. Current Contract End Date *– with ALL options to extend exercised*	September 11, 2016
8. Proposed Contract End Date *– with ALL options to extend exercised*	September 11, 2016
9. Current Maximum Contract Cost *– with ALL options to extend exercised*	$ 960,000
10. Proposed Maximum Contract Cost *– with ALL options to extend exercised*	$ 1,709,125
11. Office for Information Resources Endorsement *– information technology service (N/A to THDA)*	☐ Not Applicable ☒ Attached
12. eHealth Initiative Support *– health-related professional, pharmaceutical, laboratory, or imaging*	☐ Not Applicable ☒ Attached
13. Human Resources Support *– state employee training service*	☒ Not Applicable ☐ Attached

14. Explanation Need for the Proposed Amendment

The amendment is necessary to make necessary changes to the Controlled Substance Monitoring Database (CSMD) system to comply with the Prescription Safety Act (PSA), Public Chapter 880. The CSMD system is maintained by Optimum Technology, Inc. The PSA requires all prescribers and dispensers to check the CSMD before dispensing or writing a prescription for Schedule II, III, IV and V controlled substances. In addition, the PSA allows for interstate CSMD data sharing which will require CSMD changes.

15. Name & Address of the Contractor's Principal Owner(s)

Request Tracking #	34310-21112-01

– NOT required for a TN state education institution

Josh Davda, President Optimum Technology, Inc. 100 E. Campus View Blvd., Suite 380 Columbus OH 43235

16. Evidence Contractor's Experience & Length Of Experience Providing the Service

The contractor was founded in 1984 and has been providing services for over 25 years.

17. Efforts to Identify Reasonable, Competitive, Procurement Alternatives

The Optimum Technology, Inc. Controlled Substance Monitoring Database software is proprietary and can only be maintained by Optimum Technology, Inc.

18. Justification *– specifically explain why non-competitive negotiation is in the best interest of the state*

An RFP was issued for a Controlled Substance Monitoring Database (CSMD) system and through this competitive process a contract was awarded to Optimum Technology, Inc. Changes to the CSMD are mandated by the Prescription Safety Act, Public Chapter 880. It is in the best interest of the State to amend the current contract to facilitate necessary changes to the CSMD system to comply with the law.

Agency Head Signature and Date *– MUST be signed by the ACTUAL agency head as detailed on the current Signature Certification. Signature by an authorized signatory is acceptable only in documented exigent circumstances*

Amendment #1

CONTRACT AMENDMENT

Agency Tracking #	Edison ID	Contract #	Amendment #
34310-21112	28672	FA1236909	1

Contractor Legal Entity Name	Edison Vendor ID
Optimum Technology, Inc.	18489

Amendment Purpose & Effect(s)

This contract amendment is made in order to ensure compliance with the intent of Public Chapter 880, which was signed into law by Governor Haslam on May 9, 2012. The law emphasizes the importance of the controlled substance monitoring database (CSMD) as a public health and safety tool among healthcare providers and law enforcement. The law requires prescribers to check the CSMD before prescribing certain controlled substances, increases the frequency that dispensers report to the CSMD, and allows the sharing of data between states. All of these changes to current law will increase traffic to the CSMD at a far greater rate than the current configuration can support. This scenario has been presented to our vendor and appropriate changes to the hardware and software have been proposed to accommodate the increased traffic and maintain performance expectations.

Amendment Changes Contract End Date: ☐ YES ☒ NO | **End Date:** September 11, 2016

Amount of the TOTAL Contract Amount INCREASE or DECREASE per this Amendment: **$ 749,125**

Funding —

FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
12				152,000	152,000
13	93,100		273,100	192,000	558,200
14	119,400			192,000	311,400
15	119,400			192,000	311,400
16	119,400			192,000	311,400
17	24,725			40,000	64,725
TOTAL:	**476,025**		**273,100**	**960,000**	**1,709,125**

American Recovery and Reinvestment Act (ARRA) Funding: ☐ YES ☒ NO

Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.

Speed Chart (optional)	Account Code (optional)
HL00000587	70899000

OCR USE

FA1236909-01

RECEIVED

JUL 20 2012

HEALTH LICENSURE AND REGULATION

AMENDMENT ONE
OF CONTRACT FA1236909

This Amendment is made and entered by and between the State of Tennessee, Department of Health, hereinafter referred to as the "State" and Optimum Technology, Inc., hereinafter referred to as the "Contractor" It is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

The text of Contract Section A.1.d has been deleted and replaced with the following:

A.1.d. The Contractor shall be capable of accepting data in the American Society for Automation in Pharmacy (ASAP) 2009 format.

The following Sections have been added to the contract:

A.1.i. The Contractor shall host computer hardware and software, provide customization and installation to increase CSMD capacity by November 1, 2012 which shall include:

(a) Four (4) Intel Xeon E7-2870 2.4GHz, 30M cache processors 10C256GB Memory (16x16GB), 1066MHz Database Servers with two (2) x 300 GB 10K RPM Serial-Attach SCSI 6Gbps Servers.
(b) Two (2) Intel Xeon X3470, 2.93GHz, 8M Cache, Turbo, HT with 32GB memory, 1066MHz, 2 x 300 GB 10K RPM Serial-Attach SCSI 6 Gbps Servers.
(c) Two (2) Barracuda 340 Load Balancer, 950 MBPS, Layer 7 Load Balancing, Intrusion Detection Servers
(d) Four (4) SQL Server 2008 R2 Enterprise
(e) Six (6) Windows Server 2008 R2 Enterprise licenses
(f) 30 AMP Redundant A&B power circuit
(g) 2MB per/second 5 carrier redundant

A.1.j. (a) The Contractor shall provide and host the OTECH-PMIX interface component by January 1, 2013 between the State wherein the Prescription Monitoring Program is implemented and the HUB installed by IJIS Institute (RxCheck), and Customization and Modifications to PMP Software Application, which includes programming, QA testing, implementation, integration and Project management.
(b) The Contractor shall provide maintenance and support for the OTECH-PMIX interface Component beginning January 1, 2013.

The text of Contract Section A.2.a.(2) and A.2.a.(3) have been deleted and replaced with the following:

08/19/12

A.2. Data Management 8-10-12

a. Data Collection

(2) The Contractor shall collect dispenser prescription data every seven (7) days, or as otherwise directed by the State, from dispensers required to report, and shall review the data to determine conformity with format. If any data submitted does not meet the prescribed format, the contractor shall be responsible for contacting the dispenser and obtaining a corrected submission. If corrected data is not received within 7 days from notification, the Contractor shall provide a list of those dispensers to the State by the 15th day. The system shall have a mechanism for the purpose of correcting inaccuracies by practitioners, pharmacists, patients and others. Any change to this mechanism shall be submitted to the State for approval and approved by the State prior to being implemented.

(3) The Contractor shall collect dispenser prescription data in the format established by the American Society for Automation In Pharmacy (ASAP) 2009 for Controlled Substances or as otherwise provided by applicable law. The data must be securely collected by telephone modem connection, diskette, CD-ROM,

tape, secure FTP, Virtual Private Network (VPN), or other format or methods approved by the State. The Contractor shall ensure the authentication process to support user sign-on accepts federated security identity assertions.

The following Sections have been added to the contract as follows:

A.7. Alerting and Reporting.

h. The system shall have the capability of practitioner-supervisor/practitioner extender and pharmacist-supervisor/pharmacist extender users. The practitioner extender or pharmacist extender shall be allowed to request password access, but only be granted password access after approval from the practitioner or pharmacist supervisor. Practitioner or pharmacist supervisors may delegate an unlimited number of state-licensed or state-registered users, but a mechanism shall exist to ensure a maximum of only two (2) non-licensed or registered users at any one time. The practitioner or pharmacist supervisor shall have capability to add or revoke access to any of their delegated users at any time. The supervisor shall also have the ability to audit the use of the database by any of their authorized delegates via a report available to them as a request history. Requests for patient information may be fulfilled directly to the practitioner or pharmacist extender once they have been properly registered by the practitioner or pharmacist supervisor to access patient information found in the database.

The text of Contract Section A.8.a has been deleted and replaced with the following:

A.8. Interfaces.

a. The system must interface, at no cost to the State, with the following systems through real-time, batch, or web services interface:

(1) DEA information extracted from the DEA subscription CD,
(2) NDC information purchased from a vendor that does give therapeutic class code,
(3) Department of Health, Division of Health Related Board licensing database,
(4) US Postal Service address standardization data.
(5) Tennessee Department of Safety Driver License Database

The text of Contract Section A.8.d has been deleted and replaced with the following:

A.8.d The system shall be capable of interstate data exchange using the Prescription Monitoring Information Exchange (PMIX) architecture with the PMPi and RxCheck Hubs. The system shall include all necessary hardware and/or software to accomplish the interstate exchange of CSMD data with states.

The following sections have been added to the contract:

A.10 Control Substance Monitoring Database Performance.

Based on peak hours of usage, the CSMD shall support up to 1,000 concurrent transactions per second with a maximum query response time of 10.4 seconds per transaction during peak hours of operation.

A.11 Training Database

The Contractor shall develop and host a training database which shall be used to educate healthcare providers about database functionality. The database shall only be populated with data sent to the Contractor by the State; such data will be fictitious and used for educational purposes only. No data contained in the training database shall be incorporated in any way into the statistics or reports from the main database, which are used for public health reporting purposes.

The text of Contract Section C.1 has been deleted and replaced with the following:

C.1 Maximum Liability. In no event shall the maximum liability of the State under this Contract exceed One Million Seven Hundred and Nine Thousand One Hundred and Twenty-five Dollars ($1,709,125). The payment rates in section C.3 shall constitute the entire compensation due the Contractor for all service and Contractor obligations hereunder regardless of the difficulty, materials or equipment required. The payment rates include, but are not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor.

The Contractor is not entitled to be paid the maximum liability for any period under the Contract or any extensions of the Contract for work not requested by the State. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the State requests work and the Contractor performs said work. In which case, the Contractor shall be paid in accordance with the payment rates detailed in section C.3. The State is under no obligation to request work from the Contractor in any specific dollar amounts or to request any work at all from the Contractor during any period of this Contract.

The text of Contract Section C.3 has been deleted and replaced with the following:

C.3. Payment Methodology. The Contractor shall be compensated based on the payment rates herein for units of service authorized by the State in a total amount not to exceed the Contract Maximum Liability established in section C.1.

a. The Contractor's compensation shall be contingent upon the satisfactory completion of units, milestones, or increments of service defined in section A.

b. The Contractor shall be compensated for said units, milestones, or increments of service based upon the following payment rates:

Service Description	**Amount** (per compensable increment)*
Quarterly System Maintenance and Support of the Database (ref *Proforma* Contract Sections A.1.b, A.3., and A.4.)	$ 21,000 per Quarter
Quarterly Collection of Data from the Dispenser, Cleansing of Data collected, Data archiving, Data reporting, and Loading of that Data to the Controlled Substance Monitoring Database (CSMD) (ref *Proforma* Contract Sections A.1.c. and A.2.)	$ 27,000 per Quarter
Initial One-Time Costs for Computer Hardware and Software Installation and Implementation (*ref Proforma Contract Sections A.1.i.(a),A.1.i.(b),A.1.i.(c)).*	$228,600 One-Time Payment
Initial One-Time Costs for OTECH-PMIX Interface Component HUB for Interstate Data Sharing (*ref Proforma Contract Sections A.1.j.(a).)*	$44,500 One-Time Payment
Quarterly System Maintenance and Support of the Microsoft Software (*ref Proforma Contract Sections A.1.i.(d), A.1.i.(e), A.1.i.(f), A.1.i.(g).)*	$27,600 per Quarter
Quarterly Maintenance and Support of the OTECH-PMIX Interface Component HUB for Interstate Data Sharing *(ref Proforma Contract section A.1.j.(b).)*	$2,250 per Quarter

Initial One-Time Costs to develop, implement and host a CSMD Training Database (*ref Proforma Contract Section A.11)*	$15,000 One-Time Payment

* NOTICE: The amount(s) per compensable increment detailed above shall be contingent upon the State's receipt of an invoice (as required in section C.5., below) for said service(s) within thirty (30) days after the end of the calendar quarter in which the service(s) were rendered. At the sole discretion of the State, the amount per compensable increment of any service for which the State receives an invoice later than prescribed herein shall be subject to a reduction in amount of up to 100%. In the case of an untimely invoice, before any payment will be considered by the State, the Contractor must submit a written request regarding the untimely invoice, which shall detail the reason the invoice is untimely as well as the Contractor's plan for submitting all future invoices no later than prescribed herein, and it must be signed by an individual empowered to bind the Contractor to this Contract.

The text of Contract Section C.5 has been deleted and replaced with the following:

C.5. Invoice Requirements. The Contractor shall invoice the State only for completed increments of service and for the amount stipulated in section C.3, above, and present said invoices no more often than monthly, with all necessary supporting documentation, to:

Department of Health
Andrew Holt, PharmD, Executive Director Board of Pharmacy
TN Board of Pharmacy
227 French Landing Drive, Suite 300
Nashville, TN 37243

a. Each invoice shall clearly and accurately detail all of the following required information (calculations must be extended and totaled correctly).

(1) Invoice Number (assigned by the Contractor)
(2) Invoice Date
(3) Contract Number (assigned by the State)
(4) Customer Account Name: Department of Health, Board of Pharmacy
(5) Customer Account Number (assigned by the Contractor to the above-referenced Customer)
(6) Contractor Name
(7) Contractor Federal Employer Identification, Social Security, or Tennessee Edison Registration ID Number Referenced in Preamble of this Contract
(8) Contractor Contact for Invoice Questions (name, phone, and/or fax)
(9) Contractor Remittance Address
(10) Description of Delivered Service
(11) Complete Itemization of Charges, which shall detail the following:

i. Service or Milestone Description (including name & title as applicable) of each service invoiced
ii. Number of Completed Units, Increments, Hours, or Days as applicable, of each service invoiced
iii. Applicable Payment Rate (as stipulated in Section C.3.) of each service invoiced
iv. Amount Due by Service
v. Total Amount Due for the invoice period

b. The Contractor understands and agrees that an invoice under this Contract shall:

(1) include only charges for service described in Contract Section A and in accordance with payment terms and conditions set forth in Contract Section C;
(2) only be submitted for completed service and shall not include any charge for future work;

(3) not include sales tax or shipping charges; and
(4) initiate the timeframe for payment (and any discounts) only when the State is in receipt of the invoice, and the invoice meets the minimum requirements of this section C.5.

The text of Contract Section E.2 has been deleted and replaced with the following:

E.2. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by EMAIL or facsimile transmission with recipient confirmation. Any such communications, regardless of method of transmission, shall be addressed to the respective party at the appropriate mailing address, facsimile number, or EMAIL address as set forth below or to that of such other party or address, as may be hereafter specified by written notice.

The State:

Andrew Holt, PharmD, Executive Director Board of Pharmacy
TN Board of Pharmacy
227 French Landing Drive, Suite 300
Nashville, TN 37243
Phone: (615) 253-1300
FAX: (615) 253-8782
Email: Andrew.Holt@tn.gov

The Contractor:

Josh M. Davda, President & CEO
Optimum Technology, Inc.
100 E. Campus View Blvd, Suite 380
Columbus, OH 43235
Phone: (614) 785-1110
FAX: (614) 785-1114
Email: Josh.Davda@otech.com

All instructions, notices, consents, demands, or other communications shall be considered effectively given upon receipt or recipient confirmation as may be required.

Required Approvals. The State is not bound by this Amendment until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

Amendment Effective Date. The revisions set forth herein shall be effective on the September 1, 2012. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

IN WITNESS WHEREOF,

Optimum Technology, Inc.:

July 19, 2012

SIGNATURE **DATE**

JOSH M. DAVDA, President

PRINTED NAME AND TITLE OF SIGNATORY (above)

Department of Health:

John J. Dreyzehner, MD, MPH, FACOEM 7-27-12

John J. Dreyzehner MD, MPH Commissioner DATE

– BASE CONTRACT –

CONTRACT

(fee-for-service contract with an individual, business, non-profit, or governmental entity of another state)

Begin Date	End Date	Agency Tracking #	Edison Record ID
September 12, 2011	September 11, 2016	34310-21112	**28672**

Contractor Legal Entity Name	Edison Vendor ID
Optimum Technology, Inc.	18489

Subrecipient or Vendor	CFDA #	FEIN or SSN (optional)
☐ Subrecipient ☒ Vendor		311231081

Service Caption (one line only)

Regulatory Board Computer System

FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
2012				152,000	152,000
2013				192,000	192,000
2014				192,000	192,000
2015				192,000	192,000
2016				192,000	192,000
2017				40,000	40,000
TOTAL:				**960,000**	**960,000**

American Recovery and Reinvestment Act (ARRA) Funding: ☐ YES ☒ NO

Ownership/Control

☐ African American ☒ Asian ☐ Hispanic ☐ Native American ☐ Female

☐ Person w/Disability ☒ Small Business ☐ Government ☐ NOT Minority/Disadvantaged

☐ Other:

Selection Method & Process Summary (mark the correct response to confirm the associated summary)

☒ RFP	The procurement process was completed in accordance with the approved RFP document and associated regulations.
☐ Competitive Negotiation	The predefined, competitive, impartial, negotiation process was completed in accordance with the associated, approved procedures and evaluation criteria.
☐ Alternative Competitive Method	The predefined, competitive, impartial, procurement process was completed in accordance with the associated, approved procedures and evaluation criteria.
☐ Non-Competitive Negotiation	The non-competitive contractor selection was completed as approved, and the procurement process included a negotiation of best possible terms & price.
☐ Other	The contractor selection was directed by law, court order, settlement agreement, or resulted from the state making the same agreement with all interested parties or all parties in a predetermined "class."

Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.

Speed Code	Account Code
HL00000587	70899000

OCR USE - FA

FA1236909

CONTRACT
BETWEEN THE STATE OF TENNESSEE,
DEPARTMENT OF HEALTH
AND
OPTIMUM TECHNOLOGY, Inc.

This Contract, by and between the State of Tennessee, Department of Health, hereinafter referred to as the 'State" and Optimum Technology, Inc., hereinafter referred to as the "Contractor," is for the provision of information technology services in connection with the maintenance of the State's data repository that collects, maintains and reports Schedule II, III, IV and V controlled substance prescription data dispensed in the State of Tennessee, as further defined in the "SCOPE OF SERVICES."

The Contractor is a For-Profit Corporation
Contractor Place of Incorporation or Organization: OHIO
Contractor Edison Registration ID # 18489

A. SCOPE OF SERVICES:

A.1. General Scope

a. The Contractor shall provide all service and deliverables as required, described, and detailed herein and shall meet all service and delivery timelines as specified by this Contract.

b. The Contractor shall host for the State the Controlled Substance Monitoring Database (CSMD) and shall provide system maintenance and support on an as-needed basis including a help desk, new software, software updates, and software patches.

c. The Contractor shall collect, accept, cleanse and load prescription data submitted to the Controlled Substance Monitoring Database (CSMD) by dispensers as reported in accordance with this contract and consistent with the Controlled Substance Monitoring Act of 2002, Tenn. Code Ann. §53-10-304, *et seq.* and Board of Pharmacy Rule 1140-11-.01, *et seq.* (Attachment 2)

d. The Contractor shall be capable of accepting data in the American Society for Automation in Pharmacy (ASAP) 2007 format.

e. The Contractor and State mutually agree the State shall administer and direct the functioning of the Controlled Substance Monitoring Database. This will include, but not be limited to, the approval or denial of user registrants, the posting or rejection of alerts, and the posting of other messages as required.

f. The Contractor shall perform data conversion from the current Controlled Substance Database to the new Controlled Substance Monitoring Database data structure at no cost to the State.

g. The Contractor shall provide all training and training materials in the operation of the Controlled Substance Monitoring Database system at no cost to the State.

h. The Contractor shall assume all project management responsibilities and shall develop and maintain the project plan throughout the implementation of the Controlled Substance Monitoring Database system at no cost to the State.

A.2. Data Management

a. Data Collection

(1) The State will provide the Contractor with a list of dispensers who/that are required to report to the database. The State will provide an updated list of dispensers as requested by the Contractor. The Contractor shall collect from the dispensers prescriptions for controlled substances listed in Schedule II, III, IV, or V and any other data specified by State law as it may be amended from time to time.

(2) The Contractor shall collect dispenser prescription data at least twice a month, or as otherwise directed by the State, from dispensers required to report, and shall review the data to determine conformity with format. If any data submitted does not meet the prescribed format, the contractor shall be responsible for contacting the dispenser and obtaining a corrected submission. If corrected data is not received within 14 days from notification, the Contractor shall provide a list of those dispensers to the State by the 15th day. The system shall have a mechanism for the purpose of correcting inaccuracies by practitioners, pharmacists, patients and others. Any change to this mechanism shall be submitted to the State for approval and approved by the State prior to being implemented.

(3) The Contractor shall collect dispenser prescription data in the format established by the American Society for Automation In Pharmacy (ASAP) 2007 for Controlled Substances or as otherwise provided by applicable law. The data must be securely collected by telephone modem connection, diskette, CD-ROM, tape, secure FTP, Virtual Private Network (VPN), or other format or methods approved by the State. The Contractor shall ensure the authentication process to support user sign-on accepts federated security identify assertions.

(4) The Contractor shall also accept written paper reports such as the universal claim form, provided the dispenser has been granted a waiver from electronic submission by the Controlled Substance Database Advisory Committee (CSDAC). The Contractor shall enter data submitted on paper into the CSMD within 2 days of receipt.

(5) The Contractor shall allow dispensers under common ownership to submit a single transmission, provided each dispensing practice site is clearly identified in the data for each prescription dispensed.

(6) The Contractor shall record and provide documentation to the State of receipt of each data transmission event from a dispenser. The Contractor shall retain all documentation until such time as the State provides written authorization for its destruction.

(7) The Contractor shall automatically accept faxes from dispensers using a standardized form that can be processed using an API (Application Programming Interface) or service. The Contractor must automatically respond to the dispenser with a fax-based response.

b. Data Cleansing. The Contractor shall be responsible for converting licensing identifier numbers, Drug Enforcement Agency (DEA) numbers and National Drug Code (NDC) numbers to data fields. The system must provide the State with notification that a DEA number has been entered incorrectly if the entries do not meet the requirements. Data shall also be cleansed by standardizing address data using the U.S. Postal Service information.

c. Ownership of the Data. The State owns all data collected, cleansed and loaded by the Contractor, including any data transmitted from the dispensers to the Contractor. No data collected by the Contractor pursuant to this Contract may be sold, disclosed, or given away by the Contractor, except where specifically authorized by law.

d. Reporting. The Contractor shall submit an electronic report to the State at the end of each reporting period identifying those dispensers who/that have not submitted the required dispenser prescription data and those submissions that were rejected, including the reason for the rejection.

e. Archive. The Contractor shall provide a secure data archiving function to archive data greater than two (2) years old. The archive function shall use a date range to determine which records are to be archived.

f. Data Repository. The Contractor shall ensure all data in the CSMD is encrypted in compliance with the Health Information Technology for Economic and Clinical Health Act of 2009.

A.3. Maintenance and Support. The Contractor will provide system maintenance and support for the duration of the contract.

The Contractor shall provide a toll-free number and email address to dispensers by which dispensers may contact the contractor to resolve problems and receive information concerning data transmission. The toll-free number shall be staffed Monday through Friday, 8:00 a.m. to 5:00 p.m., Central Time. Voice mail access shall be available at all other times and voice mails will be responded to within one (1) business day.

A.4. Software Maintenance. The Contractor shall perform the following software maintenance for the Controlled Substance Monitoring Database (CSMD) system:

a. Make necessary adjustments and repairs to keep the software operating without abnormal interruptions and to correct latent deficiencies with respect to the software specifications;

b. Make all necessary modifications, adjustments and repairs to keep the software operating in compliance with applicable federal and state laws and regulations;

c. Respond to problems, requests for technical support, or requests for information within three (3) business days, by either correcting the problem, providing technical support or information requested, or providing a plan, including a deliver date, for the problem correction, technical support or information requested. Responses to the problems identified by the State as urgent will be made within one (1) business day.

d. Ensure the Controlled Substance Monitoring Database is available for use by users, 99.9% of the time, excluding scheduled planned downtimes for maintenance.

A.5. Search Engine. The Contractor shall perform the following Search Engine functions for the Controlled Substance Monitoring Database (CSMD) system at no cost to the State.

a. The search engine shall be secure with Secure Socket Layer (SSL), robust and capable of handling data records numbering in the billions.

b. Requests for patient reports shall be logged, giving the requestors name and username, date and time of request, patient name and date of birth, and date range of search. This log shall be viewable or printable at any time.

c. Archived data, created by the Archive function shall be searchable.

A.6. Security.

a. Users must gain access to the database via a secure encrypted electronic registration screen that is automatically available to the database administrator, who may either approve or deny the registration.

b. Users may request their password be emailed to them, after they answer one of three security questions they answered when they registered for access.

A.7. Alerting and Reporting.

a. There shall be a package of statistical reports at no cost to the State that includes, but is not be limited to:

(1) # Prescriptions for a given time period by Zip Code, both 5 digit and/or 3 digit, grouping prescriptions by therapeutic class code or comparable. The data shall be available in an Excel spreadsheet as well as a color coded map of Tennessee.

(2) # Prescriptions for a given time period by County, per 1000 population, using the latest census data, and grouping prescriptions by therapeutic class code or comparable. The data shall be available in an Excel spreadsheet as well as a color coded map of Tennessee.

(3) Prescriptions for a given time period for a given patient (see Attachment 4 for a suggested format).

(4) Prescriptions for a given time period for a given Practitioner (see Attachment 5 for a suggested format).

(5) A specific prescription, found by searching the pharmacy DEA# and the prescription #.

(6) A method for submitting an SQL query, composing the SQL string, having Boolean functions of AND / OR, and having access to every searchable field in the database.

(7) A text message that will be part of the login screen where postings for scheduled maintenance and other important information can be made.

(8) A text message that is sent to new users upon their registration approval, giving their login credentials, and any other message deemed necessary by the application administrator. The user login identification and password must be sent to the user separately.

b. The system shall include an Alert system that allows (1) the user to submit an alert, and the application administrator to approve the alerts and (2) an Alert to be sent from a prescriber to other prescribers or dispensers listed on a patient profile.

c. The system shall have the capability of Investigator-Supervisor/Investigator-Delegate users. The Investigator-Delegate submits a request for patient information, but it is forwarded to the Investigator-Supervisor. The Investigator-Supervisor reviews the request and the open case, and determines if there is probable cause for the search of the database. If the Investigator-Supervisor approves the request, the search is completed, the report constructed and sent to the email of the Investigator-Delegate. Investigator-Delegates may be assigned to only one Investigator-Supervisor, but that assignment can be changed at any time. This system of oversight is typically used for law enforcement access.

d. There shall be a NEWS function which allows the application administrator to post or broadcast announcements, memos, and news articles via the PMP (Prescription Monitoring Program) Website.

e. The system must have a report that identifies and retrieves the names of patients who have had a combination of any number of practitioners, any number of pharmacies, and any number of prescriptions, for a given time period. This report shall produce letters to each practitioner and pharmacy for each individual, with the content of the letters easily editable by the database administrator.

f. The system shall be capable of flagging a practitioner who has been disciplined by the practitioner's licensing board. This flag shall be visible to all who view that practitioner's name, whether on a printed report or screen view. Only the CSMD administrator may set or reset this flag.

g. The system shall be capable of reporting the Top "X" MDs, Top "X" APNs, Top "X" PAs, Top" X" DOs, and Top "X" Dentists based on the number of dosages, where "X" is a whole number. The system shall be capable of reporting the Top "X" Practitioners for prescribing specific drug families, such as Hydrocodone or Oxycodone.

A.8. <u>Interfaces</u>.

a. The system must interface, at no cost to the State, with the following systems through real-time, batch, or web services interface:

(1) DEA information extracted from the DEA subscription CD,
(2) NDC information purchased from a vendor that does give therapeutic class code,
(3) Tennessee Board of Pharmacy licensing database,
(4) Department of Health, Division of Health Related Board licensing database,

(5) US Postal Service address standardization data.

b. In addition to the Practitioner and Pharmacy type, there shall be a Dispensing Practitioner type that allows for the search and retrieval of all that are of such type. The organization name for this type shall be the individual who holds the DEA# for that office.

c. During the User Registration, after the user inputs his/her license #, the system shall verify that the license and DEA# are active and will populate common data fields from the State's RBS (Regulatory Board System) application. There shall be a report that shows active user registrants, but non-active license files.

d. The system shall be capable of the interstate exchange of PMP data (Prescription Monitoring Information Exchange – PMIX). The system shall include all necessary hardware and/or software to accomplish the interstate of prescription data with states to be named at a later time.

A.9 Quality Assurance and Testing. The Contractor shall perform, at no cost to the State, necessary quality assurance testing for the Controlled Substance Monitoring Database system to ensure compliance with the State of Tennessee Secure Application Development Guide as referenced in Attachment 3, and which may be modified as necessary from time to time by the State.

B. CONTRACT PERIOD:

This Contract shall be effective for the period beginning September 12, 2011, and ending on September 11, 2016. The Contractor hereby acknowledges and affirms that the State shall have no obligation for services rendered by the Contractor which were not performed within this specified contract period.

C. PAYMENT TERMS AND CONDITIONS:

C.1. Maximum Liability. In no event shall the maximum liability of the State under this Contract exceed Nine Hundred Sixty Thousand Dollars ($960,000). The payment rates in section C.3 shall constitute the entire compensation due the Contractor for all service and Contractor obligations hereunder regardless of the difficulty, materials or equipment required. The payment rates include, but are not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor.

The Contractor is not entitled to be paid the maximum liability for any period under the Contract or any extensions of the Contract for work not requested by the State. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the State requests work and the Contractor performs said work. In which case, the Contractor shall be paid in accordance with the payment rates detailed in section C.3. The State is under no obligation to request work from the Contractor in any specific dollar amounts or to request any work at all from the Contractor during any period of this Contract.

C.2. Compensation Firm. The payment rates and the maximum liability of the State under this Contract are firm for the duration of the Contract and are not subject to escalation for any reason unless amended.

C.3. Payment Methodology. The Contractor shall be compensated based on the payment rates herein for units of service authorized by the State in a total amount not to exceed the Contract Maximum Liability established in section C.1.

a. The Contractor's compensation shall be contingent upon the satisfactory completion of units, milestones, or increments of service defined in section A.

b. The Contractor shall be compensated for said units, milestones, or increments of service based upon the following payment rates:

Service Description	Amount (per compensable increment)*
Quarterly System Maintenance and Support of the Database (ref *Proforma* Contract Sections A.1.b, A.3., and A.4.)	$ 21,000 per Quarter

Quarterly Collection of Data from the Dispenser, Cleansing of Data collected, Data archiving, Data reporting, and Loading of that Data to the Controlled Substance Monitoring Database (CSMD) (ref *Proforma* Contract Sections A.1.c. and A.2.)	$ 27,000 per Quarter

* NOTICE: The amount(s) per compensable increment detailed above shall be contingent upon the State's receipt of an invoice (as required in section C.5., below) for said service(s) within thirty (30) days after the end of the calendar quarter in which the service(s) were rendered. At the sole discretion of the State, the amount per compensable increment of any service for which the State receives an invoice later than prescribed herein shall be subject to a reduction in amount of up to 100%. In the case of an untimely invoice, before any payment will be considered by the State, the Contractor must submit a written request regarding the untimely invoice, which shall detail the reason the invoice is untimely as well as the Contractor's plan for submitting all future invoices no later than prescribed herein, and it must be signed by an individual empowered to bind the Contractor to this Contract.

C.4. Travel Compensation. The Contractor shall not be compensated or reimbursed for travel, meals, or lodging.

C.5. Invoice Requirements. The Contractor shall invoice the State only for completed increments of service and for the amount stipulated in section C.3, above, and present said invoices no more often than monthly, with all necessary supporting documentation, to:

Department of Health
Mary N. Brewer, PMP Administrator
TN Board of Pharmacy
227 French Landing Drive, Suite 300
Nashville, TN 37243

a. Each invoice shall clearly and accurately detail all of the following required information (calculations must be extended and totaled correctly).

(1) Invoice Number (assigned by the Contractor)
(2) Invoice Date
(3) Contract Number (assigned by the State)
(4) Customer Account Name: Department of Health, Board of Pharmacy
(5) Customer Account Number (assigned by the Contractor to the above-referenced Customer)
(6) Contractor Name
(7) Contractor Federal Employer Identification, Social Security, or Tennessee Edison Registration ID Number Referenced in Preamble of this Contract
(8) Contractor Contact for Invoice Questions (name, phone, and/or fax)
(9) Contractor Remittance Address
(10) Description of Delivered Service
(11) Complete Itemization of Charges, which shall detail the following:

i. Service or Milestone Description (including name & title as applicable) of each service invoiced
ii. Number of Completed Units, Increments, Hours, or Days as applicable, of each service invoiced
iii. Applicable Payment Rate (as stipulated in Section C.3.) of each service invoiced
iv. Amount Due by Service
v. Total Amount Due for the invoice period

b. The Contractor understands and agrees that an invoice under this Contract shall:

(1) include only charges for service described in Contract Section A and in accordance with payment terms and conditions set forth in Contract Section C;
(2) only be submitted for completed service and shall not include any charge for future work;
(3) not include sales tax or shipping charges; and
(4) initiate the timeframe for payment (and any discounts) only when the State is in receipt of the invoice, and the invoice meets the minimum requirements of this section C.5.

C.6. Payment of Invoice. A payment by the State shall not prejudice the State's right to object to or question any payment, invoice, or matter in relation thereto. A payment by the State shall not be construed as acceptance of any part of the work or service provided or as approval of any amount invoiced.

C.7. Invoice Reductions. The Contractor's invoice shall be subject to reduction for amounts included in any invoice or payment theretofore made which are determined by the State, on the basis of audits conducted in accordance with the terms of this Contract, not to constitute proper remuneration for compensable services.

C.8. Deductions. The State reserves the right to deduct from amounts, which are or shall become due and payable to the Contractor under this or any contract between the Contractor and the State of Tennessee any amounts, which are or shall become due and payable to the State of Tennessee by the Contractor.

C.9. Prerequisite Documentation. The Contractor shall not invoice the State under this Contract until the State has received the following documentation properly completed.

a. The Contractor shall complete, sign, and present to the State an "Authorization Agreement for Automatic Deposit (ACH Credits) Form" provided by the State. By doing so, the Contractor acknowledges and agrees that, once said form is received by the State, all payments to the Contractor, under this or any other contract the Contractor has with the State of Tennessee shall be made by Automated Clearing House (ACH).

b. The Contractor shall complete, sign, and present to the State a "Substitute W-9 Form" provided by the State. The taxpayer identification number detailed by said form must agree with the Contractor's Federal Employer Identification Number or Tennessee Edison Registration ID referenced in this Contract.

D. STANDARD TERMS AND CONDITIONS:

D.1. Required Approvals. The State is not bound by this Contract until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

D.2. Modification and Amendment. This Contract may be modified only by a written amendment signed by all parties hereto and approved by both the officials who approved the base contract and, depending upon the specifics of the contract as amended, any additional officials required by Tennessee laws and regulations (said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

D.3. Termination for Convenience. The State may terminate this Contract without cause for any reason. Said termination shall not be deemed a breach of contract by the State. The State shall give the Contractor at least thirty (30) days written notice before the effective termination date. The Contractor shall be entitled to compensation for satisfactory, authorized service completed as of the termination date, but in no event shall the State be liable to the Contractor for compensation for any service which has not been rendered. Upon such termination, the Contractor shall have no right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

D.4. Termination for Cause. If the Contractor fails to properly perform its obligations under this Contract in a timely or proper manner, or if the Contractor violates any terms of this Contract, the State shall have the right to immediately terminate the Contract and withhold payments in excess of fair compensation for completed services. Notwithstanding the above, the Contractor shall not be relieved of liability to the State for damages sustained by virtue of any breach of this Contract by the Contractor.

D.5. Subcontracting. The Contractor shall not assign this Contract or enter into a subcontract for any of the services performed under this Contract without obtaining the prior written approval of the State. If such subcontracts are approved by the State, each shall contain, at a minimum, sections of this Contract below pertaining to "Conflicts of Interest," "Nondiscrimination," and "Records" (as identified by the section headings). Notwithstanding any use of approved subcontractors, the Contractor shall be the prime contractor and shall be responsible for all work performed.

D.6. Conflicts of Interest. The Contractor warrants that no part of the total Contract Amount shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for

acting as an officer, agent, employee, subcontractor, or consultant to the Contractor in connection with any work contemplated or performed relative to this Contract.

The Contractor acknowledges, understands, and agrees that this Contract shall be null and void if the Contractor is, or within the past six months has been, an employee of the State of Tennessee or if the Contractor is an entity in which a controlling interest is held by an individual who is, or within the past six months has been, an employee of the State of Tennessee.

D.7. Nondiscrimination. The Contractor hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Contract or in the employment practices of the Contractor on the grounds of handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by Federal, Tennessee State constitutional, or statutory law. The Contractor shall, upon request, show proof of such nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.

D.8. Prohibition of Illegal Immigrants. The requirements of *Tennessee Code Annotated*, Section 12-4-124, *et seq.*, addressing the use of illegal immigrants in the performance of any Contract to supply goods or services to the state of Tennessee, shall be a material provision of this Contract, a breach of which shall be grounds for monetary and other penalties, up to and including termination of this Contract.

a. The Contractor hereby attests, certifies, warrants, and assures that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract. The Contractor shall reaffirm this attestation, in writing, by submitting to the State a completed and signed copy of the document at Attachment 1, hereto, semi-annually during the period of this Contract. Such attestations shall be maintained by the Contractor and made available to state officials upon request.

b. Prior to the use of any subcontractor in the performance of this Contract, and semi-annually thereafter, during the period of this Contract, the Contractor shall obtain and retain a current, written attestation that the subcontractor shall not knowingly utilize the services of an illegal immigrant to perform work relative to this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant to perform work relative to this Contract. Attestations obtained from such subcontractors shall be maintained by the Contractor and made available to state officials upon request.

c. The Contractor shall maintain records for all personnel used in the performance of this Contract. Said records shall be subject to review and random inspection at any reasonable time upon reasonable notice by the State.

d. The Contractor understands and agrees that failure to comply with this section will be subject to the sanctions of *Tennessee Code Annotated*, Section 12-4-124, *et seq.* for acts or omissions occurring after its effective date. This law requires the Commissioner of Finance and Administration to prohibit a contractor from contracting with, or submitting an offer, proposal, or bid to contract with the State of Tennessee to supply goods or services for a period of one year after a contractor is discovered to have knowingly used the services of illegal immigrants during the performance of this Contract.

e. For purposes of this Contract, "illegal immigrant" shall be defined as any person who is not either a United States citizen, a Lawful Permanent Resident, or a person whose physical presence in the United States is authorized or allowed by the federal Department of Homeland Security and who, under federal immigration laws and/or regulations, is authorized to be employed in the U.S. or is otherwise authorized to provide services under the Contract.

D.9. Records. The Contractor shall maintain documentation for all charges under this Contract. The books, records, and documents of the Contractor, insofar as they relate to work performed or money received under this Contract, shall be maintained for a period of three (3) full years from the date of the final payment and shall be subject to audit at any reasonable time and upon reasonable notice by the State, the Comptroller of the Treasury, or their duly appointed representatives. The financial statements shall be prepared in accordance with generally accepted accounting principles.

D.10. Prevailing Wage Rates. All contracts for construction, erection, or demolition or to install goods or materials that involve the expenditure of any funds derived from the State require compliance with the prevailing wage laws as provided in *Tennessee Code Annotated*, Section 12-4-401 *et seq.*.

D.11. Monitoring. The Contractor's activities conducted and records maintained pursuant to this Contract shall be subject to monitoring and evaluation by the State, the Comptroller of the Treasury, or their duly appointed representatives.

D.12. Progress Reports. The Contractor shall submit brief, periodic, progress reports to the State as requested.

D.13. Strict Performance. Failure by any party to this Contract to insist in any one or more cases upon the strict performance of any of the terms, covenants, conditions, or provisions of this Contract shall not be construed as a waiver or relinquishment of any such term, covenant, condition, or provision. No term or condition of this Contract shall be held to be waived, modified, or deleted except by a written amendment signed by the parties hereto.

D.14. Independent Contractor. The parties hereto, in the performance of this Contract, shall not act as employees, partners, joint venturers, or associates of one another. It is expressly acknowledged by the parties hereto that such parties are independent contracting entities and that nothing in this Contract shall be construed to create an employer/employee relationship or to allow either to exercise control or direction over the manner or method by which the other transacts its business affairs or provides its usual services. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purpose whatsoever.

The Contractor, being an independent contractor and not an employee of the State, agrees to carry adequate public liability and other appropriate forms of insurance, including adequate public liability and other appropriate forms of insurance on the Contractor's employees, and to pay all applicable taxes incident to this Contract.

D.15. State Liability. The State shall have no liability except as specifically provided in this Contract.

D.16. Force Majeure. The obligations of the parties to this Contract are subject to prevention by causes beyond the parties' control that could not be avoided by the exercise of due care including, but not limited to, natural disasters, riots, wars, epidemics, or any other similar cause.

D.17. State and Federal Compliance. The Contractor shall comply with all applicable State and Federal laws and regulations in the performance of this Contract.

D.18. Governing Law. This Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The Contractor agrees that it will be subject to the exclusive jurisdiction of the courts of the State of Tennessee in actions that may arise under this Contract. The Contractor acknowledges and agrees that any rights or claims against the State of Tennessee or its employees hereunder, and any remedies arising there from, shall be subject to and limited to those rights and remedies, if any, available under *Tennessee Code Annotated*, Sections 9-8-101 through 9-8-407.

D.19. Completeness. This Contract is complete and contains the entire understanding between the parties relating to the subject matter contained herein, including all the terms and conditions of the parties' agreement. This Contract supersedes any and all prior understandings, representations, negotiations, and agreements between the parties relating hereto, whether written or oral.

D.20. Severability. If any terms and conditions of this Contract are held to be invalid or unenforceable as a matter of law, the other terms and conditions hereof shall not be affected thereby and shall remain in full force and effect. To this end, the terms and conditions of this Contract are declared severable.

D.21. Headings. Section headings of this Contract are for reference purposes only and shall not be construed as part of this Contract.

E. SPECIAL TERMS AND CONDITIONS:

E.1. Conflicting Terms and Conditions. Should any of these special terms and conditions conflict with any other terms and conditions of this Contract, these special terms and conditions shall control.

E.2. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by EMAIL or facsimile

transmission with recipient confirmation. Any such communications, regardless of method of transmission, shall be addressed to the respective party at the appropriate mailing address, facsimile number, or EMAIL address as set forth below or to that of such other party or address, as may be hereafter specified by written notice.

The State:

Mary N. Brewer, PMP Administrator
TN Board of Pharmacy
227 French Landing Drive, Suite 300
Nashville, TN 37243
Phone: (615) 253-1305
FAX: (615) 253-8782
Email: CSMD.admin@tn.gov

The Contractor:

Josh M. Davda, President & CEO
Optimum Technology, Inc.
100 E. Campus View Blvd, Suite 380
Columbus, OH 43235
Phone: (614) 785-1110
FAX: (614) 785-1114
Email: Josh.Davda@otech.com

All instructions, notices, consents, demands, or other communications shall be considered effectively given upon receipt or recipient confirmation as may be required.

E.3. Subject to Funds Availability. The Contract is subject to the appropriation and availability of State and/or Federal funds. In the event that the funds are not appropriated or are otherwise unavailable, the State reserves the right to terminate the Contract upon written notice to the Contractor. Said termination shall not be deemed a breach of Contract by the State. Upon receipt of the written notice, the Contractor shall cease all work associated with the Contract. Should such an event occur, the Contractor shall be entitled to compensation for all satisfactory and authorized services completed as of the termination date. Upon such termination, the Contractor shall have no right to recover from the State any actual, general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

E.4. Tennessee Consolidated Retirement System. The Contractor acknowledges and understands that, subject to statutory exceptions contained in *Tennessee Code Annotated*, Section 8-36-801, *et. seq.*, the law governing the Tennessee Consolidated Retirement System (TCRS), provides that if a retired member of TCRS, or of any superseded system administered by TCRS, or of any local retirement fund established pursuant to *Tennessee Code Annotated*, Title 8, Chapter 35, Part 3 accepts state employment, the member's retirement allowance is suspended during the period of the employment. Accordingly and notwithstanding any provision of this Contract to the contrary, the Contractor agrees that if it is later determined that the true nature of the working relationship between the Contractor and the State under this Contract is that of "employee/employer" and not that of an independent contractor, the Contractor, if a retired member of TCRS, may be required to repay to TCRS the amount of retirement benefits the Contractor received from TCRS during the period of this Contract.

E.5. Confidentiality of Records. Strict standards of confidentiality of records and information shall be maintained in accordance with applicable state and federal law. All material and information, regardless of form, medium or method of communication, provided to the Contractor by the State or acquired by the Contractor on behalf of the State shall be regarded as confidential information in accordance with the provisions of applicable state and federal law, state and federal rules and regulations, departmental policy, and ethical standards. Such confidential information shall not be disclosed, and all necessary steps shall be taken by the Contractor to safeguard the confidentiality of such material or information in conformance with applicable state and federal law, state and federal rules and regulations, departmental policy, and ethical standards.

The Contractor's obligations under this section do not apply to information in the public domain; entering the public domain but not from a breach by the Contractor of this Contract; previously possessed by the Contractor without written obligations to the State to protect it; acquired by the Contractor without written restrictions against disclosure

from a third party which, to the Contractor's knowledge, is free to disclose the information; independently developed by the Contractor without the use of the State's information; or, disclosed by the State to others without restrictions against disclosure. Nothing in this paragraph shall permit Contractor to disclose any information that is confidential under federal or state law or regulations, regardless of whether it has been disclosed or made available to the Contractor due to intentional or negligent actions or inactions of agents of the State or third parties.

It is expressly understood and agreed the obligations set forth in this section shall survive the termination of this Contract.

E.6. HIPAA Compliance. The State and Contractor shall comply with obligations under the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and its accompanying regulations.

a. Contractor warrants to the State that it is familiar with the requirements of HIPAA and its accompanying regulations, and will comply with all applicable HIPAA requirements in the course of this Contract.

b. Contractor warrants that it will cooperate with the State, including cooperation and coordination with State privacy officials and other compliance officers required by HIPAA and its regulations, in the course of performance of the Contract so that both parties will be in compliance with HIPAA.

c. The State and the Contractor will sign documents, including but not limited to business associate agreements, as required by HIPAA and that are reasonably necessary to keep the State and Contractor in compliance with HIPAA. This provision shall not apply if information received by the State under this Contract is NOT "protected health information" as defined by HIPAA, or if HIPAA permits the State to receive such information without entering into a business associate agreement or signing another such document.

E.7. State Ownership of Work Products. The State shall have ownership, right, title, and interest, including ownership of copyright, in all work products, including computer source code, created, designed, developed, derived, documented, installed, or delivered under this Contract subject to the next subsection and full and final payment for each "Work Product." The State shall have royalty-free and unlimited rights and license to use, disclose, reproduce, publish, distribute, modify, maintain, or create derivative works from, for any purpose whatsoever, all said Work Products.

a. To the extent that the Contractor uses any of its pre-existing, proprietary or independently developed tools, materials or information ("Contractor Materials"), the Contractor shall retain all right, title and interest in and to such Contractor Materials, and the State shall acquire no right, title or interest in or to such Contractor Materials EXCEPT the Contractor grants to the State an unlimited, non-transferable license to use, copy and distribute internally, solely for the State's internal purposes, any Contractor Materials reasonably associated with any Work Product provided under the Contract.

b. The Contractor shall furnish such information and data as the State may request, including but not limited to computer code, that is applicable, essential, fundamental, or intrinsic to any Work Product and Contractor Materials reasonably associated with any Work Product, in accordance with this Contract and applicable state law.

c. Nothing in this Contract shall prohibit the Contractor's use for its own purposes of the general knowledge, skills, experience, ideas, concepts, know-how, and techniques obtained and used during the course of providing the services requested under this Contract.

d. Nothing in the Contract shall prohibit the Contractor from developing for itself, or for others, materials which are similar to and/or competitive with those that are produced under this Contract.

E.8. Ownership of Software and Work Products.

a. Definitions.

(1) "Contractor-Owned Software," which shall mean commercially available software the rights to which are owned by Contractor, including but not limited to commercial "off-the-shelf" software which is not developed using State's money or resources.

(2) "Custom-Developed Application Software," which shall mean customized application software developed by Contractor solely for State.

(3) "Rights Transfer Application Software," which shall mean any pre-existing application software owned by Contractor or a third party, provided to State and to which Contractor will grant and assign, or will facilitate the granting and assignment of, all rights, including the source code, to State.

(4) "Third-Party Software," which shall mean software not owned by the State or the Contractor.

(5) "Work Product," which shall mean all deliverables exclusive of hardware, such as software, software source code, documentation, planning, etc., that are created, designed, developed, or documented by the Contractor for the State during the course of the project using State's money or resources, including Custom-Developed Application Software. If the system solution includes Rights Transfer Application Software, the definition of Work Product shall also include such software.

b. Rights and Title to the Software

(1) All right, title and interest in and to the Contractor-Owned Software shall at all times remain with Contractor, subject to any license granted herein.

(2) All right, title and interest in and to the Work Product, and to modifications thereof made by State, including without limitation all copyrights, patents, trade secrets and other intellectual property and other proprietary rights embodied by and arising out of the Work Product, shall belong to State. To the extent such rights do not automatically belong to State, Contractor hereby assigns, transfers, and conveys all right, title and interest in and to the Work Product, including without limitation the copyrights, patents, trade secrets, and other intellectual property rights arising out of or embodied by the Work Product. Contractor shall execute any other documents that State or its counsel deem necessary or desirable to document this transfer and/or allow State to register its claims and rights to such intellectual property rights or enforce them against third parties, and Contractor shall cooperate fully in the foregoing endeavors.

(3) All right, title and interest in and to the Third-Party Software shall at all times remain with the third party, subject to any license granted thereby.

c. Nothing in this Contract shall prohibit the Contractor's use for its own purposes of the general knowledge, skills, experience, ideas, concepts, know-how, and techniques obtained and used during the course of providing the services requested under this Contract.

d. Nothing in the Contract shall prohibit the Contractor from developing for itself, or for others, materials which are similar to and/or competitive with those that are produced under this Contract.

E.9. State Furnished Property. The Contractor shall be responsible for the correct use, maintenance, and protection of all articles of nonexpendable, tangible, personal property furnished by the State for the Contractor's temporary use under this Contract. Upon termination of this Contract, all property furnished shall be returned to the State in good order and condition as when received, reasonable use and wear thereof excepted. Should the property be destroyed, lost, or stolen, the Contractor shall be responsible to the State for the residual value of the property at the time of loss.

E.10. Incorporation of Additional Documents. Each of the following documents is included as a part of this Contract by reference. In the event of a discrepancy or ambiguity regarding the Contractor's duties, responsibilities, and performance under this Contract, these items shall govern in order of precedence below.

a. this Contract document with any attachments or exhibits (excluding the items listed at subsections b. through e., below);

b. any clarifications of or addenda to the Contractor's proposal seeking this Contract;

c. the State solicitation, as may be amended, requesting proposals in competition for this Contract;

d. any technical specifications provided to proposers during the procurement process to award this Contract

e. the Contractor's proposal seeking this Contract.

E.11. Prohibited Advertising. The Contractor shall not refer to this Contract or the Contractor's relationship with the State hereunder in commercial advertising in such a manner as to state or imply that the Contractor or the Contractor's services are endorsed. It is expressly understood and agreed that the obligations set forth in this section shall survive the termination of this Contract in perpetuity.

E.12. Lobbying. The Contractor certifies, to the best of its knowledge and belief, that:

a. No federally appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

b. If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, grant, loan, or cooperative agreement, the Contractor shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

c. The Contractor shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into and is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, *U.S. Code*.

E.13. Debarment and Suspension. The Contractor certifies, to the best of its knowledge and belief, that it, its current and future principals, its current and future subcontractors and their principals:

a. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department or agency;

b. have not within a three (3) year period preceding this Contract been convicted of, or had a civil judgment rendered against them from commission of fraud, or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or grant under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c. are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses detailed in section b. of this certification; and

d. have not within a three (3) year period preceding this Contract had one or more public transactions (federal, state, or local) terminated for cause or default.

The Contractor shall provide immediate written notice to the State if at any time it learns that there was an earlier failure to disclose information or that due to changed circumstances, its principals or the principals of its subcontractors are excluded or disqualified.

E.14. Contractor Commitment to Diversity. The Contractor shall comply with and make reasonable business efforts to exceed the commitment to diversity represented by the Contractor's proposal responding to RFP-34310-21112 (RFP Attachment 6.2, Section B.15) and resulting in this Contract.

The Contractor shall assist the State in monitoring the Contractor's performance of this commitment by providing, as requested, a quarterly report of participation in the performance of this Contract by small business enterprises and

businesses owned by minorities, women, and persons with a disability. Such reports shall be provided to the state of Tennessee Governor's Office of Diversity Business Enterprise in form and substance as required by said office.

E.15. Copyrights and Patents. The Contractor agrees to indemnify and hold harmless the State of Tennessee as well as its officers, agents, and employees from and against any and all claims or suits which may be brought against the State for infringement of any laws regarding patents or copyrights which may arise from the Contractor's performance of this Contract. In any such action brought against the State, the Contractor shall satisfy and indemnify the State for the amount of any final judgment for infringement. The Contractor further agrees it shall be liable for the reasonable fees of attorneys for the State in the event such service is necessitated to enforce the terms of this Contract or otherwise enforce the obligations of the Contractor to the State. The State shall give the Contractor written notice of any such claim or suit and full right and opportunity to conduct the Contractor's own defense thereof.

E.16. Hold Harmless. The Contractor agrees to indemnify and hold harmless the State of Tennessee as well as its officers, agents, and employees from and against any and all claims, liabilities, losses, and causes of action which may arise, accrue, or result to any person, firm, corporation, or other entity which may be injured or damaged as a result of acts, omissions, or negligence on the part of the Contractor, its employees, or any person acting for or on its or their behalf relating to this Contract. The Contractor further agrees it shall be liable for the reasonable cost of attorneys for the State in the event such service is necessitated to enforce the terms of this Contract or otherwise enforce the obligations of the Contractor to the State.

In the event of any such suit or claim, the Contractor shall give the State immediate notice thereof and shall provide all assistance required by the State in the State's defense. The State shall give the Contractor written notice of any such claim or suit, and the Contractor shall have full right and obligation to conduct the Contractor's own defense thereof. Nothing contained herein shall be deemed to accord to the Contractor, through its attorney(s), the right to represent the State of Tennessee in any legal matter, such rights being governed by *Tennessee Code Annotated*, Section 8-6-106.

E.17. Disclosure of Personal Identity Information. The Contractor shall report to the State any instances of unauthorized disclosure of confidential information that come to the attention of the Contractor. Any such report shall be made by the Contractor within twenty-four (24) hours after the instance has come to the attention of the Contractor. The Contractor, at the sole discretion of the State, shall provide no cost credit monitoring services for individuals that are deemed to be part of a potential disclosure. The Contractor shall bear the cost of notification to individuals having personal identity information involved in a potential disclosure event, including individual letters and/or public notice.

IN WITNESS WHEREOF,

OPTIMUM TECHNOLOGY, INC.:

CONTRACTOR SIGNATURE **DATE**

8/22/2011

JOSH M. DAVDA, PRESIDENT & CEO

DEPARTMENT OF HEALTH:

Susan R. Cooper, MSN, RN 9.1.11

SUSAN R. COOPER, MSN, RN, COMMISSIONER **DATE**

ATTESTATION RE PERSONNEL USED IN CONTRACT PERFORMANCE

SUBJECT CONTRACT NUMBER:	
CONTRACTOR LEGAL ENTITY NAME:	Optimum Technology, Inc.
FEDERAL EMPLOYER IDENTIFICATION NUMBER: (or Social Security Number)	311231061

The Contractor, identified above, does hereby attest, certify, warrant, and assure that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract.

CONTRACTOR SIGNATURE

NOTICE: This attestation MUST be signed by an individual empowered to contractually bind the Contractor. If said individual is not the chief executive or president, this document shall attach evidence showing the individual's authority to contractually bind the Contractor.

JOSH M. DAVDA PRESIDENT & CEO

PRINTED NAME AND TITLE OF SIGNATORY

8/22/2011

DATE OF ATTESTATION

ATTACHMENT 2

Tennessee Code Annotated
Title 53
Chapter 10 Legend Drugs
Part 3 Controlled Substance Monitoring Act of 2002

53-10-304. Administrative attachment — Controlled substance database — Data requirements. —

(a) There is created within the department a controlled substance database to be attached administratively and for purposes of staffing to the board of pharmacy. The executive director of the board shall be responsible for determining staffing.

(b) The board and the committee shall establish, administer, maintain and direct the functioning of the database in accordance with this part. The board, upon concurrence of the committee, may, under state procurement laws, contract with another state agency or private entity to establish, operate, or maintain the database. Additionally, the board, upon concurrence of the committee, shall determine whether to operate the database within the board or contract with another entity to operate the database, based on an analysis of costs and benefits.

(c) The purpose of the database is to assist in research, statistical analysis and the education of health care practitioners concerning patients who, by virtue of their conduct in acquiring controlled substances, may require counseling or intervention for substance abuse, by collecting and maintaining data as described in this part regarding all controlled substances in Schedules II, III and IV dispensed in this state, and Schedule V controlled substances identified by the controlled substance database advisory committee as demonstrating a potential for abuse.

(d) The data required by this part shall be submitted in compliance with this part to the committee by any practitioner, or person under the supervision and control of the practitioner, pharmacist or pharmacy who dispenses a controlled substance contained in Schedules II, III and IV, and Schedule V controlled substances identified by the controlled substance database advisory committee as demonstrating a potential for abuse. The reporting requirement shall not apply for the following:

(1) A drug administered directly to a patient;
(2) Any drug dispensed by a licensed health care facility; provided, that the quantity dispensed is limited to an amount adequate to treat the patient for a maximum of forty-eight (48) hours;
(3) Any drug sample dispensed; or
(4) Any facility that is registered by the United States drug enforcement administration as a narcotic treatment program and is subject to the recordkeeping provisions of 21 CFR 1304.24.

Acts 2002, ch. 840, § 1; 2004, ch. 673, §§ 24, 25; 2007, ch. 518, § 3.

RULES
OF
THE TENNESSEE BOARD OF PHARMACY

CHAPTER 1140-11
CONTROLLED SUBSTANCE MONITORING DATABASE

TABLE OF CONTENTS

1140-11-.01 Definitions
1140-11-.02 Access to Database
1140-11-.03 Alternative Identification of Patients
1140-11-.04 Submission of Information

1140-11-.01 DEFINITIONS.

(1) The following definitions shall be applicable to this chapter:

(a) "Board" means the Board of Pharmacy created by Tenn. Code Ann., Title 63, Chapter 10,

(b) "Commissioner" means the Commissioner of Commerce and Insurance;

(c) "Committee" means the controlled substance monitoring database advisory committee created by Tenn. Code Ann. § 53-10-303;

(d) "Controlled substance dispensed identifier" means the National Drug Code Number of the controlled substance;

(e) "Database" means the controlled substance database created by Tenn. Code Ann., Title 53, Chapter 10, Part 3;

(f) "Department" means the Department of Commerce and Insurance;

(g) "Dispense" means to physically deliver a controlled substance covered by this chapter to any person, institution or entity with the intent that it be consumed away from the premises in which it is dispensed. "Dispense" does not include the act of writing a prescription by a practitioner to be filled at a pharmacy licensed by the Board;

(h) "Dispenser" means any health care practitioner who has authority to dispense controlled substances, pharmacists, and pharmacies that dispense to any address within this state;

(i) "Dispenser identifier" means the Drug Enforcement Administration Registration Number of the dispenser as defined in Tenn. Code Ann §53-10-302(7);

(j) "Patient" means a person, animal or owner of an animal who is receiving medical treatment from a prescriber;

(k) "Patient identifier" means the patient's full name; address; including zip code; date of birth; and social security number or an alternative identification number as defined by this rule;

(l) "Person" means any individual, partnership, association, corporation and the state of Tennessee, its departments, agencies and employees, and the political subdivisions of Tennessee and their departments, agencies and employees;

(m) "Prescriber" means any health care practitioner who has the authority to issue prescriptions for controlled substances;

(Rule 1140-11-.01, continued)

(n) "Prescriber identifier" means the Drug Enforcement Administration Registration Number of the prescriber as defined by this rule

Authority: *T.C.A. §§53-10-302 and 53-10-303(f).* ***Administrative History:*** *Original rule filed December 22, 2005; effective March 7, 2006.*

1140-11-.02 ACCESS TO DATABASE.

(1) The following persons shall have access to the controlled substance database with regard to a patient:

(a) the prescriber who is currently issuing the patient a controlled substance or controlled substances or who anticipates issuing the patient a controlled substance or controlled substances,

(b) the dispenser who is currently dispensing a controlled substance or controlled substances to the patient or who anticipates issuing the patient a controlled substance or controlled substances;

(c) a person who has the patient's written permission to have access to the patient's records in the database;

(d) the manager of any investigations or prosecution unit of a health-related board, committee or other governing body that licenses practitioners who has access to the database with the committee's permission pursuant to Tenn. Code Ann. §53-10-308, may release the database information that that such manager receives to the state of Tennessee health-related boards, health-related committees, the department, the department of health and representatives of health-related professional recovery programs; or

(e) a district attorney who obtains an order from circuit or criminal court ordering the release of the information contained in the database, in compliance with Tenn. Code Ann. §53-10-306.

(2) The persons listed in paragraph (1) of this rule shall have access to the information contained in the database by submitting a request for information in writing or by electronic means to the Committee on a form developed by the Committee and in compliance with the procedures developed by the Committee. The Committee shall not disseminate any information from the database without the submission of this written request, unless the dissemination of the information is directed by Court Order.

Authority: *T.C.A. §§53-10-303(f), 53-10-304(b), 53-10-305(e), 53-10-306, and 53-10-308.* ***Administrative History:*** *Original rule filed December 22, 2005; effective March 7, 2006.*

1140-11-.03 ALTERNATIVE IDENTIFICATION OF PATIENTS.

(1) If a patient does not have a social security number or refuses to provide his or her social security number to be used as a patient identifier, then the board shall use the patient's driver's license number or telephone number as the patient identifier in the database.

(2) If a patient does not have a social security number, a driver's license number or a telephone number, then the board shall use the number "000-00-0000" as the patient identifier in the database

(3) If a patient or a patient's agent refuses to provide his or her social security number, driver's license number or telephone number to his or her prescriber or dispenser, then the board shall use the number "999-99-9999" as the patient identifier in the database.

(Rule 1140-11-.03, continued)

(4) If a patient's social security number is not available, then the board shall use the social security number, driver's license number or telephone number of the person obtaining the controlled substance on behalf of the patient as the patient identifier in the database or the numbers "000-00-0000" (does not have the data) or "999-99-9999" (refusal to provide data), as applicable.

(5) If a patient is a child who does not have a social security number, then the board shall use the parent's or guardian's social security number, driver's license number, telephone number, or number "000-00-0000" (does not have data) or number "999-99-9999" (refusal to provide data) as the patient identifier in the database.

(6) If a patient is an animal, then the board shall use the owner's social security, driver's license number, telephone number, or number "000-00-0000" (does not have data) or number "999-99-9999" (refusal to provide data) as the patient identifier in the database

Authority: *T.C.A. §§53-10-303(f) and 53-10-305.* ***Administrative History:*** *Original rule filed December 22, 2005; effective March 7, 2006.*

1140-11-.04 SUBMISSION OF INFORMATION.

(1) A dispenser who is licensed in the State of Tennessee, who is dispensing controlled substances within or from outside of the State of Tennessee and who is treating patients in the State of Tennessee with controlled substances shall submit the required information to the Committee pursuant to Tenn. Code Ann. §53-10-305(a)

(2) The dispenser shall submit the data that is required by Tenn. Code Ann. §53-10-305 in one of the following forms:

(a) an electronic device compatible with the Committee's receiving device or the receiving device of the Committee's agent;

(b) double-sided, high density micro floppy disk;

(c) one-half (1/2) inch, nine (9) track sixteen hundred (1,600) or six thousand two hundred and fifty (6,250) BPI magnetic tape; or

(d) other electronic or data format approved by the Committee.

(3) The dispenser shall transmit the data that is required pursuant to Tenn. Code Ann. §53-10-305(a) in the May, 1995 version of the Telecommunications Format for Controlled Substances established by the American Society for Automation in Pharmacy (ASAP).

(4) If the dispenser does not have an automated recordkeeping system capable of producing an electronic report of the required data in the format established by the ASAP, then the dispenser may request a waiver from the electronic reporting requirement from the Committee.

(5) If the Committee grants the dispenser a waiver from the electronic reporting requirement, then the dispenser shall comply with an alternative method of reporting the data as determined by the Committee, such as submitting the required data in writing on a form approved by the Committee

Authority: *T.C.A. §§53-10-303(f) and 53-10-305.* ***Administrative History:*** *Original rule filed December 22, 2005; effective March 7, 2006.*

ATTACHMENT 3

Secure Application Development Guide

Version 1.0
April 29, 2010

State of Tennessee
Department of Finance and Administration
Office for Information Resources
312 Rosa L. Parks Avenue
Snodrass Tennessee Tower, 16th Floor
Nashville, TN 37243
http://intranet.state.tn.us/finance/oir/security/policy.html

Table of Contents

Introduction ... 1
Audience ... 1
Input and Data Validation ... 2
Recommendations for Input and Data Validation ... 2
The Validation Paradigm ... 3
Constrain Input ... 3
Restrict Characters to "Known Good" Patterns ... 3
Validate Length, Format, Character Set, and Type ... 3
Reject/Replace Input ... 4
Assignment ... 4
Validation Paradigm Demonstrated ... 4
Parameterize Queries ... 5
Encrypt Credentials Stored in Configuration Files ... 10
Control of Internal Processing ... 11
Message Authentication ... 12
Input Validation ... 12
Management Responsibility ... 12
Architecture Issues ... 13
Separate SOAP Communications from Other Web Traffic ... 13
Harden the Web Services Servers ... 13
Application/service specific configuration ... 13
Disable Test Certificates ... 13
Disable HTTP POST and HTTP GET Protocols ... 14
Disable the Service Help Page ... 14
Implement SOAP Security ... 14
Implement Schema Restrictions ... 14
Security and Your System Development Life Cycle (SDLC) ... 16
Audit, Monitor and Maintain ... 17

Introduction

Audience

The information in this appendix is intended for development teams and administrators of web applications.

The State of Tennessee has gone to great lengths to secure its IT infrastructure. We have state-of-the-art devices and software to prevent access to servers and databases over the network. All network services, ports and protocols are buttoned down as securely as we know how—except one: UFBP, the Universal Firewall Bypass Protocol. These are our web applications and web services tunneling data over HTTP.

While web applications increase our attack surface, good coding and configuration practices can contain the degree to which they do so. Many of the most common web application attacks[1], Cross Site Scripting, SQL Injection, Cross Site Request Forgery, etc., can be largely neutralized with input and output validation and scrubbing. This is why security policy 10.2.1 states that *"Applications shall not pass raw input to other processes including, but not limited to, other applications, web services, application servers and databases."*

Proper input validation and output filtering will make our applications more stable, our data less at risk and our positions as IT professionals more secure, particularly in the event of a breach.

[1] See OWASP's "The Ten Most Critical Web Application Security Vulnerabilities."

Input and Data Validation

Input and data validation is checking to see that provided data is what is expected and appropriate for the destination. Some examples are, input dates are actually dates, numbers contain only digits and punctuation, text fields have maximum lengths, and narratives are filtered to exclude code. Business rules also provide validation, keeping values in known ranges or from lists of available choices.

Recommendations for Input and Data Validation

Use client side validation. It will reduce end user frustration as well as requests to the server. It is much easier to write code on the user interface that communicates validation errors, such as "invalid date" than it is to perform this validation on the server and have the validation error percolate back up to the user interface.

Unfortunately, client side validation will not make your applications more secure. Attackers do not always rely on the user interface, but they do find applications useful as they have embedded back end connection capability. With the connection established, the next step is to slip malicious code into the system via the URL field of a GET request, or the body field of a POST request. Your application must not act as a conduit for these requests.

The Validation Paradigm[ii]

Constrain Input

Restrict Characters to "Known Good" Patterns

Validate Length, Format, Character Set, and Type

Regular expressions (regex) are a powerful and complex tool for constraining input. Regexes can easily validate length, format (obviously), character set (a-zA-Z) and type. To help manage your collection of regex code, maintain a single validation library for data of all different types, shapes, and sensitivity. There is so much sample code for regex on the Internet, that you might be tempted to copy an expression and paste it into your application. That is fine, but please take the time to understand the code you discover. Refer to your language reference for guidance. Take the time to document the expressions in your code library, explaining the expression's constituent parts.

For example, this regex can be used to validate a string intended to be an email address:

```
^([a-zA-Z0-9_\-\.]+@(([a-zA-Z0-9\-])+\.)+([a-zA-Z\-])+$

//Namespace Reference
using System.Text.RegularExpressions

/// <summary>
/// method for validating an email address
/// regex explanation:
///^                          |From the beginning of the line, followed by...
///([a-zA-Z0-9_\-\.]+        |the character class matching upper and lower case
letters, all digits, underscore, dash, and period each matching one or more
times followed by...
///@                          |the "at" symbol followed by...
///((([a-zA-Z0-9\-])+\.)+    |the group which matches one or more times
containing another group (comprised of a character class where each atom
matches one or more times) and a period.  Followed by...
///(([a-zA-Z\-])+            |another group which matches one ore more times
containing the character class matching upper and lower case letters and a
dash, followed by...
///$                          |end of line.
/// </summary>

public static bool IsValidEmail(string email)
{
    string pattern = @"^([a-zA-Z0-9_\-\.]+@(([a-zA-Z0-9\-])+\.)+([a-zA-Z\-
])+$";
    Regex match = new Regex(pattern);
    return match.IsMatch(email);
}
```

Reject/Replace Input

Allowed good characters can still be dangerous.
Replace potentially dangerous characters.

The following VBScript[iii] function removes bad characters by accepting only alphabetic characters, numbers, underscores and spaces:

```
Function RemoveBadCharacters(strTemp)
    Dim regEx
    Set regEx = New RegExp
    regEx.Pattern = "[^A-Za-z0-9_ ]"
    regEx.Global = True
    RemoveBadCharacters = regEx.Replace(strTemp, "")
End Function
```

This could be too restrictive for some types of input, but would neutralize <script> and punctuation commonly used in injection attacks. One trick used to bypass this type of validation is to HEX encode the strings being passed to the web application. For example:

`SELECT LOAD_FILE(0x63:A5C626F6F742E696E69)` will dump the contents of c:\boot.ini. The string beginning `0x` contains valid numeric and alphabetic characters and would be hard to detect as invalid in many text fields. This is why it is important to restrict input by length and to known good values (dropdown lists).

Assignment

After validation, assign input to a local variable and then work only with the local variable. Using local variables will enforce type safety and maximum lengths.

Validation Paradigm Demonstrated

The code sample below demonstrates a simplified use of the validation paradigm.

```
protected void btnLogin_Click(object sender, EventArgs e)
{
    string _username = String.Empty;
    string _password = String.Empty;

    // constrain
    if (Validator.IsValid(InputType.SimpleName, txtUsername.Text.Trim()))
    {
      // assign
      _username = txtUsername.Text.Trim();
    }

    // constrain
    if (Validator.IsValid(InputType.Password, txtPassword.Text.Trim()))
    {
      // assign
      _password = txtPassword.Text.Trim();
    }
```

```
    // Use cleaned up variables ONLY!
    if (IsAuthenticated(_username, _password))
    {
      // allow access
    }

} // end btnLogin_Click
```

Consider a logon page with TextBox controls for user name and password (txtUsernamе and txtPassword). The logon button invokes the btnLogin_Click method.

The btnLogin_Click method contains local variables _username and _password that will hold the user-supplied data after validation.

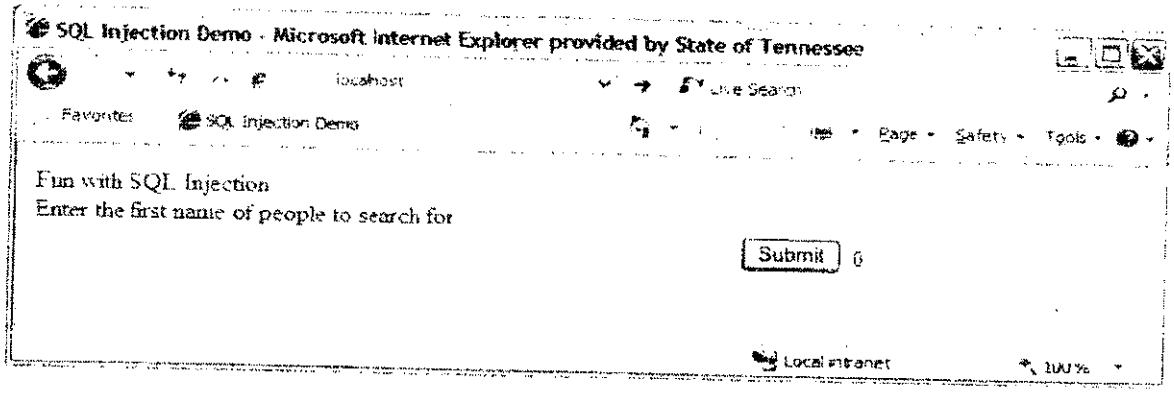
The Validator.IsValid method (not shown) would use whatever standard approach to input validation you have coded for input types like user names and passwords as described above under "Constrain Input." Only after passing the validation methods would the user-supplied data be assigned to local variables. These variables are then passed to the actual authentication method "IsAuthenticated." This method would do the actual lookups in a database or directory.

Parameterize Queries

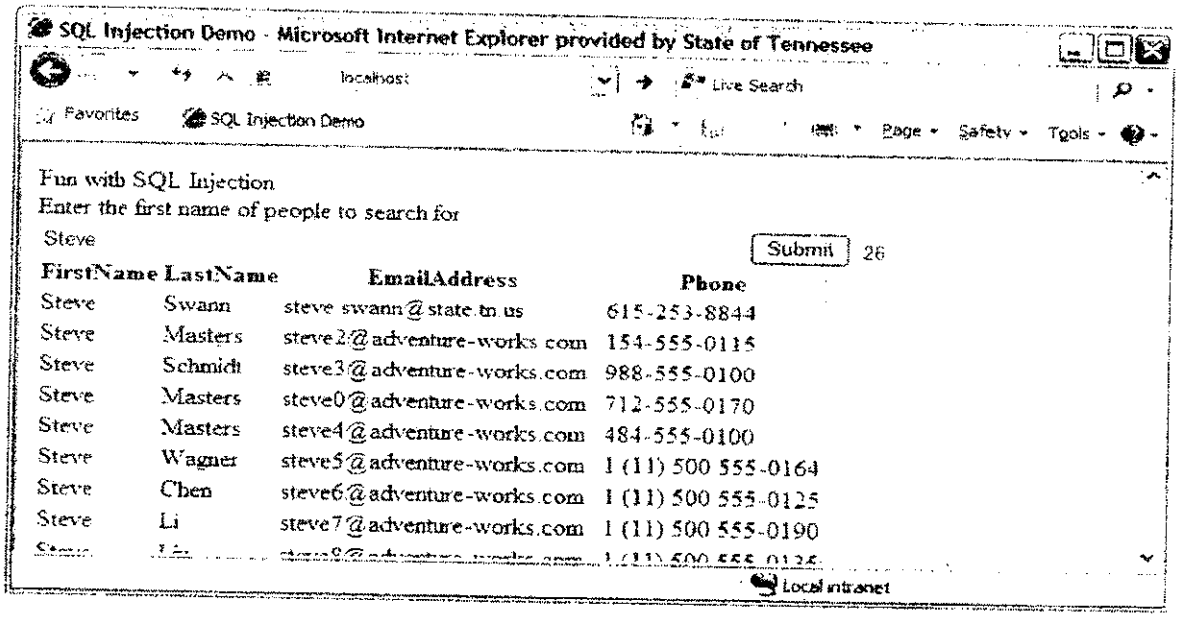
SQL Injection occurs when malicious instructions are passed to a database query engine by way of a web application that does not sanitize input. Typically, a dynamic query is constructed by appending user-supplied input to a SQL SELECT statement. This common attack vector is a vulnerability in countless web applications, which is frustrating since the solution is so simple, well known, and easily coded.

Validating input was discussed previously and following those practices would eliminate a lot of SQL injection vulnerabilities. But even raw malicious input will be unlikely to exploit an application if parameterized queries are used. Parameterized queries ensure that any data passed from the user to the database through the application is treated as data to search for not as instructions.

Consider this simple page that searches a database of people by first name.



If you submit a name that occurs in the database, a grid is populated with the results and the row count is displayed



FirstName	LastName	EmailAddress	Phone
Steve	Swann	steve swann@state.tn.us	615-253-8844
Steve	Masters	steve2@adventure-works.com	154-555-0115
Steve	Schmidt	steve3@adventure-works.com	988-555-0100
Steve	Masters	steve0@adventure-works.com	712-555-0170
Steve	Masters	steve4@adventure-works.com	484-555-0100
Steve	Wagner	steve5@adventure-works.com	1 (11) 500 555-0164
Steve	Chen	steve6@adventure-works.com	1 (11) 500 555-0125
Steve	Li	steve7@adventure-works.com	1 (11) 500 555-0190

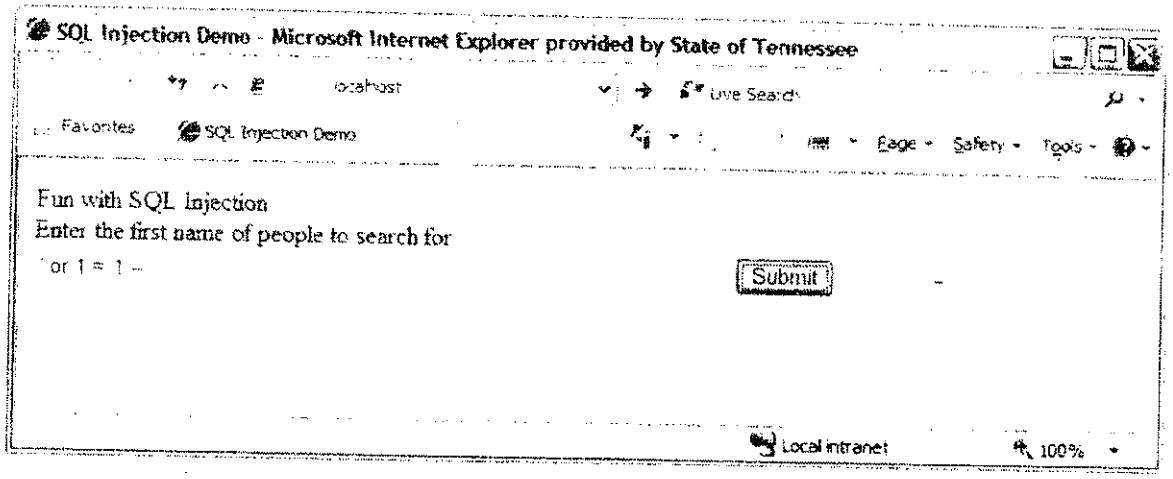
This is the actual SQL query generated at runtime

```
Select FirstName, LastName, EmailAddress, Phone from Person.Contact Where
FirstName = 'Steve'
```

Instead of entering a valid name to search for, an attacker enters an expression that always evaluates to "True." A classic example of such an expression is

```
' or 1 = 1;--
```

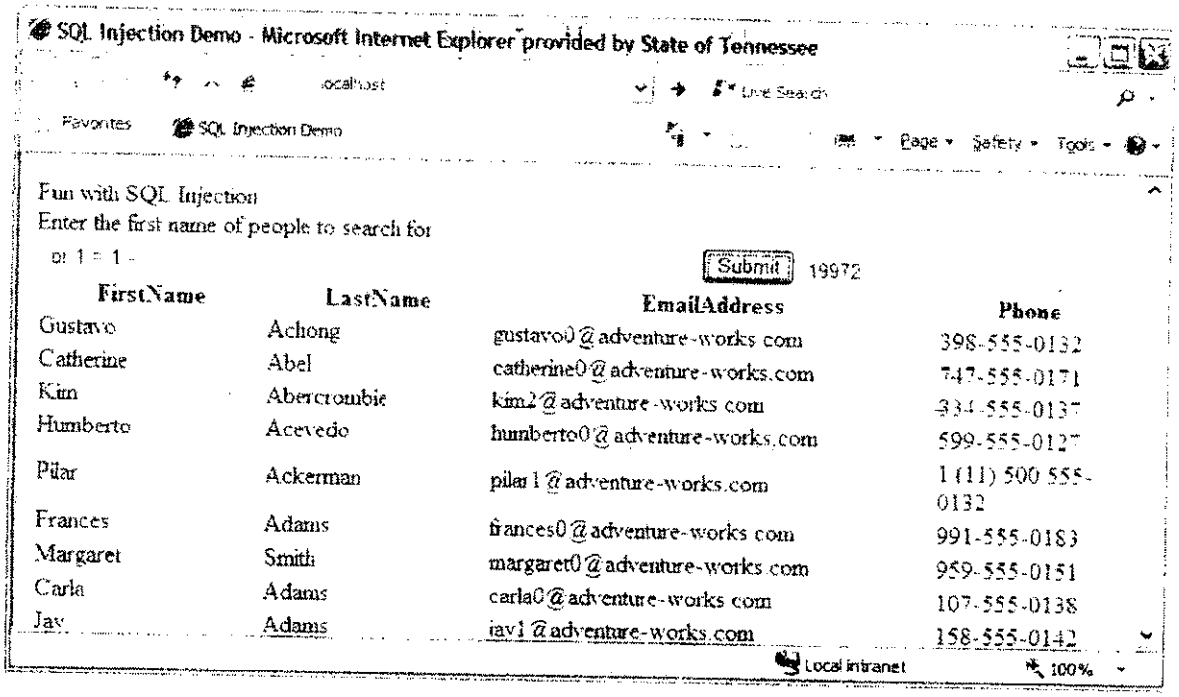
The expression above will replace Steve in the select statement. The apostrophe closes the first quote followed by "or True". The semicolon ends the statement and the double dash says to treat the rest of the line as a comment.



The select statement generated from that expression is

```
Select FirstName, LastName, EmailAddress, Phone from
Person.Contact Where FirstName = '' or 1 = 1;--'
```

When executed, all 19972 rows are returned



This vulnerability opens the door to the entire database and potentially the database server itself

This C# code contains bad, injectable code and good, // parameterized code.

This is the BAD C# code that runs when the Submit button is clicked:

```
protected void SubmitButton_Click(object sender, EventArgs e)
{
    String connString =
ConfigurationManager.ConnectionStrings["AdventureWorksConnectionString"].Conn
ectionString;
    SqlConnection conn = new SqlConnection(connString);
    conn.Open();
    string sqlSelect = "Select FirstName, LastName, EmailAddress, Phone from
Person.Contact Where FirstName  = '" + Criteria.Text + "'";
    SqlCommand sqlCmd = new SqlCommand(sqlSelect, conn);
    SqlDataReader sqlDr =
sqlCmd.ExecuteReader(CommandBehavior.CloseConnection);
    grd.DataSource = sqlDr;
    grd.DataBind();
    RowCount.Text = grd.Rows.Count.ToString();
    sqlDr.Close();
}
```

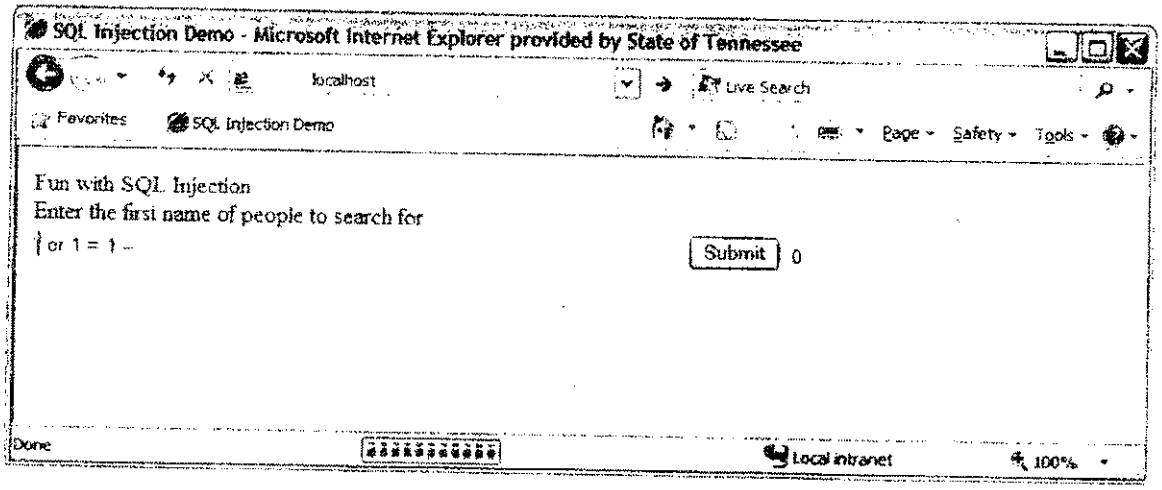
Above, "`Criteria.Text`" is the TextBox where the user or attacker puts the name or malicious code. The text is inserted directly into the select statement. As horrendous a

practice as this is, it is unbelieveably widespread.

The good news is that the page and code are easily salvaged with just a change to the select statement and three lines of code, even without using stored procedures, which would accomplish the same thing.

The parameterized code is shown below.

```
protected void SubmitButton_Click(object sender, EventArgs e)
{
    String connString =
ConfigurationManager.ConnectionStrings["AdventureWorksConnectionString"].Conn
ectionString;
    SqlConnection conn = new SqlConnection(connString);
    conn.Open();
    String sqlSelect = "Select FirstName, LastName, EmailAddress, Phone from
Person.Contact Where FirstName = @fname";
    SqlParameter param = new SqlParameter("fname", SqlDbType.VarChar);
    param.Value = Criteria.Text;
    SqlCommand sqlCmd = new SqlCommand(sqlSelect, conn);
    sqlCmd.Parameters.Add(param);
    SqlDataReader sqlDr =
sqlCmd.ExecuteReader(CommandBehavior.CloseConnection);
    grd.DataSource = sqlDr;
    grd.DataBind();
    RowCount.Text = grd.Rows.Count.ToString();
    sqlDr.Close();
}
```



It now fails to find anyone whose name is ' or 1 = 1.

See "Explained – SQL Injection" on msdn.microsoft.com for videos and recommended guidance on coding practices.

Encrypt Credentials Stored in Configuration Files

Policy (8.1.7) Protection of Login Credentials
Login credentials stored in configuration files shall be encrypted.

Obviously you have big problems if an attacker is able to read configuration files on your server, but knowing user names, passwords, server names and IP addresses do not have to be among them.

In an ASP.NET application, it is simple to encrypt selected <keys/> in web.config and machine.config files.

Look at the documentation on the "aspnet_regiis" command. Here are examples of its use to encrypt and decrypt a single key in an application's web.config file.

Encrypt the "connectionstrings" key:

```
aspnet_regiis -pef "connectionStrings" "Web application physical
path" -prov "DataProtectionConfigurationProvider"
```

Decrypt the "connectionstrings" key:

```
aspnet_regiis -pdf "connectionStrings" "Web application physical
path"
```

[ii] As described in SANS Institute Defensible .NET courseware
Copyright © 2008, the SANS Institute
[iii] See MSDN article "Removing Harmful Characters from User Input."

Control of Internal Processing[iv]

"Security controls shall be included to prevent corruption due to processing errors or deliberate acts."

The design and implementation of applications should ensure that the risks of processing failures leading to a loss of integrity are minimized Specific areas to consider include:

- the use of add. modify. and delete functions to implement changes to data;
- the procedures to prevent programs running in the wrong order or running after failure of prior processing;
- the use of appropriate programs to recover from failures to ensure the correct processing of data;
- protection against attacks using buffer overruns/overflows.

An appropriate checklist should be prepared, activities documented, and the results should be kept secure. Examples of checks that can be incorporated include the following:

- data is valid, reasonable, and what is expected (e.g. within ranges and among predefined choices);
- session or batch controls, to reconcile data file balances after transaction updates;
- balancing controls, to check opening balances against previous closing balances, namely:
  - run-to-run controls;
  - file update totals;
  - program-to-program controls;
- validation of system-generated input data;
- checks on the integrity, authenticity or any other security feature of data or software downloaded, or uploaded, between central and remote computers;
- hash totals of records and files;
- checks to ensure that application programs are run at the correct time;
- checks to ensure that programs are run in the correct order and terminate in case of a failure, and that further processing is halted until the problem is resolved;
- creating a log of the activities involved in the processing.

Data that has been correctly entered can be corrupted by hardware errors, processing errors or through deliberate acts. The validation checks required will depend on the nature of the application and the business impact of any corruption of data.

[iv] From ISO+IEC+27002-2005

Message Authentication[v]

Policy (10.2.2.1 1) Inter-process Message Authentication
"Inter-process message authentication shall be used to verify that a message originated from a trusted source and that the message has not been altered during transmission."

This section is about securing communication between processes, or services. A common method for commucation between different applications over the Internet/Intranet is Web Services. Web Services were not designed with security in mind. Like most Internet technology, just getting Web Services to work at all was considered a large enough miracle that security had to be added much later.

The language of Web Services is XML (Extensible Markup Language). XML is simple to learn and is readable by humans and machines. This provides a minimal barrier to entry for developers and hackers alike.

Web Services use SOAP to transfer the data. SOAP once stood for "Simple Object Access Protocol" but this acronym was dropped with Version 1.2 of the standard. SOAP is a stateless, one-way, XML-based message exchange.

Again, policy states *"...verify that a message originated from a trusted source and that the message has not been altered during transmission."* SOAP messages can be altered. XML schemas can be altered. They are subject to URL/URI redirection within SOAP messages to refer to different namespaces or network resources referenced in the SOAP message itself.

The OASIS WS-Security specification is the open standard for Web Services security. Its goal is to let applications secure SOAP message exchanges by providing encryption, integrity, and authentication support.

Input Validation

XML is created and consumed by programs that were written by humans. Just as with web applications, input validation in Web Services is critical to prevent injection and other attacks. Pay the same attention to input/output validation when reading and writing XML data as when processing data to and from users.

Management Responsibility

Agency policy should determine if and to what extent Web Services are offered to the outside world. Web Services that expose the organization's databases are subject to the same security considerations as interactive web applications.

Architecture Issues

Separate SOAP Communications from Other Web Traffic

Web Services are particularly prone to Denial of Service (DoS) attacks. Huge, complex, or intentionally recursive XML messages can tax a web server's XML parsing engine to the extent that the server becomes slow or unresponsive. Running Web Services on other than the default port for HTTP (TCP80) allows you to selectively turn Web Services on and off and attacks against port 80 will not affect other ports and vice versa. Unlike traditional DoS attacks, XML attacks can be small and need only be executed once.

Harden the Web Services Servers

Hardening the servers is a fundamental part of information security. Here are a few basic. important suggestions:

- Disable unnecessary services.
- Use IPSec packet filtering. Use full IPSec capability between the front-end and back-end servers.
- As with services, disable any unnecessary ISAPI filters and extensions, and unnecessary ASP.NET handlers.
- An XML parser is a program that interprets the contents of an XML file and determines what to do with the input. Apply XML parser hotfixes as quickly as reasonably possible. This is where malicious XML meets the computer. XML parser exploits are a common attack mechanism.

Application/service specific configuration

Disable Test Certificates

Microsoft provides `makecert.exe` to facilitate development and testing web applications and services. This capability should be disabled in production servers.

```
<microsoft.web.services>
      <security>
            <x509 allowTestRoot="False" />
      </security>
</microsoft.web.services>
```

Set the `verifyTrust` attribute to true. Doing so requires the certificate's entire "chain of trust" to be verified.

```
<microsoft.web.services3>
  <security>
    <x509 verifyTrust="true" />
  </security>
</microsoft.web.services3>
```

Disable HTTP POST and HTTP GET Protocols

To disable support for a protocol for an individual Web application:

The following example[vi] explicitly removes the HTTP-POST and HTTP-GET protocols:

```
<webServices>
    <protocols>
      <remove name="HttpPost" />
      <remove name="HttpGet" />
    </protocols>
</webServices>
```

Disable the Service Help Page

To disable the service help page for an individual Web application:[vii]

```
<webServices>
    <protocols>
      <remove name="Documentation" />
    </protocols>
</webServices>
```

Alternatively, your service can redirect to a blank page:

```
<webServices>
   <wsdlHelpGenerator href="docs/MyBlank.htm"/>
</webServices>
```

Implement SOAP Security

- Sign all outgoing messages as they are fully editable by the receiving party. Without cryptographic proof of the original message, the receiving party can claim falsehoods.
- Consider requiring XML signatures for incoming SOAP messages.
- There is no guarantee of end-to-end protection with SSL and IPSec. Therefore, use XML encryption for any sensitive information leaving the network.

Implement Schema Restrictions

The XML schema for a message is incredibly important for security. Documents that do not conform to the schema return an error to the client. Schemas can perform input validation using regular expressions and by setting minimum and maximum values.

As important as schema validation is, it hurts performance by as much as three times slower execution. High volume services are good candidates to be offloaded to an XML-aware firewall or proxy.

---

[v] As described in SANS Institute Devensible .NET courseware
Copyright © 2008, the SANS Institute
[vi] How to: Disable Protocol Support for Web Services (MSDN)
[vii] How to: Disable the Service Help Page for a Web Service (MSDN)

Security and Your System Development Life Cycle (SDLC)

Application development projects usually suffer from feature creep, or scope creep. This is where the original set of features constantly grows, causing massive delays in release of the product. The last feature you want to add to an application late in the development cycle is security. Security needs to be an intragal part of an application's architecture, from the servers and database to the user interface.

Consider the typical phases of an SDLC.

- Requirements
- Design
- Implementation
- Verification
- Release
- Support

To include security, add training and response.

- Training (in secure coding and administration)
- Requirements
- Design
- Implementation
- Verification
- Release
- Support
- Response (to incidents, such as a data breach)

One large software and development tools vendor, Microsoft, suggests these security activites during the SDLC phases:[vii]

- Training
  - Core training
- Requirements
  - Analyze security and privacy risk
  - Define quality gates
- Design
  - Threat modeling
  - Attack surface analysis
- Implementation
  - Specify tools
  - Enforce banned functions
  - Static analysis
- Verification
  - Dynamic/Fuzz testing
  - Verify thread models/attack surface
- Release
  - Response plan

    - Final security review
    - Release archive
- Support
    - Service packs
    - Security updates
- Response (to incidents, such as a data breach)
    - Repsonse execution

Policy 10.1.1.1 Security Controls in Requirements states *"Analysis of requirements for all new systems, or changes to existing systems shall include specification of controls to audit, monitor and/or maintain systems during regular operation and in failure mode (e.g. logging access to the program, changes to data, application-specific data points, instrumenting code)."*

What do we mean by "security controls?" Think of security controls as safeguards or countermeasures. Security controls are ways to manage risk, including policies, procedures, guidelines, and practices. These can be of administrative, technical, management, or legal nature. Here we are concerned with technical security controls.

Audit, Monitor and Maintain

Requirements should include the ability to audit an application's activity. Typically, this is done via log files or log tables in a database. Log events to answer the question "Who did what when?" Design a standard logging mechanism that you can call anywhere in the application and that the database engine can access independent of the application, such as with triggers.

Consider run-time monitoring that can be turned on and off outside the application. Turn logging of database activity on for monitoring, tuning, and troubleshooting, and off for maximum performance.

Also consider instrumenting your code to help analyze performance in multi-user, multi-processor, multi-server and caching scenarios.

For a security-specific code instrumentation "how to" see the article "Instrument ASP.NET 2.0 Applications for Security"
Objectives

- Identify the security related events that are raised automatically.
- Learn about additional security related events you might want to track.
- Raise custom events to track specific security related activity.
- Instrument your code to detect password changes.
- Instrument your code to detect when the membership system locks out an account.
- Instrument your code to track access to sensitive business logic.

[vii] The Microsoft Security Development Lifecycle (SDL): Process Guidance

TENNESSEE CONTROLLED SUBSTANCE MONITORING PROGRAM
BOARD OF PHARMACY
DEPARTMENT OF HEALTH
227 FRENCH LANDING, SUITE 380; Nashville, TN 37243-1149
TEL: (615) 532-1305 FAX: (615) 253-8782
URL: https://prescriptionmonitoring.state.tn.us

Patient Rx History Report

PATIENT NAME

DATE: 5/4/11

Search Criteria: ((Last Name) = And (D.O.B.) = To_Date(,'mm/dd/yyyy') and Request Period = '4/13/2010 12:00:00AM' to '4/13/2011 12:00:00AM'

Prescriptions

1/27/2011	HYDROCODONE BITARTRATE AND ACETAMINOPHEN TABLETS 500 MG:5 MG TABLET	12	1		1/27/2011	N	U
8/24/2010	SUBOXONE TABLETS 8.64 MG;2.44 MG TABLET	24	16		8/24/2010	N	U
8/23/2010	SUBOXONE TABLETS 8.64 MG;2.44 MG TABLET	2	1		8/23/2010	N	U
5/15/2010	SUBOXONE TABLETS 8.64 MG;2.44 MG TABLET	24	16		5/15/2010	N	U
5/24/2010	SUBOXONE TABLETS 8.64 MG;2.44 MG TABLET	22	14		5/24/2010	N	U
5/13/2010	SUBOXONE TABLETS 8.64 MG;2.44 MG TABLET	18	12		5/13/2010	N	U
5/10/2010	SUBOXONE TABLETS 8.64 MG;2.44 MG TABLET	6	2		5/10/2010	N	U

N/R: N=New R=Refill

Pay: I=Insurance C=Cash M1=Medicare M2=Medicaid WC=Workers Comp CI=Commercial PBM Insurance U-Unknown

Total Prescriptions: 7

Prescribers for prescriptions listed

XXXXXXXXX

XXXXXXXXX

Pharmacies that dispensed prescriptions listed

XXXXXXXXX

XXXXXXXXX

XXXXXXXXX

Patients that match search criteria

XXXXXXXXX

XXXXXXXXX

Sample

ATTACHMENT 4

Disclaimer: The Board Of Pharmacy does not warrant the above information to be accurate or complete. The Report is based on the search criteria entered and the data entered by the dispensing pharmacy. For more information about any prescription, please contact the dispensing pharmacy or the prescriber.

TENNESSEE CONTROLLED SUBSTANCE MONITORING PROGRAM
BOARD OF PHARMACY
DEPARTMENT OF HEALTH
227 FRENCH LANDING, SUITE 380; Nashville, TN 37243-1149
TEL (615) 532- 1305 *FAX:* (615) 253-8782
URL https://prescriptionmonitoring.state.tn.us

Prescriber Rx History Report

NAME OF DOCTOR

DATE : 4/28/11

Search Criteria: (DEA Number) = (**And (State) = ('TN') and Request Period = '1/1/2011' to '1/31/2011'**

Prescriptions

2/1/1977	01/31/2011	01/31/2011	OXYCODONE AND ACETAMINOPHEN TABLETS 325 MG;10 MG TABLET	45		0
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2/1/1977	01/03/2011	12/27/2010	OXYCODONE AND ACETAMINOPHEN TABLETS 325 MG;10 MG TABLET	45		0
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
1/27/1979	01/25/2011	01/25/2011	HYDROCODONE BITARTRATE AND ACETAMINOPHEN TABLETS 500 MG;10 MG TABLET	60		0
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
1/27/1979	01/10/2011	11/30/2010	HYDROCODONE BITARTRATE AND ACETAMINOPHEN TABLETS 500 MG;10 MG TABLET	60		0
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
3/28/1983	01/25/2011		HYDROCODONE BITARTRATE AND ACETAMINOPHEN TABLETS 500 MG;10 MG TABLET	90		0
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
11/19/1955	01/17/2011	01/17/2011	OXYCODONE AND ACETAMINOPHEN TABLETS 325 MG;10 MG TABLET	90		0
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
12/18/1962	01/29/2011	01/29/2011	OXYCODONE HYDROCHLORIDE TABLETS 30 MG TABLET	90		0
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Sample

ATTACHMENT 5

Disclaimer: The Board Of Pharmacy does not warrant the above information to be accurate or complete. The Report is based on the search criteria entered and the data entered by the dispensing pharmacy. For more information about any prescription, please contact the dispensing pharmacy or the prescriber.