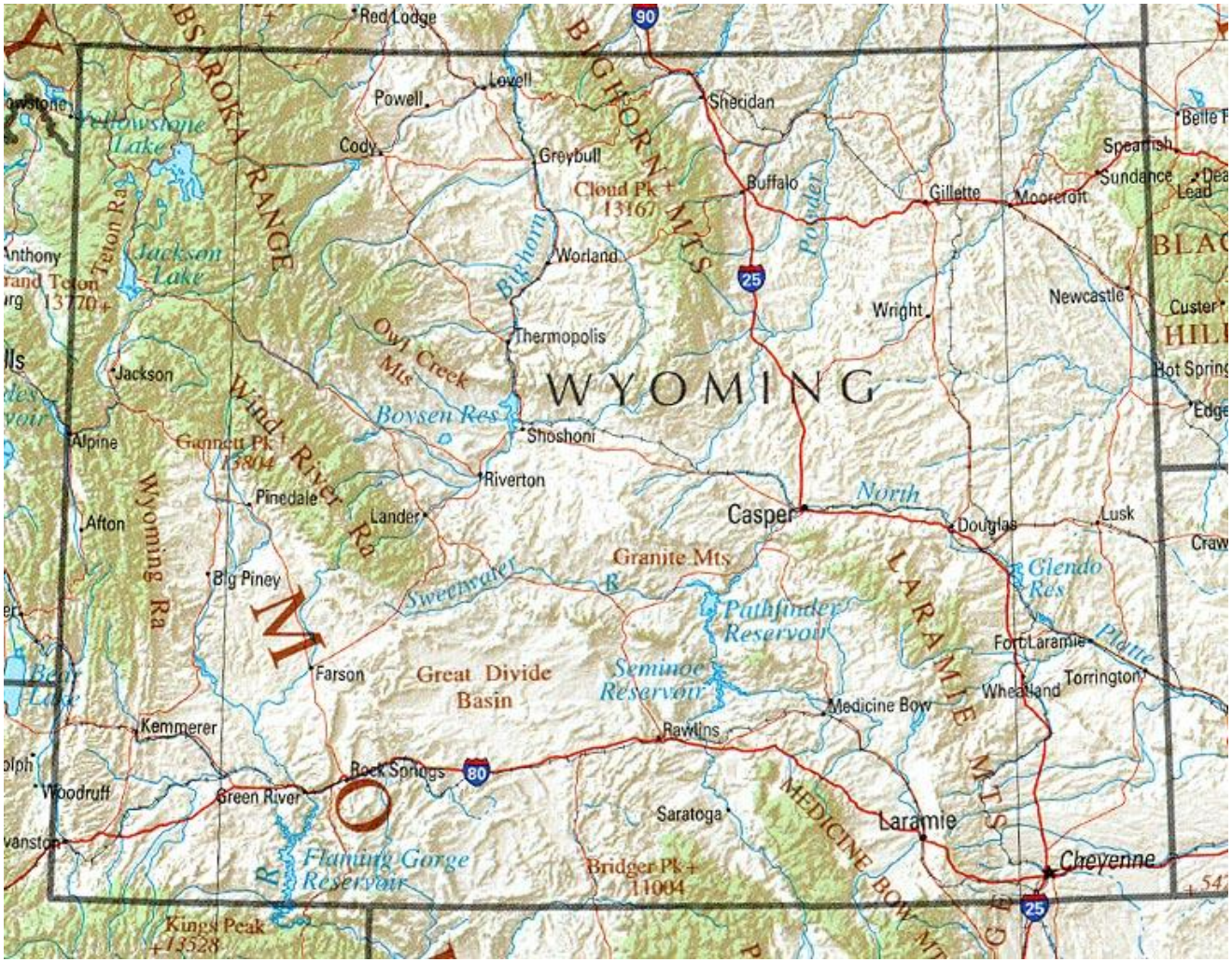
Session E33

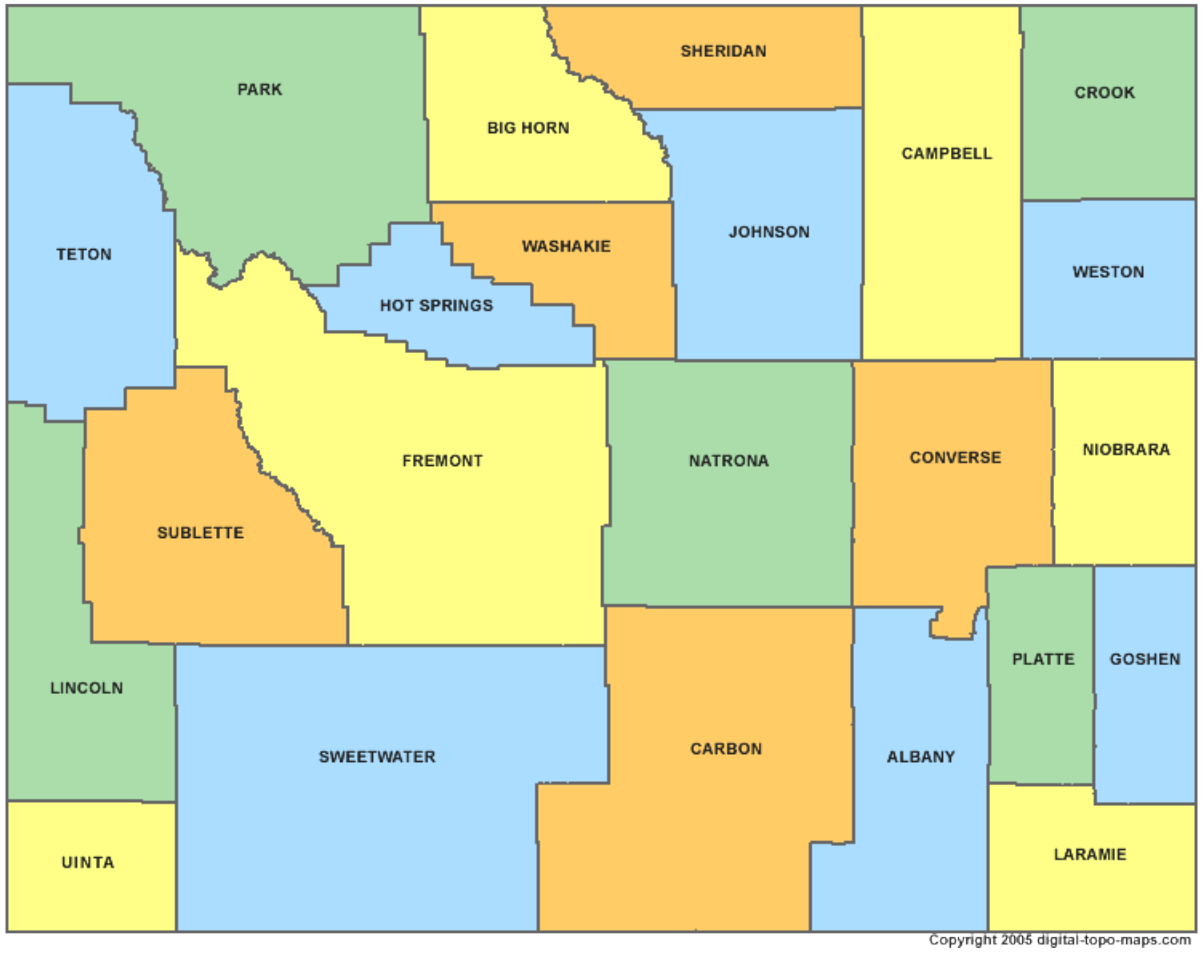
WyPONS

Real-time Wyoming Protection Order Notification System

Welcome to Wyoming (*532,668)*



Wyoming Counties (23)



Wyoming Courts

- Wyoming Municipal Courts
- Wyoming Circuit Courts
- Wyoming District Courts
- Wyoming Supreme Court

Wyoming Municipal Courts (94)

Municipal Courts handle most **municipal ordinance violations**. Municipal Courts may handle some ordinance violations with juvenile defendants.

Municipal Courts have exclusive jurisdiction over most municipal ordinance violations, and this jurisdiction is limited to the extent that District Courts have jurisdiction to grant injunctive relief and impose civil penalties authorized by certain types of ordinances.

Circuit Courts may handle municipal ordinance violations with the agreement of a municipality.

Wyoming Circuit Courts (29)

Circuit Courts have jurisdiction over certain types of civil and criminal cases.

Criminal cases heard by Circuit Courts include misdemeanors and felony preliminary hearings. Circuit Courts have original jurisdiction over misdemeanors and share jurisdiction over misdemeanors with District Courts. Circuit Courts may handle municipal ordinance violations with the agreement of a municipality.

Civil cases heard by Circuit Courts include most general civil claims for less than $7000, exclusive of court costs. Circuit Courts also handle **civil family violence protection cases**. Civil cases handled by a Circuit Court include claims for the recovery of money, claims for the recovery of personal property, landlord-tenant cases, foreclosures and enforcements of certain liens, small claims cases and the disposal of abandoned vehicles.

Circuit Courts have replaced Justice of the Peace Courts and exercise the jurisdiction previously granted to Justice of the Peace Courts.

Wyoming District Courts (23)

District Courts have general jurisdiction over all criminal and civil cases, but typically handle cases that are beyond the jurisdiction of other courts.

Criminal cases heard by District Courts include **felonies**, lesser-included offenses and some misdemeanors. District Courts may impose certain penalties in some ordinance violation cases, but most ordinance violation cases are heard by Municipal Courts or Circuit Courts.

Civil cases heard by District Courts include general civil claims beyond the jurisdiction of Circuit Courts. District Courts also handle juvenile matters, probate matters, domestic relations and cases requesting injunctive relief.

District Courts have a Juvenile Court division with general jurisdiction over certain types of cases, including juvenile delinquency, child neglect, children in need of supervision and judicial consent to abortion. Municipal Courts may handle some municipal ordinance violations with juvenile defendants.

Wyoming Supreme Court (1)

- **The Wyoming Supreme Court has general appellate jurisdiction**, hearing **appeals** from lower Wyoming courts in civil and criminal cases. The court also has "general superintending control over all inferior courts, under such rules and regulations as may be prescribed by law."[1]
- The Supreme Court has original jurisdiction in cases involving quo warranto and mandamus as to all state officers and in habeas corpus. The Court also has power to issue writs of mandamus, review, prohibition, habeas corpus, certiorari, and other writs necessary to the exercise of its appellate duties.

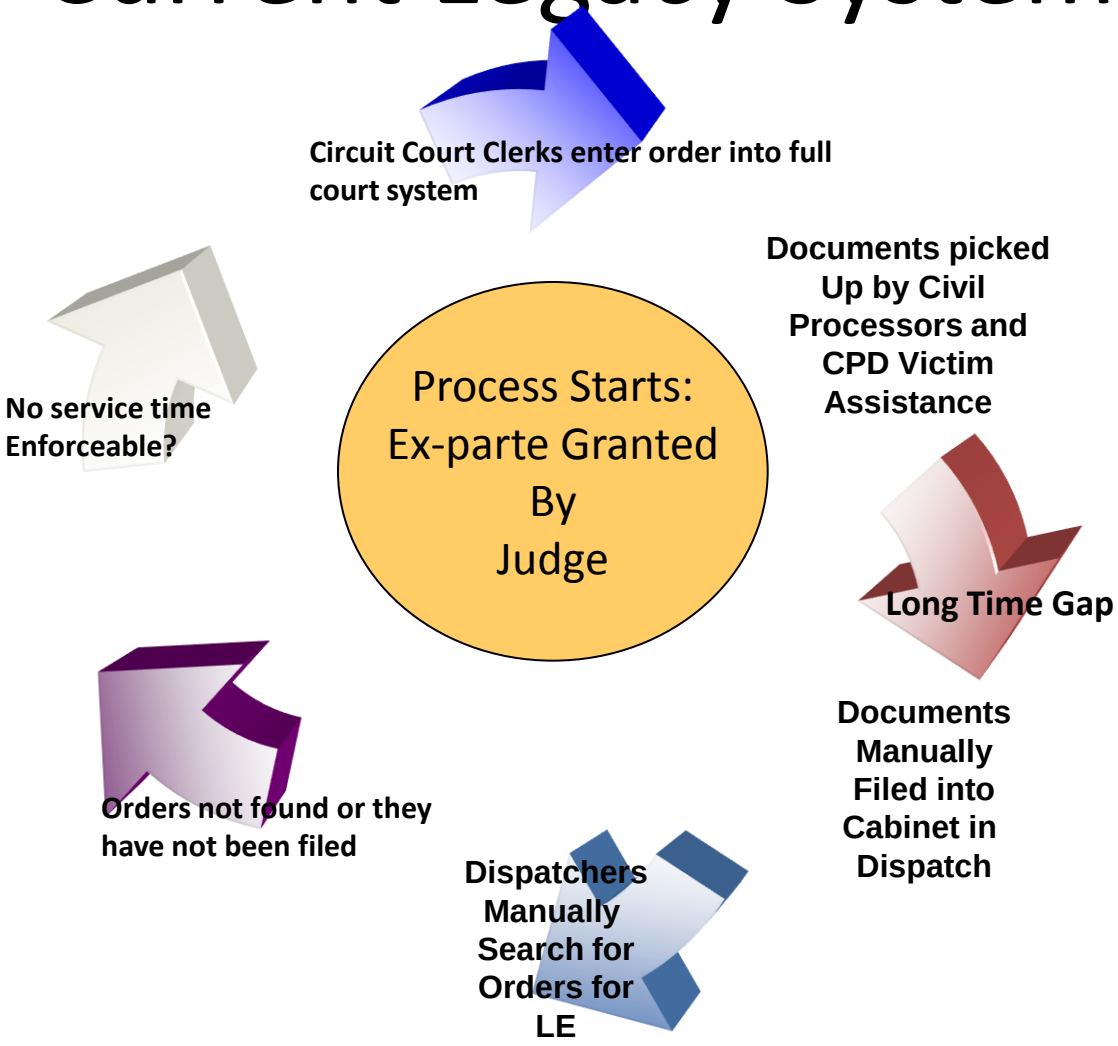
Tina Henderson

Cheyenne Police Department

Victim Witness Coordinator

Current Protection Order Network in Wyoming

Current Legacy System



Statement of Problem

Legacy System

- No data system used to track ex-parte's and when they are served
  - Ex-parte's were not entered into NCIC only Permanent Protection Orders
  - Time gap from the time the ex-parte was issued and the papers are filed in dispatch
  - Time of service, court orders are not enforceable until they have been served
- Victim Safety
- Officer Safety and liability
- Enforcing Protection orders from other Counties in Wyoming

Obstacles

- CHANGE
- Multi-agency collaboration:
  - Law Enforcement
  - Sheriff Officers
  - Municipal Police Officers
  - Dispatchers
  - Division of Criminal Investigation
  - Victim Services
  - Domestic Violence Programs
  - Courts
- Question the need for database system in Wyoming

National Standard: A Guide for Effective Issuance and Enforcement of Protection Orders (DOJ)

- All states should participate in the National Crime Information Center (NCIC) Protection Order File (POF) database.
- All states should establish a full text state protection order registry or data base.
- State registries or database should maintain comprehensive data about all qualifying orders, **including emergency and ex-parte orders.**
- Registry or database staff should assist in the development of tools to gather appropriate information for the registry and for other purposes
- State registries or databases should provide easy access to information for enforcement purposes while protecting victim safety. (*A guide for effective issuance and enforcement of protection orders 2004)*

Solution: Infrastructure

Steven Dreher
Chief Technology Officer
Wyoming Supreme Court

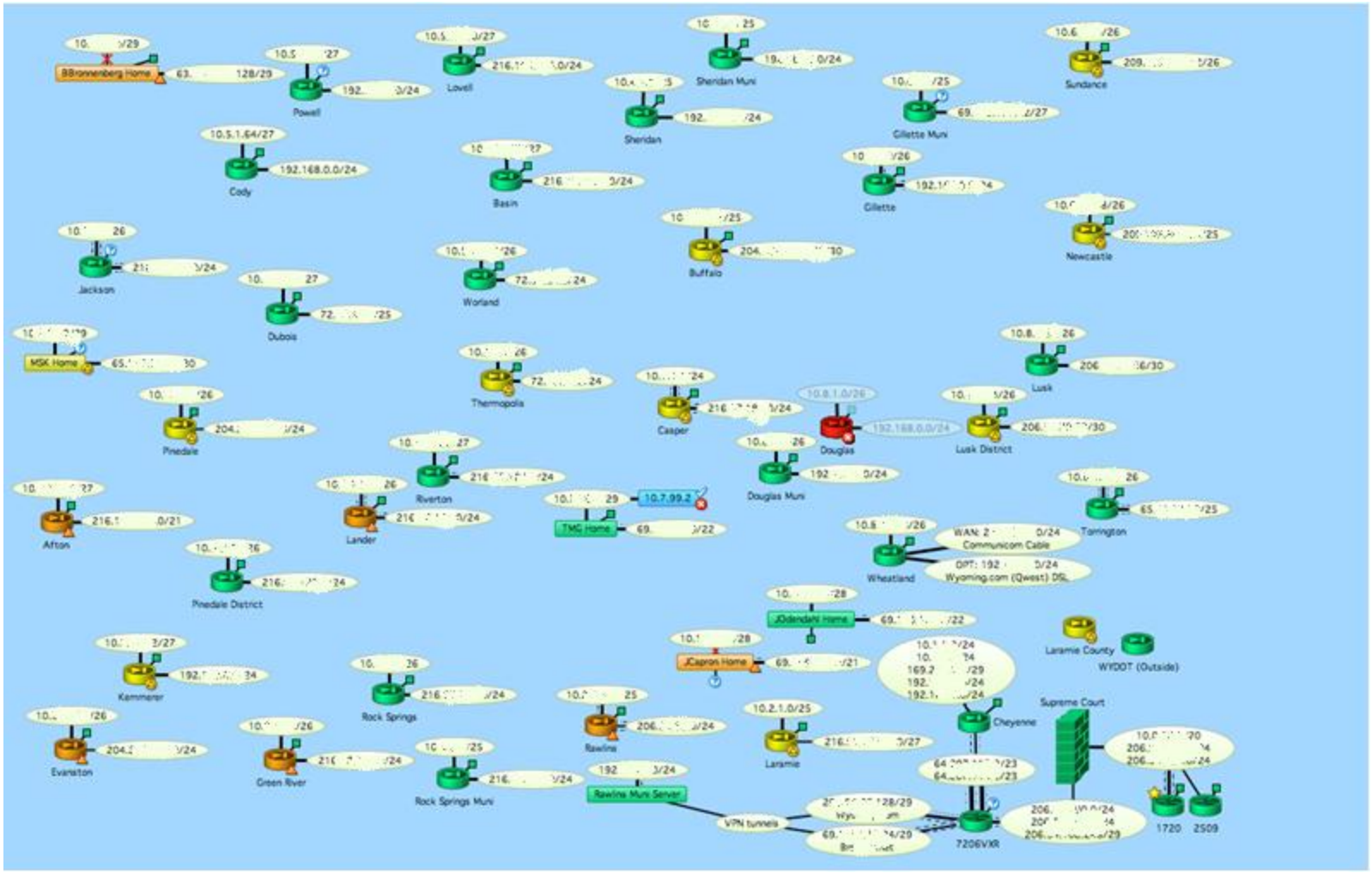
Key Infrastructure Points

- Information Retrieval is Statewide - WAN
- Near-Real-Time Timeliness of Information
- Uniformity of Database Sources
- Centralized Data Aggregation
- Secure
- Moderated

Network Summary

- 29 Court DB's Queried by WyPONS
- (52 Locations Total)
- Hub and Spoke Topology utilizing VPN Tunneling over Public Internet to the Supreme Court's Data Center

Wyoming State Court Network



Data Aggregation, Timeliness, and Uniformity

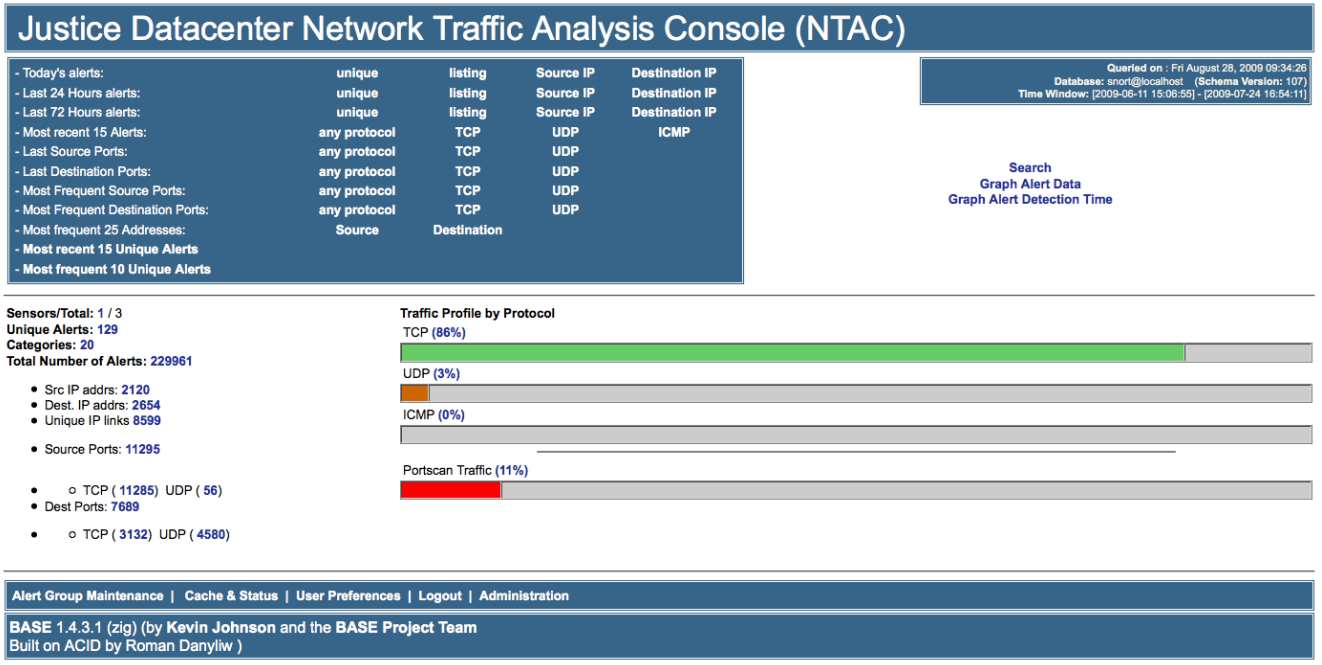
- 5 Minute Querying of 29 Target DB's
- Source Databases are Uniform
- Centralized Aggregation
  - Statewide Court Information Store (SCIS)
    - Service Oriented Architecture (SOA)
    - Judicial Reference Architecture Model (JRA)
    - NIEM Compliancy
  - Staging Information for Judicial Partners

Access Controls/Authentication

- Single Web Based Point of Entry
  - Credentials
    - Badge Number (Static and Reused)
    - PIN (Assigned to Individual Officer)
    - Badge + PIN = “Salted” Login
    - Pass code
  - Timed SSL (Encrypted) Browser Sessions

Access Moderation

- Logging and Capture of All Layer 3 (TCP) Traffic
  - Source / Destination “Sniffing”
  - TCP Payload (packet) Capture



TCP Payload Capture

Meta

ID #	Time	Triggered Signature
4 - 280	2009-06-11 15:37:42	<FONT SIZE=-1>[<A HREF="signatures/15000.txt" TARGET="_ACID_ALERT_DESC">local</A>] </FONT> <FONT SIZE=-1>[<A HREF="http://www.snort.org/pub-bin/sigs.cgi?sid=1:15000" TARGET="_ACID_ALERT_DESC">snort</A>]</FONT> SCIS Access

Sensor	Sensor Address	Interface	Filter
	unknown:eth1	eth1	*none*

FQDN	Sensor Name
	unknown:eth1

Alert Group	*none*

IP

Source Address	Dest. Address	Ver	Hdr Len	TOS	length	ID	fragment	offset	TTL	chksum
159.238.[redacted].66	206.54.[redacted]	4	20	0	1420	28899	no	0	120	43294 = 0xa91e

FQDN	Source Name	Dest. Name
	Unable to resolve address	*Unable to resolve address*

Options	*none*

TCP

Source Port	Dest Port	R 1	R 0	U R G	A C K	P S H	R S T	S Y N	F I N	seq #	ack	offset	res	window	urp	chksum
2006 [sans] [tantalo] [sstats]	1843 [sans] [tantalo] [sstats]				X					952231649	3702061296	20	0	65535	0	34735 = 0x87af

Options	*none*

Payload

Normal Display

```
49238010567          SD      Richard     D       Dunnihoo          1967052240325 D   CCLSKC1431-5-301 biv (2)
[2 non-ASCII characters]
                             Sherry              Hatcher           1900010100000*A   CCWORC206-3-702 abi
[2 non-ASCII characters]
1[redacted]          WY[redacted]1Dillon         Carlson           1989051629250 C   CCCPRC0135-7-1031 ciA (1)
[2 non-ASCII characters]
288[redacted]        WY[redacted]2John   Lee     Hill              19451110070007B   CCWORC206-3-406 ai
[2 non-ASCII characters]
1[redacted]599       WY[redacted]Michael Lee     Miller            19650103002025A   CCCPRC0131-5-1206 a
```

Download of Payload

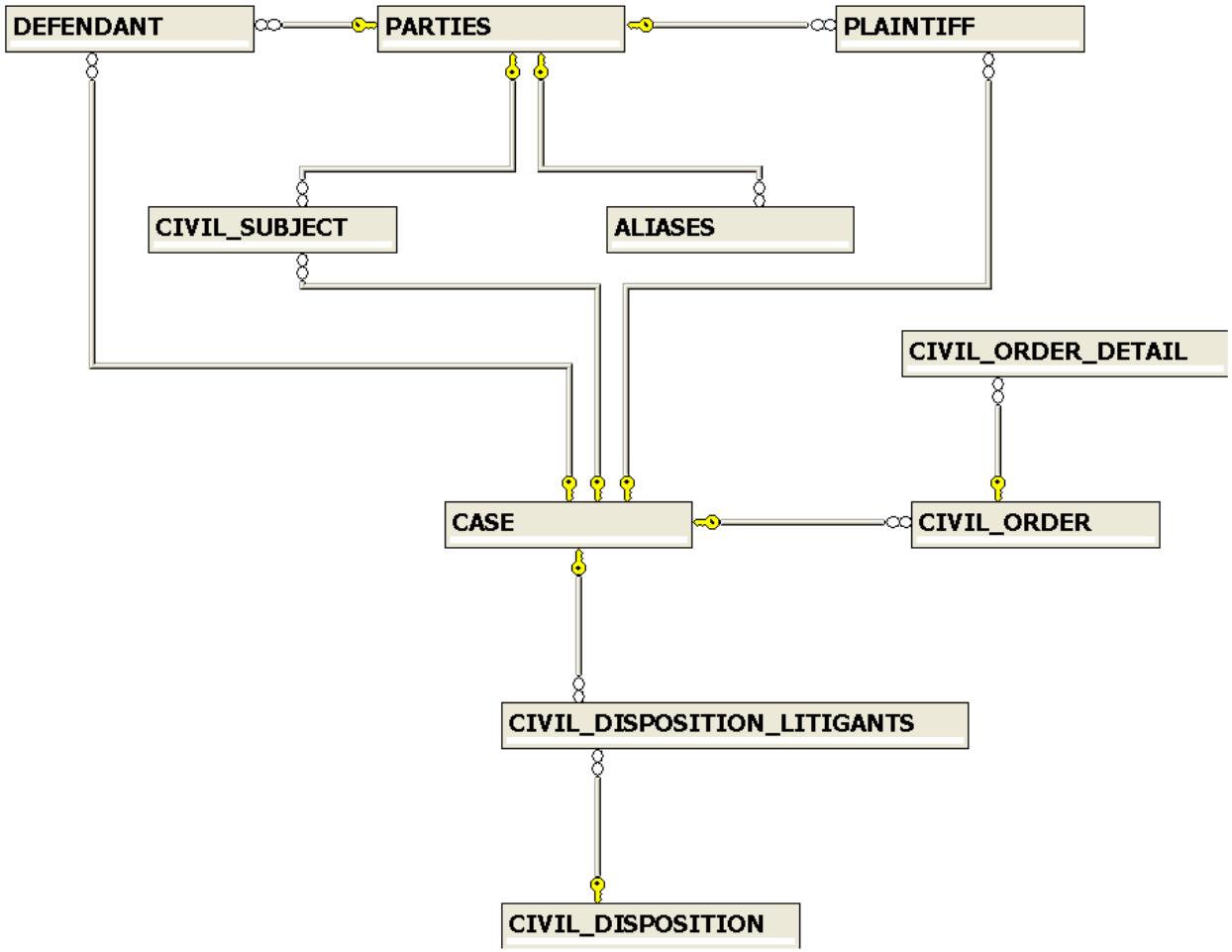
Download in pcap format

Thank you!

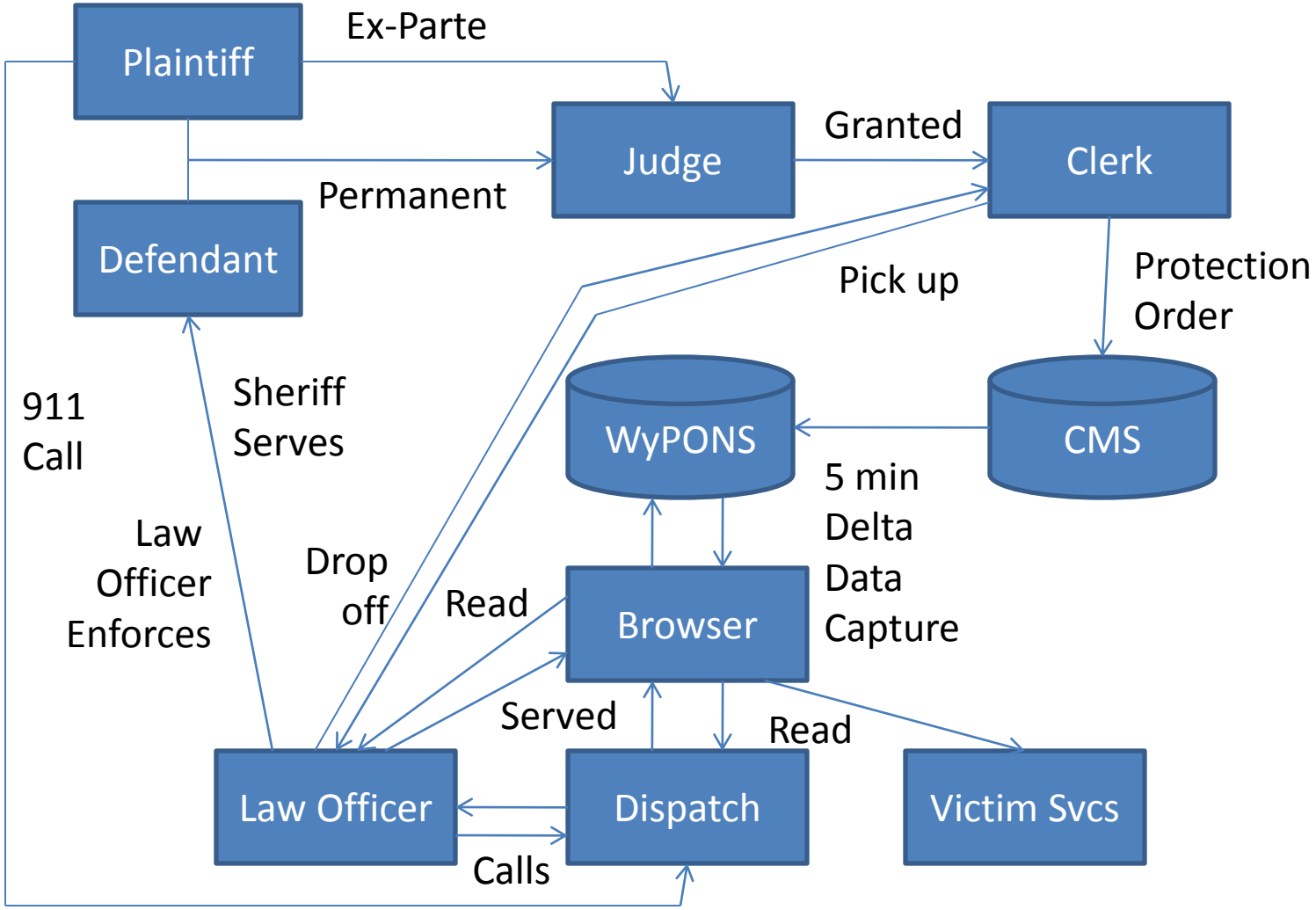
Solution: Implementation

James Bothamley
Chief Information Officer
Wyoming Supreme Court

Protection Order Model



Data/Process Flow Diagram



Data/Process Tools

- CMS – Case Management System
  - RDBMS: ORACLE 9i
- WyPONS
  - Browser: IE 7.0 or greater
  - RDBMS: SQL Server 2005
  - Software
    - Asp.NET
    - SQL CLR
    - T-SQL
    - SQL Server Agent

Creating CLR Functions:

- Define the function as a static method of a class in a language supported by the .NET Framework. For more information about how to program functions in the common language runtime, see CLR User-Defined Functions. Then, compile the class to build an assembly in the .NET Framework by using the appropriate language compiler.

- Register the assembly in SQL Server by using the CREATE ASSEMBLY statement. For more information about assemblies in SQL Server, see Assemblies (Database Engine).

- Create the function that references the registered assembly by using the CREATE FUNCTION statement.

Visual Basic 2008 – SQL CLR

```
Public NotInheritable Class GetCaseDataFromOracle
  <SqlFunction(FillRowMethodName:="FillRow", DataAccess:=DataAccessKind.Read)> _
  Public Shared Function GetCaseDataFromOracle(ByVal servername As String, ByVal username As String,
     ByVal pwd As String, ByVal last_datetime As String) As IEnumerable
    Dim sqlStatement As String
    Dim csb As New OracleConnectionStringBuilder()
    csb.DataSource = servername
    csb.UserID = username
    csb.Password = pwd
    sqlStatement = <Oracle SQL Statement>
    Dim conn As New OracleConnection(csb.ConnectionString)
    conn.Open()
    Dim cmd As New OracleCommand(sqlStatement, conn)
    Try
      Return cmd.ExecuteReader(CommandBehavior.CloseConnection)
    Finally
      cmd.Dispose()
    End Try
  End Function
```

CLR - CREATE ASYMMETRIC KEY

```
DECLARE @SamplesPath nvarchar(1024)
-- You may need to modify the value of the this variable if you have installed
     the sample someplace other than the default location.

SELECT @SamplesPath = REPLACE(physical_name,
   'Microsoft SQL Server\MSSQL.1\MSSQL\DATA\master.mdf',
   'Microsoft SQL Server\90\Tools\Bin\')
   FROM master.sys.database_files
   WHERE name = 'master';

EXEC('CREATE ASYMMETRIC KEY UnsafeWyPONS_Key FROM EXECUTABLE FILE
     = ''‘ + @SamplesPath + 'ProtectionOrderNotification.dll'';');
```

CLR - CREATE LOGIN FROM ASYMMETRIC KEY

```
CREATE LOGIN UnsafeSample_Login FROM ASYMMETRIC KEY UnsafeWyPONS_Key

GRANT UNSAFE ASSEMBLY TO UnsafeWyPONS_Login
```

CLR - CREATE ASSEMBLY

```
DECLARE @SamplesPath nvarchar(1024)
-- You may need to modify the value of the this variable if you have
    installed the sample someplace other than the default location.
SELECT @SamplesPath = REPLACE(physical_name, 'Microsoft SQL
    Server\MSSQL.1\MSSQL\DATA\master.mdf', 'Microsoft SQL
    Server\90\Tools\Bin\')
   FROM master.sys.database_files
   WHERE name = 'master';
print @SamplesPath

CREATE ASSEMBLY ProtectionOrderNotification
FROM @SamplesPath + 'ProtectionOrderNotification.dll'
WITH permission_set = unsafe;
```

CLR - CREATE FUNCTION

```
CREATE FUNCTION sc_PON_Oracle_SC_PON_CASE_Select(@servername nvarchar(200),
                                                 @username nvarchar(200),
                                                 @pwd nvarchar(200),
                                                 @last_datetime [nvarchar](19))
RETURNS TABLE
(
        CASE_SEQUENCE                   numeric,
        CASE_LAST_DATETIME              datetime,
        PLAINTIFF_SEQUENCE              numeric,
        DEFENDANT_SEQUENCE              numeric,
        PLAINTIFF_PARTY_SEQUENCE        numeric,
        PLAINTIFF_PARTY_LAST_DATETIME   datetime,
        PLAINTIFF_PARTY_LAST_NAME       nvarchar(103),
        PLAINTIFF_PARTY_FIRST_NAME      nvarchar(103),
        PLAINTIFF_PARTY_MIDDLE_NAME     nvarchar(103),
        PLAINTIFF_PARTY_COMPANY_NAME    nvarchar(103),
        PLAINTIFF_PARTY_DOB             datetime,
        DEFENDANT_PARTY_SEQUENCE        numeric,
        DEFENDANT_PARTY_LAST_DATETIME   datetime,
        DEFENDANT_PARTY_LAST_NAME       nvarchar(103),
        DEFENDANT_PARTY_FIRST_NAME      nvarchar(103),
        DEFENDANT_PARTY_MIDDLE_NAME     nvarchar(103),
        DEFENDANT_PARTY_COMPANY_NAME    nvarchar(103),
        DEFENDANT_PARTY_DOB             datetime,
        CASE_NUMBER                     nvarchar(32),
        CASE_FILING_DATE                datetime,
        SEALED                          nchar(1),
        CURRENT_STATUS                  nvarchar(32),
        CURRENT_STATUS_DATE             datetime,
        CASE_COMMENT                    nvarchar(4000),
        APPEALED                        nchar(1),
        PHYSICAL_FILE                   nchar(1),
        CLERK_COMMENT                   nvarchar(4000),
        CIVIL_ORDER_ROWS                nchar(1)
)
AS EXTERNAL NAME ProtectionOrderNotification.[WyPONS.SqlServer.GetCaseDataFromOracle].GetCaseDataFromOracle
```

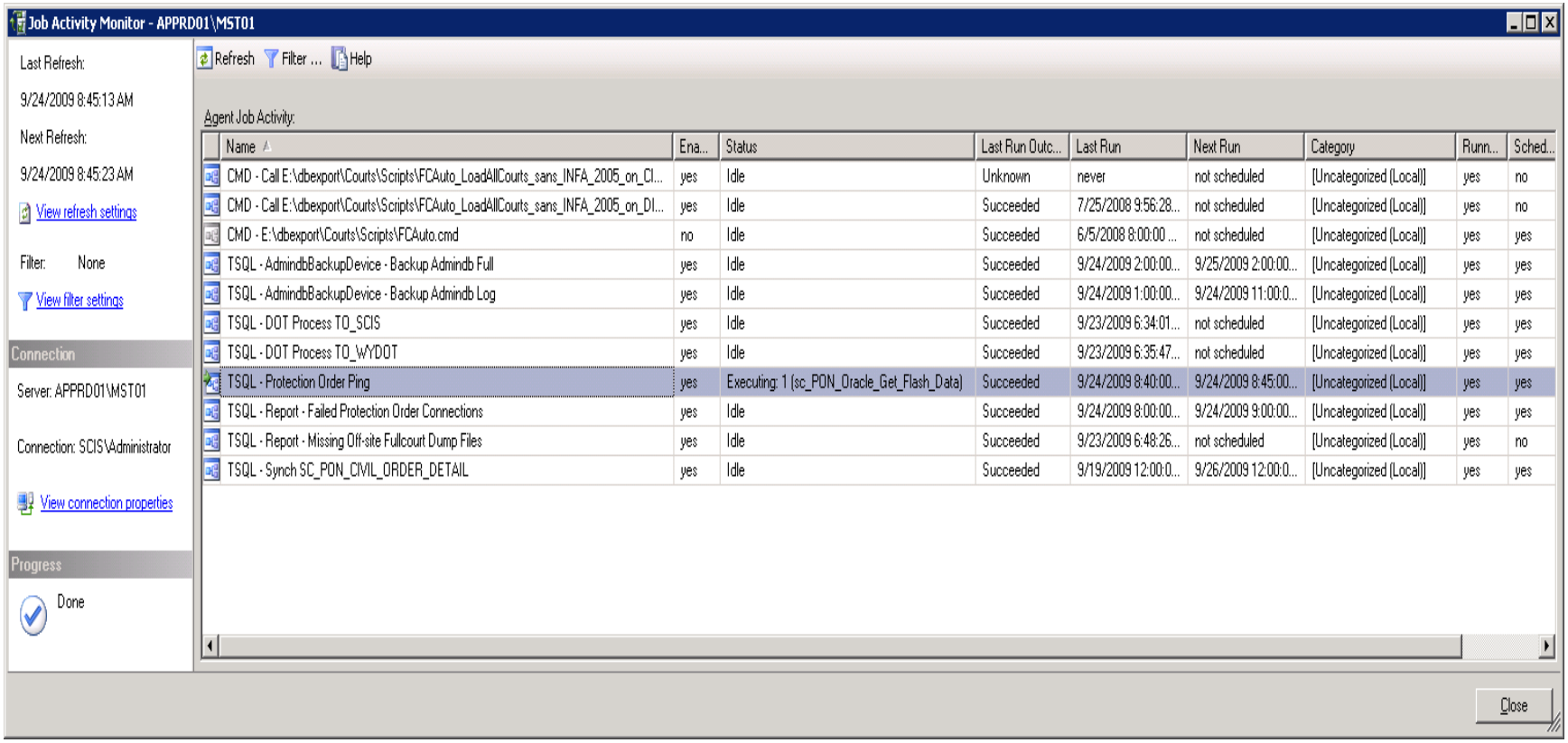
Stored Procedure - Call CLR

```
CREATE PROC [dbo].[sc_PON_Oracle_Get_Flash_Data] as
declare …
declare COURT_cursor cursor
    for select [D_COURT_ORA], [D_COURT_ORA_ID], [D_COURT_ORA_PWD] from [SC_OLAP_DIM_COURT] where [D_COURT_TYPE_NM] = 'Circuit'
open COURT_cursor
fetch next from COURT_cursor into @D_COURT_ORA, @D_COURT_ORA_ID, @D_COURT_ORA_PWD
while (@@fetch_status = 0)
  begin
    select @LAST_DATETIME = max([LAST_DATETIME]) from [SC_PON_LAST_DATETIME_TBL]
     where [SCIS_COURT_ID] = @D_COURT_ABBR and [D_TABLE_NAME] = 'SC_PON_CASE'
Begin Try
    select @D_COURT_COUNT = count(*), @ORA_LAST_DATETIME = CASE_LAST_DATETIME
      from [WyPONS].[dbo].[sc_PON_Oracle_SC_PON_CASE_Select](@D_COURT_ORA, @D_COURT_ORA_ID, @D_COURT_ORA_PWD, @LAST_DATETIME)
    if @ORA_LAST_DATETIME > @LAST_DATETIME
        begin
          exec [sc_PON_SQLServer_SC_PON_CASE_Insert] @D_COURT_ORA = @D_COURT_ORA, @D_COURT_ORA_ID = @D_COURT_ORA_ID
                                                   , @D_COURT_ORA_PWD = @D_COURT_ORA_PWD, @D_COURT_ABBR = @D_COURT_ABBR
                                                   , @ORA_LAST_DATETIME = @LAST_DATETIME
          Insert into [SC_PON_LAST_DATETIME_TBL]( [SCIS_COURT_ID], [D_TABLE_NAME], [LAST_DATETIME])
          select @D_COURT_ABBR, 'SC_PON_CASE', @ORA_LAST_DATETIME
        end
End Try
Begin Catch
   <Error Handling>
End Catch
   fetch next from COURT_cursor into @D_COURT_ORA, @D_COURT_ORA_ID, @D_COURT_ORA_PWD
 End
close COURT_cursor
deallocate SC_OLAP_DIM_COURT_cursor
```

SQL Server Agent

```
USE [msdb]
EXEC @ReturnCode =  msdb.dbo.sp_add_job @job_name=N'TSQL - Protection Order Ping',
                    @enabled=1,
                    @notify_level_eventlog=0,
                    @notify_level_email=2,
                    @notify_level_netsend=0,
                    @notify_level_page=0,
                    @delete_level=0,
                    @description=N'Visit each Circuit Court looking for new Protection Order Information',
                    @category_name=N'[Uncategorized (Local)]',
                    @owner_login_name=N'sa',
                    @notify_email_operator_name=N'DBA', @job_id = @jobId OUTPUT
EXEC @ReturnCode = msdb.dbo.sp_add_jobstep @job_id=@jobId, @step_name=N'sc_PON_Oracle_Get_Flash_Data',
                    @step_id=1,
                    @cmdexec_success_code=0,
                    @on_success_action=1,
                    @on_success_step_id=0,
                    @on_fail_action=2,
                    @on_fail_step_id=0,
                    @retry_attempts=0,
                    @retry_interval=0,
                    @os_run_priority=0, @subsystem=N'TSQL',
                    @command=N'exec [sc_PON_Oracle_Get_Flash_Data]',
                    @database_name=N'WyPONS',
                    @output_file_name=N'E:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\LOG\TSQL - Protection Order Ping.log',
                    @flags=2
EXEC @ReturnCode = msdb.dbo.sp_add_jobschedule @job_id=@jobId, @name=N'Every 5 Minutes',
                    @enabled=1,
                    @freq_type=8,
                    @freq_interval=62,
                    @freq_subday_type=4,
                    @freq_subday_interval=5,
                    @freq_relative_interval=0,
                    @freq_recurrence_factor=1,
                    @active_start_date=20080624,
                    @active_end_date=99991231,
                    @active_start_time=80000,
                    @active_end_time=180000
```

SQL Server Agent



Coming Soon

- Electronic records as the ‘official’ court records.

- Any Sheriff can print and serve from the electronic record when responding to a protection order violation that has yet to be served.

Demo

WyPONS