

# CAPSIT

The Center for Advanced Public Safety  
Information Technologies, Inc.

GOSCON 2007

*The OpenRMS Project*

*A Case Study In Free Software for Government*

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# A Brief History

- *Who is CAPSIT?*
- *What we do*
  - *Develop advanced mission-critical systems*
  - *Deploy, Integrate, Manage, Train & Support*
  - *Support the free and open software business model*
- *Why we do it*
  - *Provide a low-cost, high-value alternative*
  - *Create incentives to innovate / collaborate*
  - *Return control over cost / quality to agency*

# A Brief History

## ■ *OpenRMS Project*

- *US Dept. of Justice grant 2005*
- *OpenScheduler*
- *OpenRMS*
- *Community (free4gov.org)*

## ■ *Current Status*

- *Pilots in TX & AK*
- *Beginning second development phase*
- *USDOJ / SPAWAR continuation grants*
- *Maturing of the Community (FFOSG)*

# What's the Problem?

- 88% of police departments have less than 25 officers
  - ...virtually no automated record keeping systems
- 6% of police departments have more than 100 officers
  - ...aging systems can not meet new demands
- State and Federal mandates for interoperability
  - ... smaller agencies can't / don't collect the data
  - ... large agency legacy systems are difficult to change
- Systems are complex, expensive and proprietary
  - ...the best systems out of reach for most agencies

# What's the Problem?

## Unique Characteristics of Public Safety Domain

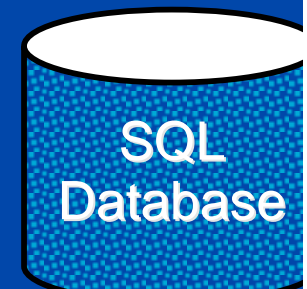
- The business processes are NOT well defined
- System requirements FREQUENTLY change
- The data model is NOT stable or fixed
- Relevant data is mostly UNSTRUCTURED
- Data relationships are NOT well known
- Persistent historical information is CRITICAL
- Searches are often one-time & UNIQUE
- Reporting and Analytics are PRIMARY functions

# Objectives

- Functional
  - Fast, robust, reliable, secure, local
- Easy to Use
  - Minimal training, intuitive
- Adaptive
  - Easily accommodate customization and change
- Scalable
  - No perceptible difference for agencies of 1 or 1000+
- Interoperable
  - Integral, natural and seamless sharing of information
- Affordable
  - Few cost barriers

# Architecture Overview

- Extremely flexible data structure
- Easily accommodates future requirements
- Supports complex entity relationships
- Combined operational / analytical structure
- Intuitive natural language search
- Fast, flexible advanced query
- Adaptive user interface
- Customization without development



# Architecture Overview

- Platform independent (Java)
- Open source infrastructure (RedHat, Apache, MySQL)
- Service oriented architecture (SOA)
- Compliant with evolving interoperability standards (GJXDM, NIEM)
- Compliant with Global Justice Reference Architecture (JRA)
- Wide range of deployment platform options (e.g. local, regional, hosted, SaaS)

# Licensing Model

## CAPSIT Open License for Government v2.0

- No-fee license
- Available to any government agency
- Full access to configuration & development tools
- Collaborative evolution
- Restricted to Government, non-commercial use

## Agency Control

- Configuration & customization
- Development
- Data, including import / export
- Interoperability and information sharing

# Costs

## Infrastructure

- Hardware
- Third-party software
- Network, communications

## Deployment & Support

- Agency independent
- Adjunct agency, consortium or center supported
- Community based support through FFOSG
- Direct professional services contract

# Online Community

## CAPSIT Community

- Practitioner focused
- Project centric
- Requirements collaboration
- High interest / low participation

# Myths & Misconceptions

# Small agencies don't need 'full' functionality

## Myth

- Fewer reports, so they need less functionality
- Smaller agencies just need simple “data input”

## Reality

- Small agencies have the same operational needs
- Primary concern should be for the secure and reliable collection of data *at the source*
- Data sharing initiatives *cannot* succeed if local agencies don't have tools they trust to meet their day to day operational needs
- Anything less increases risk and lowers reliability of

# Free software means there's less to do

## Myth

- Because the software is free, there are no challenges
- Free software doesn't require decision-making

## Reality

- Hardware configuration
- Software configuration & installation
- Application installation & configuration
- Security assessment & configuration
- Data back-up, persistence strategy
- Fail-over continuous operations, system recovery

# Free software means there are no costs

## Myth

- If you hand out CD's, agencies get free systems
- Free software magically solves financial challenges

## Reality

- Some agencies will never be able to afford any costs
- Smaller they are, the more they need

# One distribution strategy fits all

## Myth

- If it's free, it's got to be a simple “plug & play” CD
- Once you get the disk, you're done

## Reality

- Installation & initial configuration is the most critical part of the project and requires the most support
- Mission critical systems require professional maintenance, support and monitoring
- Data security and integrity requirements cannot be taken lightly
- Requires a *reasonable, reliable and repeatable*

# Free software users don't need professional support

## Myth

- If it's free, we'll be able to support it ourselves
- If it's free, someone will support it for us

## Reality

- Major applications require professional support
- Professional support is never “free”
- One agency supporting another is not “free”
- Costs can be subsidized or shifted, but not eliminated

# If a 'free' alternative is available, everyone will use it

## Myth

- Government agencies are natural collaborators
- There are few barriers to cooperation

## Reality

- Local control is still very important
- Wide range of views on the risks and benefits of adopting free software
- 'Free' does not include the full assurance of stability and 24x7 support required for mission critical systems

# Bottom Line....

- Project development is centrally funded, but support is
- Agencies are “risk averse” and avoid uncertainty
- No “trusted” source of assurance or free support

# Continuum of Options

- Traditional Open Source Project
  - Technically oriented
  - Highly variable standards
  - Low cost, high risk
- Government Sponsored Project
  - Agency sponsored / funded project
  - Competing priorities
  - Lacks assurance and continuity

# Continuum of Options

- Software as a Service (SaaS)
  - Public / Private partnerships
  - Easier adoption, try before you buy
  - Low technical burden
  - No real 'free' alternative
- Trusted Independent Third Party
  - Provide continuity and support services
  - Financially supported by donations & grants
  - Provides *no cost* assurance, quality and support oversight

# Foundation for Free & Open Software in Government (FFOSG)

- A Non Profit 501(c)(3) Oregon Corporation to promote the adoption of free and open software
- No-cost to the agency, support and assistance
- Coordinates participation of community resources
- Monitors contributors to ensure obligations are met
- Assumes responsibility when the contributor becomes unable or unwilling to continue to meet its obligations.
- Provides consistent infrastructure and methodology
  - professional source code management
  - coordination of development efforts
  - standardization of system documentation

# What FFOSG is not...

- Does not develop applications
- Does not own or license the applications
- Does not promote one application over another
- Does not provide 'for-fee' services
- Does not maintain core application or releases
- Does not 'fix' bugs

# Discussion