Preservation and Archiving Special Interest Group (PASIG) EMEA Meeting

Preservation for a Safer World

Hong-Eng Koh
Senior Director (Global Lead)
Justice & Public Safety
A Very Fragmented World with…

One Disaster, One Pandemic, One Crime, One Terror Act, One Traveler, One Cargo

Many Agencies
...Massive Records Needed for a Safer World
Future Environment Must Support All Types of Data

- Automated Case Files
- Investigative Reports & Evidence...
- Forensics: Blood, Fingerprints, DNA, etc
- Wiretaps & Surveillance
- Financial Data: Bank Records, Credit Card Transactions, Hotel, Airlines, etc.
- Open Sources & Web Products
- Legacy Data Bases
- Immigration Records
- DEA & ATF Data
- Intelligence Data
- Terrorist Watch Lists

Data includes: Documents, electronic files, images, audio, Graphics, Multimedia, databases, Web products, etc...

Law Enforcement is an Information Intensive Business
Future Environment Must Support All Types of Data
Oracle Smart Policing Solution

Finnish Police

Involved parties
- Citizens
- Legal Representative
- Trusted 3rd parties
- Police Staff

Channels
- SunRay, Portal, Oracle Self Service, Contact Center Anywhere, WebCenter

Policing Operational Capabilities
- Incident Mgt
- Case Mgt
- Relationship
- Lost & Found
- Offender
- Criminal
- Legal Instr.
- Alerts
- Prosecution
- Analysis
- Evidence
- Custody
- Firearms
- Sub. & Notifi.
- Operations & Response
- Investigation
- Intelligence
- Property Management
- Suspect & Offender
- Records Management
- Coordination & Liaison

Business Rules
- Oracle Policy Automation, Real Time Decisions, Real Time Scheduler

Content Management
- Oracle Universal Content Management

Business Intelligence
- Oracle Business Intelligence Suite, Hyperion, EPM, GRC

Information Management
- Storage, Server, Database, Clustering, IDAM, Spatial, MDM
OVERVIEW
• The Labor Superior Court of Brazil evaluates employment issues and labor relations action in accordance with Brazilian Labor Laws
• Employees: More than 30,000

CHALLENGES/OPPORTUNITY
• Provide data integration between the Labor Superior Court and its 24 regional labor courts
• Standardize legacy database platforms in those courts
• Develop an IT environment that supports the high volume of information referring to court proceedings, hearing minutes, judgment sessions, and other judicial issues

SOLUTIONS
• Oracle Database
• Oracle Real Application Clusters
• Oracle Enterprise Manager
• Oracle Developer Suite
• Oracle Application Server
• Oracle Portal
• Oracle Discoverer
• Oracle SQL Developer

RESULTS
• Implemented Oracle Database to organize information and processes; integrated courts with different and disconnected platforms
• Centralized information from several courts on Oracle Database and organized the data so it could be accessed by citizens via Web
• Adopted Oracle Database with Real Application Clusters to enhance IT performance, scalability, and security
• Used Oracle Developer Suite to create basic systems to control the interaction between the database and other operational systems

CUSTOMER PERSPECTIVE
“Oracle Database with Real Application Clusters increased IT performance, scalability, savings, and security in the Labor Superior Court, facilitating the integration of several labor courts.”
– Eduardo Antonini, IT Coordinator
CUSTOMER PERSPECTIVE

“Upgrading to Oracle Database 11g Enterprise Edition and deploying Oracle’s advanced database management tools has improved performance and security in addition to mitigating risk from this key system holding highly sensitive data.”

 Robin Moore, Senior Research Officer, National Offender Management Service

COMPANY OVERVIEW

• Within the Ministry of Justice, the National Offender Management Service (NOMS) manages offenders in England and Wales throughout their entire sentence
• Industry: Public Sector
• Employees: 77,000
• Revenue: US$13.9 Billion

CHALLENGES/OPPORTUNITIES

• Improve performance within the Offender Data Evaluation and Analysis Team (O-DEAT) database
• Ensure that the O-DEAT database is able to comfortably handle an expected growth of 750,000 assessments year-over-year
• Enable a team of criminologists, forensic psychologists, and researchers to produce relevant, up-to-date reports
• Strengthen database security to protect more than 3 million offender assessments from 42 probation areas and 132 prisons

RESULTS

• Improved access times to key offender tables by 30%
• Saved one day per month in IT administration time via automation
• Increased productivity through better availability and performance of the database
Disaster Simulation and Warning
Thailand National Disaster Warning Center

HURRICANE DAVID FORECAST/ADVISORY NUMBER 15
NATIONAL WEATHER SERVICE MIAMI FL EP0402
0000Z WED ALO 26 1979

HURRICANE CENTER LOCATED NEAR 13.7N 58.0W AT 20/0000Z
POSITION ACCURATE WITHIN 30 NM

PRESENT MOVEMENT TOWARD THE WEST-NORTHWEST OR 265 DEGREES AT 11 KT

ESTIMATED MINIMUM CENTRAL PRESSURE 942 MB
MAX SUSTAINED WINDS 120 KT WITH GUSTS 135 KT.
WINDS AND SEAS VARY GREATLY IN EACH QUADRANT. RADI IN NAUTICAL MILES ARE THE LARGEST RADI IN ANYWHERE IN THAT QUADRANT.

REPEAT...CENTER LOCATED NEAR 13.7N 58.0W AT 29/0000Z
AT 29/2300Z CENTER WAS LOCATED NEAR 13.7N 57.0W

FORECAST VALID 29/0600Z 14.2N 59.2W
MAX WIND 120 KT...GUSTS 135 KT.
64 KT...35NE 35SE 35SW 35NW.
45 KT...45NE 45SE 45SW 45NW.
34 KT...135NE 135SE 135SW 135NW.

FORECAST VALID 29/1200Z 14.8N 60.3W
MAX WIND 125 KT...GUSTS 140 KT.
64 KT...40NE 40SE 40SW 40NW.
50 KT...50NE 50SE 50SW 50NW.
34 KT...130NE 130SE 130SW 130NW.

FORECAST VALID 29/1800Z 15.3N 61.6W
MAX WIND 125 KT...GUSTS 140 KT.
64 KT...40NE 40SE 40SW 40NW.
50 KT...50NE 50SE 50SW 50NW.
34 KT...130NE 130SE 130SW 130NW.

REQUEST FOR 3 HOURLY SHIP REPORTS WITHIN 300 MILES OF 15.3N 61.6W
EXTENDED OUTLOOK...USE FOR GUIDANCE ONLY...ERRORS MAY BE LARGE

OUTLOOK VALID 30/0000Z 15.6N 62.8W
MAX WIND 130 KT...GUSTS 145 KT.
64 KT...50NE 50SE 50SW 50NW.
60 KT...60NE 60SE 60SW 60NW.
34 KT...140NE 140SE 140SW 140NW.
Oracle Intelligence-led Border Control

- Automate straight through processing for lower risk cases, e.g. visitor visas
- Manage complicated cases with workflow engine, e.g. asylum, immigration, citizenship
- Checks including criminal history, ‘blacklists’, ‘passenger and crew’ lists
- Access a combined view of immigrants, visitors, refugees, workers across agencies
Oracle Intelligence-led Border Control
Semantic-based Risk Assessment System

Analytical Functions
- Entity Disambiguation / Profiling
  - Recognition
  - Matching
  - Transliteration
  - Analysis
- Language Identification

Document Exploitation
- Homeland Security & Terror Domain
- Smuggling & Trafficking
- Illegal Immigration & Employment
- Drugs

Ontology Layers
- Ethnicity
- Places Visited
- Companions
- Organizations
- Financials
- Work Records

Information Sources
- Core Systems
  - Visa
  - Airline
  - Hotel
- Other govt databases
  - Police Records
  - Immigration Intelligence
  - INTERPOL
- Other related sources
  - Blogs
  - Social Networking
  - Open Sources

Immigration Ontology
- GeoSpatial
- Semantics
- Documents
- Visa
- Passport
- Air Ticket
- Hotel
- Entity
- Police Records
- APIS
- Work Records
- Financials
Domestic Security & Civilian Intelligence

Video Surveillance

Prague International Airport

- 2,600 cameras, 8 control centers, 62 monitoring stations
- Integrated with:
  - Automatic Number Plate Recognition
  - Abandoned object detection
  - Face recognition
- Video is stored:
  - 200 cameras 25fps for 60 days
  - 150 cameras 8fps for 60 days
  - 150 cameras 8fps for 30 days
  - 700 cameras 12fps for 15 days
- Storage:
  - 50 TB primary disk storage array
  - 50 TB secondary disk storage array
  - 600 TB available on tape library
Oracle Smart Video Surveillance

Current

Broken into time chunk files

Metadata Tagging

No Longer Streaming Video. Video Clips get re-built to replay

Broadcast

Future

Video Stream

Lawful Interception

Intelligence Database

ANPR

Audio

Location

Facial

Graphics

Chat

Etc.

Oracle Database Multimedia Universal Content Management Streaming Server Secure Enterprise Search WebLogic Fusion Middleware Complex Event Processing BPEL/SOA WebCenter Business Intelligence

Client

Browser
Domestic Security & Civilian Intelligence

The Necessary Evil – Electronics Surveillance

[Images of social media and mobile device with text: "The Hacker is behind bars now.""]

[Catch Me If You Can]

Cyber Cafe

[Images of a mobile device with text: "W r u? I m here"]

[Image of a newspaper with text: "THE DAILY FREEWHEEL KIDNAPPING"]

[Image of a hand holding a gun]
Domestic Security & Civilian Intelligence

Electronics Surveillance

Network Source
Network Tap

Surveillance Data Collection & Mediation

Correlation Analytics

Surveillance Logic

Service Usage & Network Activity

Backup Data Storage & Backup

Query Engine

Data Collection & Mediation

Query & Delivery

Administration

Law Enforcement Monitoring Center (link analysis & case management)

PSTN
Internet
Wireless

Exadata X2-8
Exalogic X2-2
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