Healthcare IT

Stan Smits

Analysts’ Meeting
June 15th, 2005
Healthcare IT is the backbone of the care cycle

- Operating room
  - Monitoring
  - Imaging
- Intensive Care unit
  - Monitoring
- Step down facility
  - Monitoring
- Home
  - Monitoring
- Pre-Hospital/Ambulance
  - Monitoring
- Diagnostics
  - Imaging
- Treatment
- Follow Up
Healthcare IT comprises many different applications

**Pharmacy/ Medication Safety**
- Medication Order Entry
- Outpatient Prescriptions
- eMAR
- Dosing Management
- Formulary Management
- Substitution/ Cost Management
- Barcoding
- Drug Interactions
- Access to Drug Databases
- Robot Interface
- Pharmacy Robot
- Automated Dispensing

**Care Management**
- Precertification Authorization
- Initial & Concurrent Review
- Discharge Planning
- Clinical Denial Management
- Payor Communication and Notes
- InterQual Support for LOC
- Pathways (LOS)
- Post Acute Placement
- Disease Management

**Physician Clinical Practice**
- Physician Order Entry
- Provider Documentation
- Rounding/ Workflow Tools
- Pathways
- Protocols
- Results Review
- Order Sets
- Patient History/ Problem Lists
- Patient Locator/ Patient Lists

**Clinical Decision Support**
- Data Warehouse
- Severity Adjustment
- Report Writer
- Comparative Database Access
- Outcomes Measurement
- Resource Utilization
- Provider Profiling
- Credentialing

**Clinical Documentation**
- Patient Assessment
- I & O Vital Signs
- Flowsheets
- Kardex
- Task Lists
- Care Plans
- Non-MD Orders
- Patient Education
- Interfaces to Monitors
- Critical Care Specialty Documentation
- Non-MD Evidence Based Documentation

**Core Information Management**
- User Interface/Portal
- Data Aggregation and Reporting Tools
- Clinical Data Repository
- Decision Support Repository
- Research Repository
- Common Medical Vocabularies
- Order Management
- Decision Support Repository
- Rules Engine
- Standard CDM/ Master File
- Security Tools
- Integration Tools
- Response Time
- PDA Support
- Document Imaging Single
- Document Imaging Batch

**Departmental/Support Services**
- Lab
- Radiology
- Cardiology
- Pathology
- Emergency Department
- Surgery
- Blood Bank
- Other Departmental Systems
- Medical Imaging

**Enterprise Patient Access**
- Admission/ Registration
- Enterprise Scheduling
- Eligibility Verification
- Request for Authorization
- Consumer Portal
- Technical Denial Management
- Coding
- Abstracting
- Coding Support
- Chart Tracking/ Management
- Chart Completion
- Electronic Signature
- Release of Information
- Printing the EMR
- Workflow Tools
- Transcription/ Dictation
- MRN Management and Merge
Healthcare IT Market

IT in Healthcare = Infrastructure IT + Healthcare IT
Healthcare IT = Enterprise IT + Clinical IT

Healthcare IT is:
• very fragmented (1200+ companies)
• a € 22 Bln market (USA 70%)
• with an average growth 11%/year

Source: CapGemini U.S., DeLoitte, Gartner

Total IT in Healthcare €52 Bln (USA 50%) in 2004
Healthcare IT market remains very regional

- **CPOE** (Computerized Physician Order Entry) and MAR (Medication Administration Record) in USA justified by avoidance of medical errors
- **PACS** (Picture Archiving and Communication System) both for Cardiology and Radiology remains an important growth market
- **ADT** (Admission, Discharge, Transfer) in Europe is a replacement market

**USA Healthcare IT Application Ranking by Attractiveness**

**European Healthcare IT Application Ranking by Attractiveness**

Source: CapGemini

Source: DeLoitte
Philips offers a consistent experience

Imaging Modalities & Monitoring

Clinical Specialty Solutions

Enterprise Solutions
November 2003: Philips announced alliance for Enterprise IT with Epic

Epic Company Profile:
• Founded in 1979
• Based in Madison, Wisconsin, US
• 1,600 Employees
• Privately owned HealthCare IT company
• Growth approximately 30% per year
• Website: [www.epicsystems.com](http://www.epicsystems.com)
• Epic has a complete Integrated Enterprise Healthcare IT system
• Received again (10th time in a row), the #1 customer satisfaction ranking by KLAS
• 42 M Patient Records in use in the US

HealthCare’s premium award winning technology vendor
We are on-track…

- World-wide announcement previous analyst meeting November 4th
- Partnership introduction for Cardiologists (AHA) and Radiologists (RSNA) in November 2003
- Major launch at major US Healthcare IT event (HIMSS) in February 2004
- Training and roll-out during 2004
- Highly qualified Philips Healthcare IT team (50 by year-end) being trained by Epic
- This will allow Philips also to use the award winning Epic processes
- Philips selected as Vendor of Choice in first project
- Major announcements planned for RSNA 2004 and HIMSS 2005
- By mid 2005 fully operational Healthcare IT practice in North America

Alliance benefits:
- Fully Integrated Enterprise IT portfolio
- Staff trained by KLAS #1 vendor
- Scaleable in deployment
- Tight integration with modalities, PACS and monitoring equipment

We remain on-track…

- Metro Health, Grand Rapids, Mi, has selected Xtenity
- Second half 2005 operational Enterprise IT practice in North America
### Core Information Management Components

#### User Interface/Portal

- Enterprise Master Person Index (MPI)
- Common Medical Vocabularies

#### Data Aggregation and Reporting Tools

- Clinical Data Repository
- Research Repository
- Standard CDM/Master File

#### Security Tools

- Integration Tools
- Rules Engine
- PDA Support

#### Core Information Management Components

- Document Imaging Single
- Document Imaging Batch

### Clinical Decision Support

- Data Warehouse
- Severity Adjustment
- Clinical Decision Support Repository
- Comparative Database Access

### Clinical Documentation

- Patient Assessment
- I & O Vital Signs
- Flowsheets

### Enterprise Patient Access

- Admission/Registration
- Enterprise Scheduling
- Eligibility Verification

### Health Information Management

- Coding
- Abstractioning
- Coding Support

### Departmental/Support Services

- Lab
- Radiology
- Pathology
- Emergency Department
- Surgery
- Blood Bank
- Other Departmental Systems
- Medical Imaging

### Care Management

- Precertification Authorization
- Chart Tracking/Management
- Chart Completion
- Electronic Signature
- Release of Information
- Printing the EMR
- Workflow Tools

### Pharmacy/ Medication Safety

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### Physician Clinical Practice

- Physician Order Entry
- Results Review
- Order Sets
- Ambulatory Practice Management
- Provider Documentation
- Rounding/Workflow Tools
- Patient History/Problem Lists
- Patient Locator/Patient Lists

### Let’s zoom into Cardiology

- Let’s zoom into Cardiology

### Non-MD

- Evidence Based Documentation
- Flowsheets
- Non-MD
- Critical Care Specialty Documentation
- Non-MD Evidence Based Documentation

### Enterprise Master Person Index (MPI)

- Common Medical Vocabularies

### Decision Support Repository

- Comparative Database Access

### Outcome Measurement

- Clinical Decision Support
- Resource Utilization
- Provider Profiling
- Credentialing

### MRN Management and Merge

- Transcription/Dictation
- MRN Management and Merge

### Available key strength

- Available key strength

### Available

- Available

### Third party

- Third party

### Evolved/acquired from third party system

- Evolved/acquired from third party system

### In Development

- In Development

### Unavailable

- Unavailable
Relevance for Philips’ focus on clinical segments

Cardio and Vascular Diseases and Cancer responsible for ~60% of US Deaths.

Source: CDC, National Vital Statistics, 2001
Philips position in the Cardiology PACS market

North American Cardiology PACS Vendor Market Share, by Facility Appearance, 2004

- GE Healthcare: 15%
- Philips Medical Systems: 17%
- Agfa-Gevaert Group: 14%
- Siemens Medical Solutions: 13%
- Undisclosed: 8%
- Fujifilm Medical Systems: 4%
- Camtronics Medical Systems: 4%
- Heartlab, Inc.: 5%
- Others: 20%

Approximately 32,000 Facilities were surveyed
Source: CapGemini
Optimizing the workflow of the digital cardiology department.
Xcelera Echo Lab Management
Integrated workflow is more than the sum of the components….

- Personalized Echo Reporting Workflow
- Automated labeled measurements transfer from the iE33 cart to the Xcelera database and to the report
- iE33 and Xcelera support for Live 3D and quantification system management is unique in the world
Xcelera Cath Lab Management
Integrated workflow is more than the sum of the components…

- Instant report generation from all data entered during cardio procedure
- Insert Xcelera image(s) from procedure for further quantification and processing
- Physician findings and conclusions can be added where required
- Create management reports,
  - Supply usage, performed procedures
  - Analyze workload
  - Billing & inventory reports
Radiology and Cardiology PACS market

Global PACS market 2004E: € 1.5 Bln
Global PACS market share, 2004E
Growth 9% per year

Source: DrKW Equity Research
2005, Frost & Sullivan 2004
Clinical Image Processing Applications

- Clinical image processing applications historically used close to the imaging equipment
- Multi-modality applications requiring image fusion
- Trend to move applications towards PACS workstations
- Enlarged market: new applications for referring physicians
- Computer Aided Detection is a new class of applications:
  - Mammography: Breast Lesions
  - Lung Imaging: Nodules
  - Virtual Colonoscopy: Polyps

2004 Market: around €500 Mln.
Growing 11% during 2005-2008
Philips market share ~ 10-15%
Legs osteotomy simulation

- Legs osteotomy: to change the orientation of the leg bones in such a way that the weight-bearing axis and the joint lines return to ‘normal’ positions

- The application allows to measure bone angles, plan the intervention and simulate the result

- The application also brings the results directly to the report
**Log Catectomy Pre-Surgical Evaluation**

**PHILIPS Orthopaedic Applications**

**Analysis:**

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**Planned surgical approach:**

- 8° Open
- 16.7 mm

**Conclusion:**

**Document approval:**
Healthcare IT: integrated, comprehensive and proven

Thank you for your attention!