



4.2 Accurate Attribution of Data

Asad Khan - Accenture

Tuesday October 17th, 2006

8:30am - 9:45am

Salon F/G



4.2 Accurate Attribution of Data - Issue #1

The role of document-based approaches when accessing discrete data values

- Secure Channel (e.g. SSL/TLS)
- Digitally sign documents – complete or selective portions
- Authenticate sender and receiver
- Encryption
- Document controls (Registration)
- Audit trail

Pros

- **Fine-grained control**
- **Non-repudiation**
- **Assurance**
- **Compliance**

Cons

- **Hardware and software obsolescence**
- **Inability to validate the contents**
- **Interoperability**
- **Cost**
- **Implementation complexities**
- **Human side**



4.2 Accurate Attribution of Data - Issue #2

Authentication requirements to support accurate Attribution.

- Multi-factor authentication (is, has, knows, location)
- Levels of authentication (Local, Regional, National)
- Where authentication is performed (Edge Vs Core)
- Audit trail

Pros

- **High level of assurance**
- **Local control**
- **Overall Complexity is reduced**
- **Edge system role based access**

Cons

- **Interoperability**
- **Cost**
- **Audit complexities**
- **Implementation**
 - Registration
 - Issuance
 - Logistics
- **Product proliferation**
- **Social Issues/Coverage**



4.2 Accurate Attribution of Data - Issue #3

Attribution by the system providing the patient data that the data are what they claim to be

- Audit based
- System-to-system authentication between edge and core systems
- System-to-system mutual authentication between edge and core systems
- Trust relationship at different levels
- Separate view of aggregated data

Pros

- **Delegated trust**
- **Relative ease**
- **Attributable data source**

Cons

- **Complexity**
- **Cost**
- **Operation & Management**
- **Overhead**
- **Code of connections**



4.2 Accurate Attribution of Data - Issue #4

The cost-effectiveness of more or less robust methods for attribution of data

- Complexity and cost is directly proportional to level of assurance
- Delegated to different levels
- Combination of the following
 - Single & multi-factor authentication
 - Role-based access
 - System-to-system mutual authentication
 - Extensive audit logging

Pros

- **Scaleable**
- **Better ROI**
- **Desired outcomes**
- **Decreased complexity**

Cons

- **As strong as your weakest link**
- **Distributed audit logs**
- **Trust need to be established**