



NHIN Functional Requirements Hearing – NCVHS July 27, 2006

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Who I am...

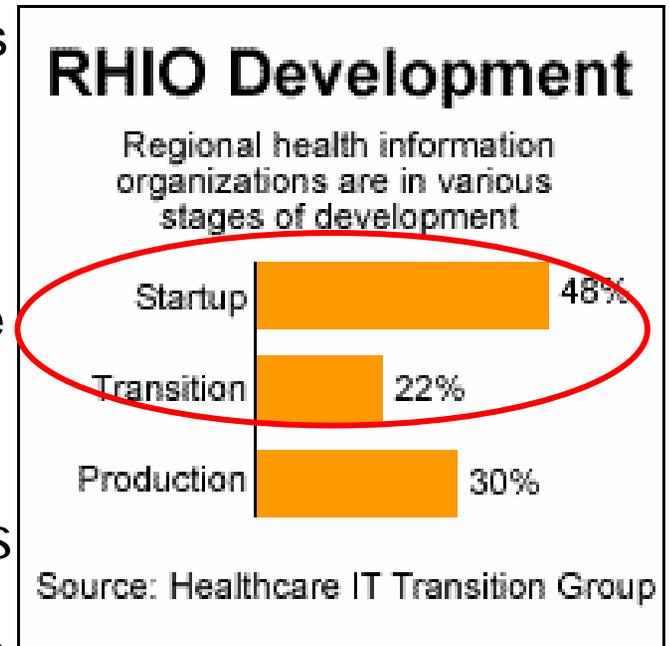
- Clinician – trained as a physician
- Entrepreneur – NIH SBIR funded EMR startup...now GE Centricity
- Vendor – Ran GE's Clinical IT business for 3 years
- Father of three and eldest son of aging parents

4 Recommendations

- Emphasize Needs of the SNO or LHIN In the Functional Requirements
- Develop Requirements for a Secure-RLS in the Core
- Distinguish NHIN Requirements Essential for HIE for Care Delivery from Bio-surveillance, PHR, and Research
- Functional Requirements Should Include Validation Criteria for RLS Effectiveness

Recommendation 1 : Emphasize Needs of the LHIN/SNO

- NHIN is a “NETWORK of networks”
- Cliché – healthcare is local
 - Effective regional health information exchange is the real achievement : the network is the key
 - It is the building block for the N
 - Necessary if not sufficient condition
 - Only proven business model is local
 - Current functional requirements and much of the dialogue disproportionately emphasize items related to the N. The SNO has been relegated as an “edge” system
- Recommendations : Balance needs of the SNOs with needs of the NHIN
 - Develop functional requirements specific to SNO in the CORE
 - HITSP and CCHIT should accelerate focus on interoperability for EHR
 - Sponsor work to identify intermediate stops along the way to the NHIN final destination





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CardSystems Solutions' Data Breach



By Kim Zetter
02:00 AM Jun, 22,

CardSystems Solutions, a company that provides credit-card accounts in its network, even though secure to a data

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Todd Weiss Today's Top Stories >

January 26, 2006 (Computerworld) — About 305,000 hospice and home health care patients in Oregon and Washington are being notified about the theft of computer backup data disks and tapes late last month that included personal information and confidential medical records.

In an [announcement](#) yesterday, Providence Home Services, a division of Seattle-based Providence Health Systems, said the records and other data were on several disks and tapes stolen from the car of a Providence employee at his home. The incident was reported by the employee on Dec. 31, according to the health care



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Demographic Information is Dangerous

- Clinical data breach represents a future concern (employment, insurability, embarrassment)
- Demographic data is proven to be sensitive
- Identity theft needs only demographic info
- health care demographic data rich in demographics
- SSN needed for record linkage
- ALL RLS designs contemplated are CENTRALIZED

... PART OF THIS STORY

- Analysis: Data breach notification law unlikely this year
- Idaho utility hard drives ... and

Recommendation 2 : Core Functional Requirements Should Address Need for a Blinded, Secure RLS

■ Why

- Data aggregation increases value to attackers – one stop ... all citizens
- Large number of entities with legitimate need to access the RLS... increases vulnerability
- “discoverability” of information by government agencies
- Threat from within
- Minimal disclosure rule implication

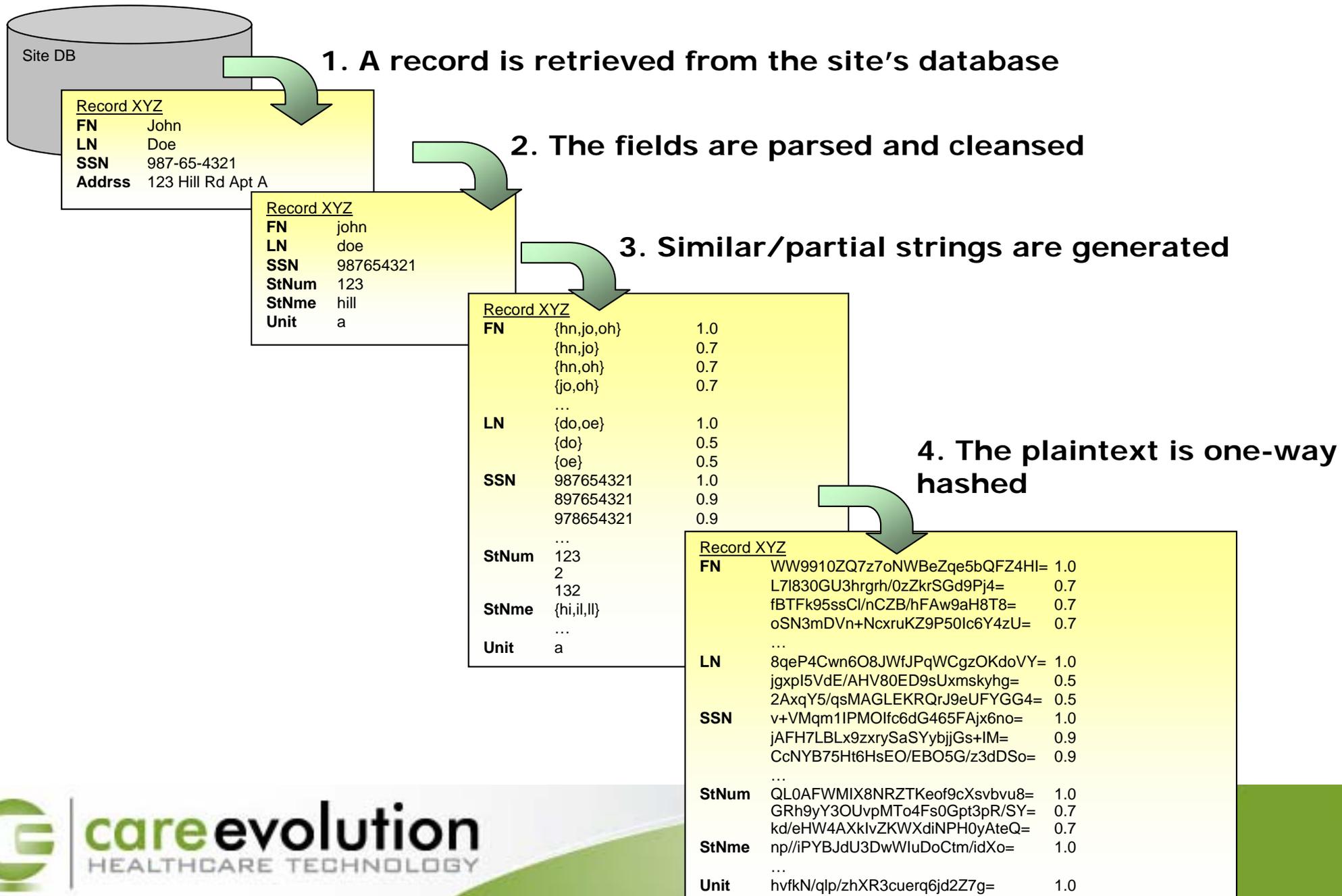
■ How

- Bi-gramming and other techniques CAN achieve approximate matching AND one way hashing
- We have deployed this successfully deployed a blindfolded RLS – It can be done

■ Recommendation

- Functional Requirements Should Emphasize blinded, secure RLS
- Sponsor effectiveness studies in upcoming contracts/grants for a secure RLS

Blinded Record Locator Service – Secure RLS



Recommendation 3 : Separate Care Delivery Use Case from Biosurveillance and PHR in the functional requirements

■ Background

- 95% of the requirements likely the same but the prioritization and implementation implications different depending on the use case
- Objectives of health care cost savings and quality improvement primarily driven by care delivery
- Patient compliance and tolerance for privacy risk tied almost exclusively to care delivery use case
- Legal and other issues are often orthogonal across the three use cases

■ Recommendation

- Group functional requirements and prioritize for Care Delivery
- Establish a clear “Prime Directive” – where choices arise, select one that best serves care deliver needs

Recommendation 4 : Functional Requirements Should Include Validation Criteria for RLS Effectiveness

■ Background

- Effective Record Linking Essential link in the chain
- Current work does not formally study effectiveness (sensitivity and specificity)

■ Recommendation

- Functional requirements should go beyond listing a desired Specificity (1 in 100,000 false positive). Include a minimum sensitivity while preserving specificity
- Sponsor and publish an annotated “gold” standard data set that can be used to evaluate RLS effectiveness
- Initiate a CCHIT or HITSP managed certification or testing process for RLS effectiveness