



The Environmental Public Health Tracking (EPHT) Network Prototype





Introduction

- ◆ **The EPHT Network Prototype is:**
 - A requirements gathering tool that is used to facilitate the movement toward the design and development of a National EPHT Network
 - Not a suggested architecture or software design





Introduction (Cont'd)

- ◆ **The purpose of the Prototype is to:**
 - Elicit detailed requirements from grantees and stakeholders to support the Environmental Public Health Tracking (EPHT) Program's goal to implement a National EPHT Network
 - Establish a foundation to link and display data
 - Demonstrate the utility of a National EPHT Network



Methods

- ◆ **The initial Prototype was created using:**
 - Requirements from the EPHT Network Vision document
 - The Standards and Network Development (SND) Principles
 - Discussions from other EPHT Network workgroups and sub-groups





Methods (Cont'd)

- ◆ **The Prototype leveraged existing technical assets from other Public Health Information Network (PHIN) programs, including:**
 - Graphical User Interface (GUI) guidelines and technical specifications defined by the CDC Web Redesign project
 - Security Frameworks developed for the Common CDC Application Module (CAM) Services project
 - AVR modules developed for the Common CAM Services and BioSense projects



Results

- ◆ The Prototype was reviewed during five Joint Application Development (JAD) sessions.
- ◆ During these JAD sessions, the Prototype was presented to the CDC EPHT Network Internal and External Partners and the EPHT Network Grantees for review.
- ◆ Between JAD sessions, minimal changes were made to the Prototype in order to maintain consistency in feedback.



Participants

JAD Session Participants

- ◆ EHT Branch
- ◆ All 26 EPHT Network Grantees
- ◆ CDC-Lead Poison Prevention Branch (LPPB)
- ◆ National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)
- ◆ National Center on Birth Defects and Developmental Disabilities
- ◆ National Center for Public Health Informatics (NCPHI)
- ◆ Environmental Protection Agency (EPA)
- ◆ Association of State and Territorial Health Officials (ASTHO)
- ◆ National Association of County and City Health Officials (NACCHO)



◆ Capability to search by various methods

- Keyword
- Data Selection Wizard
- “Clickable” maps, including multi-select
- State, region, or local data
- By population size
- By time period
- By metadata characteristics
- By the three major categories: Environmental Hazards, Exposure, and Health Effects



Feedback (Cont'd)

◆ Capability to filter and display search results

- Results list grouped into categories
- Capability to compare metadata
- Capability to preview data



Feedback (Cont'd)

◆ Capability to link data

- Provide access to both pre-linked data and linkable data
- Provide recommendations on how to link data
- Provide guidance on proper data linkage



Feedback (Cont'd)

◆ Capability to customize AVR display

- Provide different levels of data granularity for “drill down” purposes, depending on access rights
- Export data in various formats (comma-delimited, PDF, SAS)
- View data using histograms, pie charts and bar graphs
- Add population and census data
- Provide analytical tools
- Add trends and timescales
- Display EPA monitoring sites on maps
- Provide access to metadata from AVR display



Feedback (Cont'd)

◆ Capability to customize maps

- Adjustable ranges for mapping data
- Select thresholds or standard percentiles
- Display both counts and rates
- Display map layers as either a color or number
- Download map boundaries



Feedback (Cont'd)

- ◆ **Capability to view "non-typical" geographic data**
 - Aquifers
 - Air pollution regions
 - Watersheds
 - Community health districts
 - Unified hospital zones
 - Boroughs
 - Building identification numbers (BIN)



Feedback (Cont'd)

◆ Provide access to training modules

- “EPHTN 101”
- Data linkage
- Proper use of data and health implications
- What the Network can and cannot do



Feedback (Cont'd)

◆ Provide alternate means to obtain data

- Access to web services
- Capability to execute queries



Feedback (Cont'd)

◆ Provide a means to share information

- Reports
- Data tables
- Results from studies
- Demonstration projects
- Intervention strategies
- Policies



Hot Topics

◆ Data Storage/Ownership

- Centralized vs. decentralized
- Maintenance requirements

◆ Trading Partner Agreement (TPA)

- Electronic vs. paper

◆ Analysis tools

- How sophisticated? Who can access?

◆ Data access

- How much data should be viewed and at what level?
- De-identifying data – should it be done at the state level?

◆ Data linkage

- What linking methodology will be used?

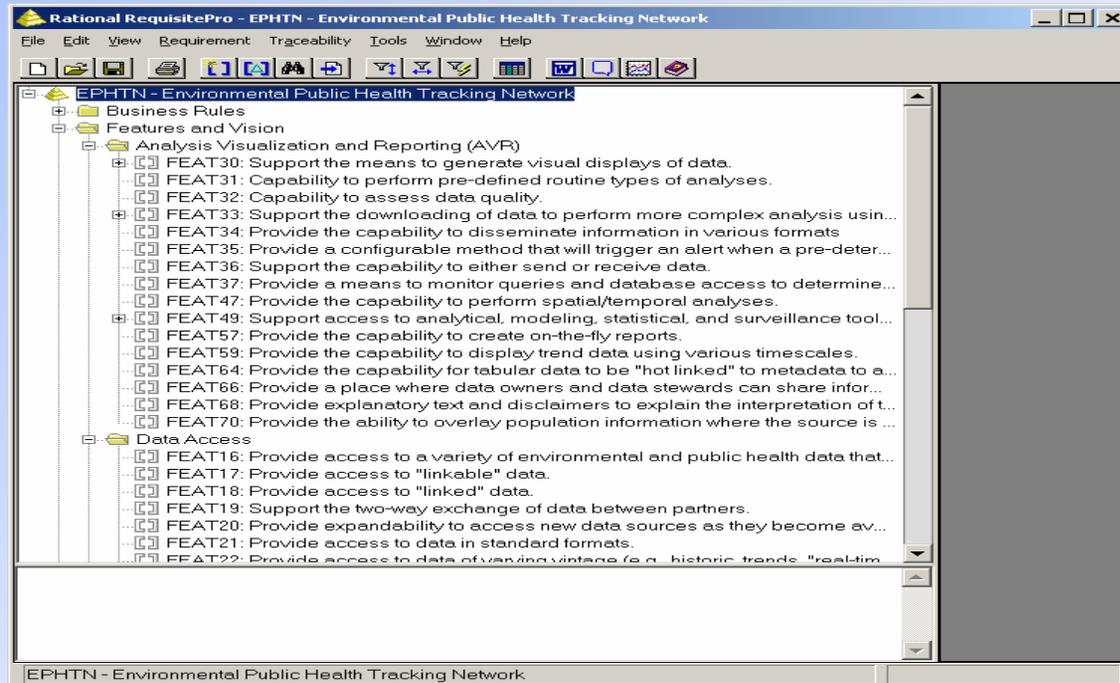


Rational Unified Process (RUP)

- ◆ The Rational Unified Process (RUP) is a comprehensive, flexible software engineering methodology created by the Rational Software Corporation.
- ◆ RUP has been selected by the Centers for Disease Control and Prevention (CDC) as the framework to be used for all development projects.
- ◆ Requirements are gathered through a succession of incremental iterations. These requirements are maintained in the Rational RequisitePro repository.



RUP (Cont'd)



- ◆ Requirements are stored based on features and categories



Next Steps

- ◆ Obtain demonstration project data from a selected EPHT Network Grantee to assist in further refining the Prototype

- ◆ Convene final JAD session with stakeholders and partners
 - Determine if additional requirements are necessary
 - Move forward into the design and development phase of the National EPHT Network



Comments and Questions

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Prototype Demonstration

