HL7
Sharing the Vision

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GS1 Global Healthcare User Group

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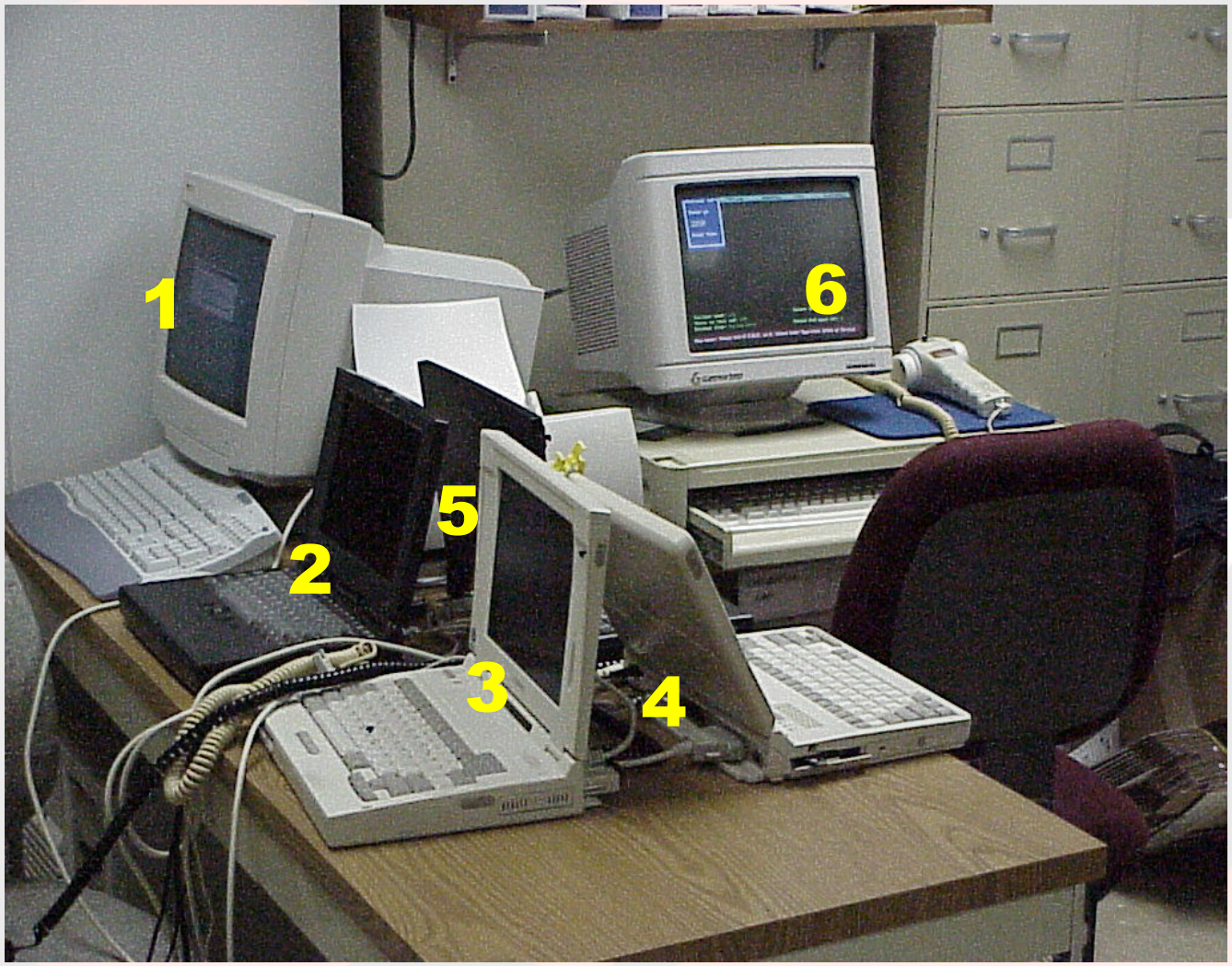
HL7 – What's in a name?

"Level Seven" refers to the highest level within the International Organization for Standardization communications model for Open Systems Interconnection - the application level. The application level addresses definition of the data to be exchanged, the timing of the interchange, and the communication of certain errors to the application.

Computerized doesn't mean Interoperable



Interchange vs. Interoperability

- Main Entry: **in·ter·op·er·a·bil·i·ty**
  Function: *noun*
  Date: 1977
  : ability of a system (as a weapons system) to use the parts or equipment of another system
  Source: Merriam-Webster web site
- **interoperability**
  : ability of two or more systems or components to exchange information and to use the information that has been exchanged.
  Source: IEEE Standard Computer Dictionary: A Compilation of IEEE Standard Computer Glossaries, IEEE, 1990]

Functional interoperability

Semantic interoperability

Interoperability & Innovation

HL7's **mission** is clinical interoperability

"HL7 is an international community of healthcare subject matter experts and information scientists collaborating to create standards for the exchange, management and integration of electronic healthcare information. HL7 promotes the use of such standards within and among healthcare organizations to increase the effectiveness and efficiency of healthcare delivery for the benefit of all."

HL7's **strategy** is innovation – both by ourselves and by our users

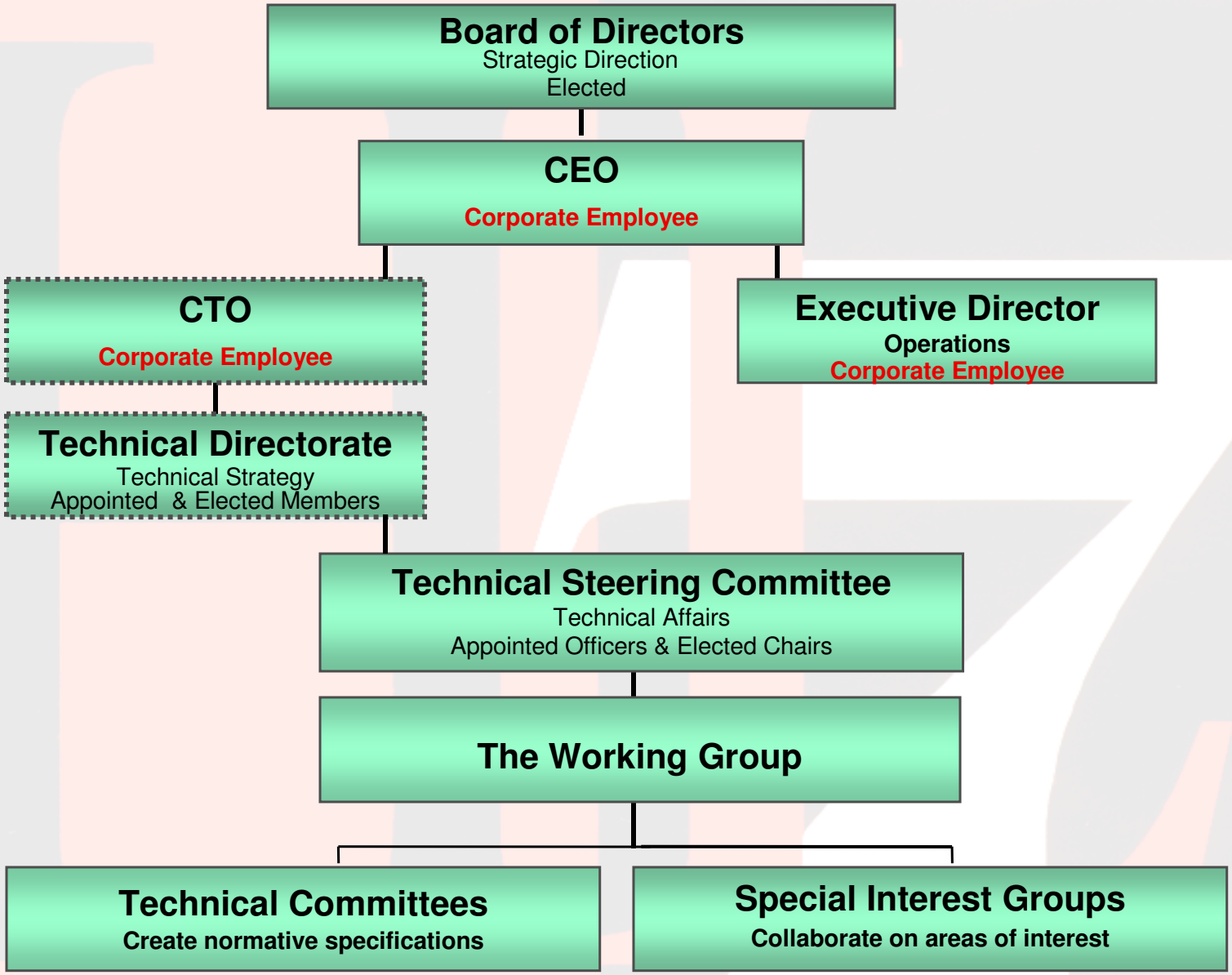
HL7 Role

HL7 is one of several standards development organizations accredited by the American National Standards Organization (ANSI) within the healthcare Area.

HL7 adheres to a strict and well-defined set of operating procedures that ensures *consensus*, openness and balance of interest.

HL7 does not develop software. It develops *specifications*, the most widely used being a messaging standard that enables disparate healthcare applications to exchange keys sets of clinical and administrative data.

HL7 Organization



HL7 Technical Committees

- Clinical Context Object Workgroup (CCOW)
- Clinical Decision Support (Arden Syntax, Guidelines)
- Control/Query, Modeling and Methodology, Vocabulary
- Medical Records/Information Management
- Orders/Observations
- Patient Administration/Financial Management
- Patient Care
- Scheduling and Logistics
- Structured Documents
- Electronic Health Record
- RCRIM: Regulated Clinical Research Information Management

Special Interest Groups

- Arden Syntax
- Attachments
- Blood Bank
- Community Based Health Services
- Conformance
- Government Projects
- Clinical Guidelines
- Pediatrics
- Medication
- Templates
- Imaging Integration
- Laboratory, Point of Care, and Automated Testing
- Personnel Management
- Secure Transactions
- XML
- Genomics
- Patient Safety
- Public Health and Emergency Response

HL7 International Affiliates

Argentina	Australia	Brazil
Canada	China	Croatia
Czech Rep.	Denmark	Finland
France	Germany	Greece
India	Ireland	Italy
Japan	Korea	Lithuania
Mexico	New Zealand	Poland
Spain	South Africa	Switzerland
Taiwan	Netherlands	United Kingdom

ANSI-Approved Standards

- Encoding
- Messaging
- Reference Information Model (RIM)
- Scheduling
- Data Types
- Annotated ECG
- Clinical Context Management Specification (CCOW)
- Structured Product Label
- Clinical Trial Lab Results

- Case Investigation
- Clinical Data Architecture (CDA)
- Common Terminology Services
- Arden Syntax
- Gello (Common Expression Language)
- Drug Stability
- Personnel Management
- Claims and Reimbursement
- Registry Infrastructure

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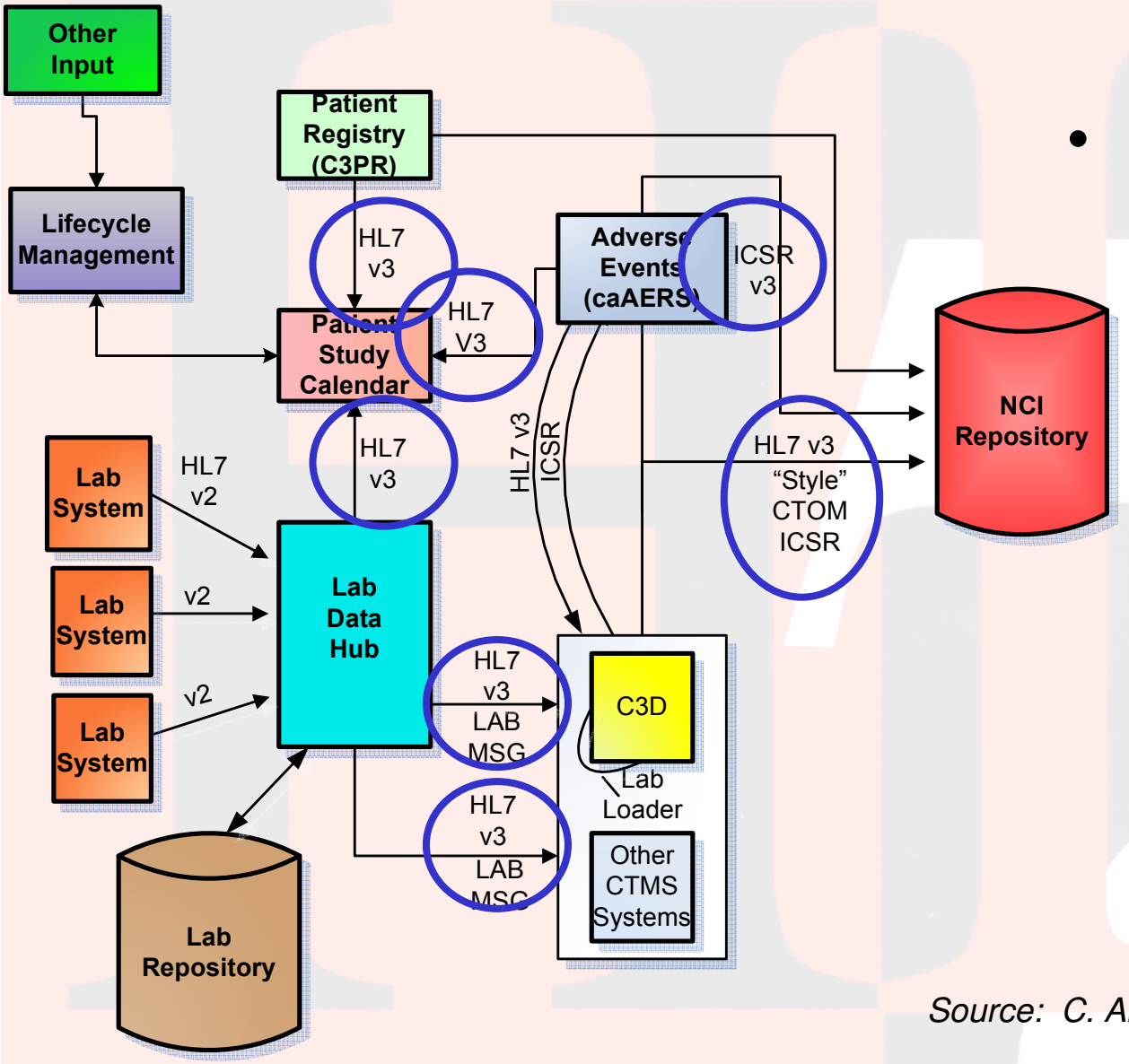
Collaboration

The BRIDG Model

Biomedical Research Information Domain Group

- HL7
- NIH/NCI
- CDISC
- FDA

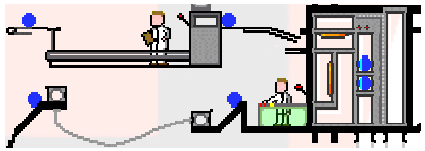
Coordination and Data Exchange Within an Organization



- Different systems need to exchange information that contain detailed semantic information about that data
  - HL7 standards
  - CDISC standards

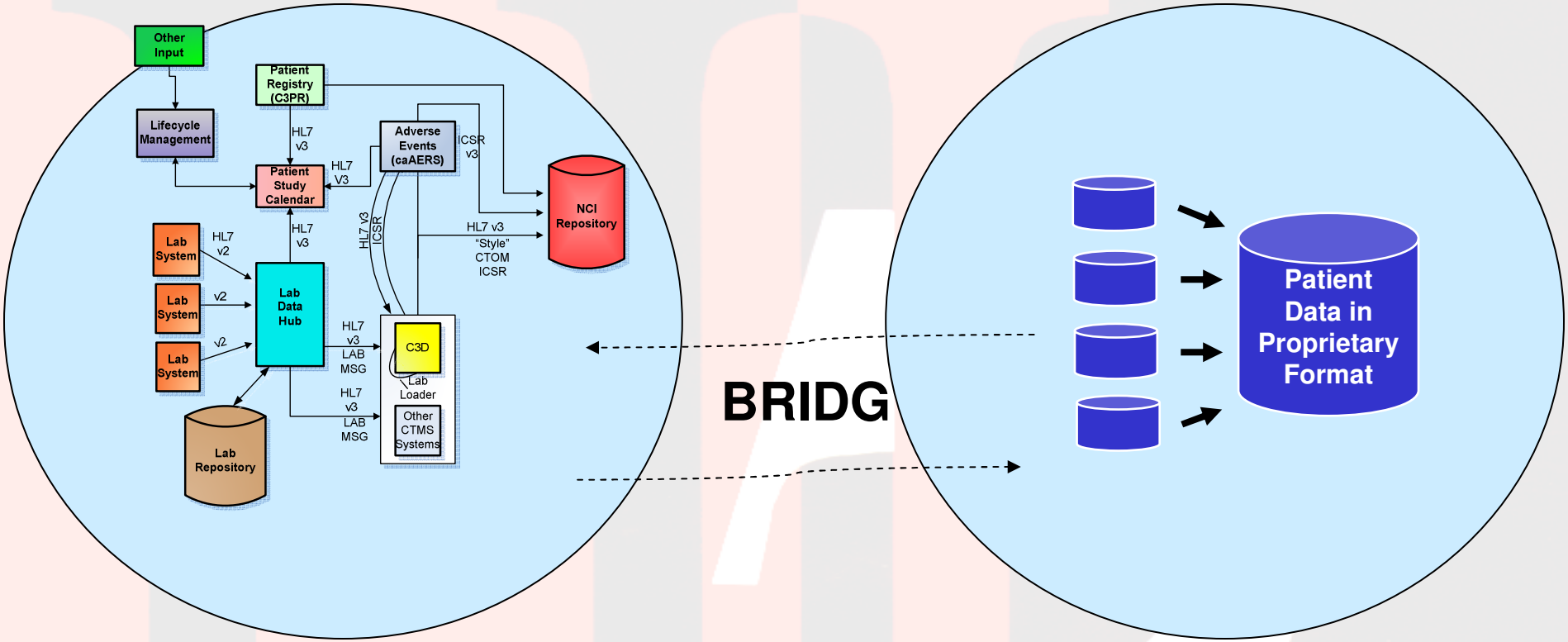
Source: C. Andonyadis/M. Gronvall presentation to CTMS f2f January 2006

Modern clinical research requires complex, interconnected systems



- Within organizations, there are often many systems that need to exchange data to effectively manage clinical trials data
- To exchange data, we need detailed descriptions of
  - definitions of data (what)
  - the process of care (how)

Connecting Clinical Research to the World of Patient Care



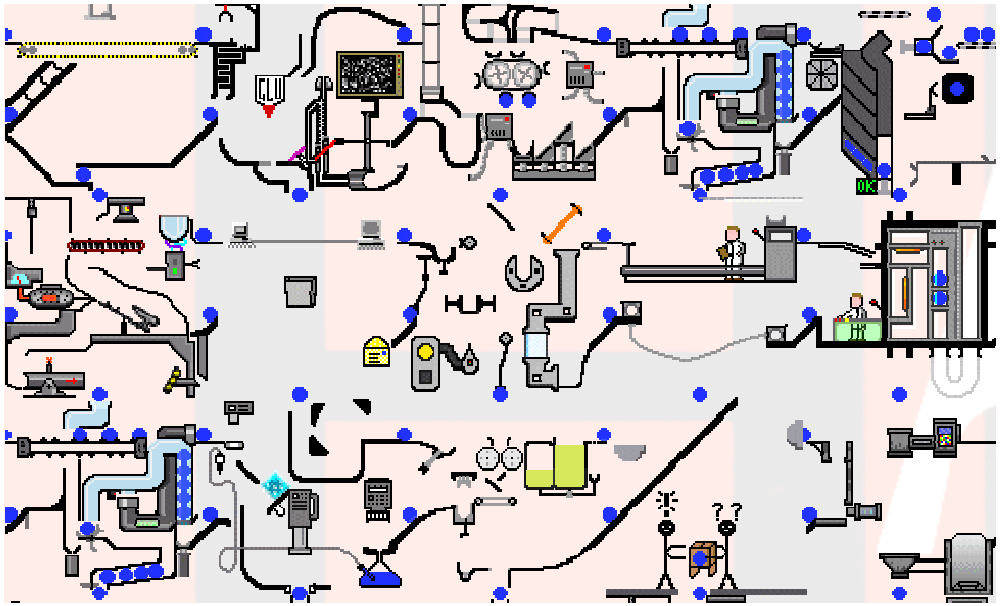
Clinical Research World

- **Protocol** defines define elements
- Linear data flow
- CDISC is the emerging standard
- Data are organized around a **trial**

Patient Care World

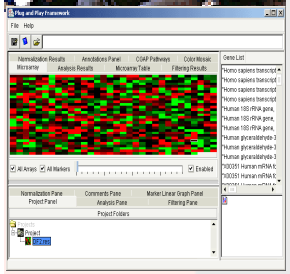
- Multiple data sources and types
- HL7 is a pervasive standard
- Data are organized around the **patient**

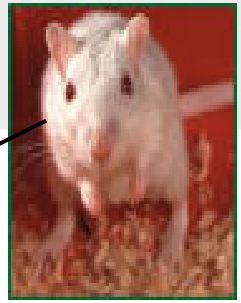
Modern clinical research requires complex, interconnected systems

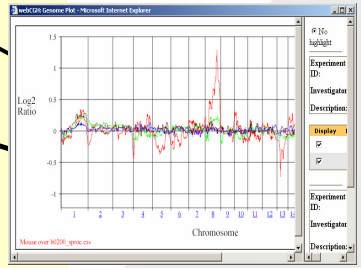


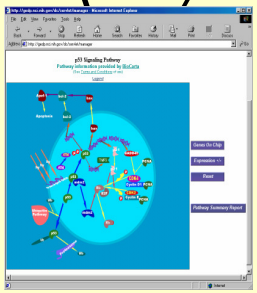
- So clinical trials data must be able to interoperate with the larger medical enterprise
  - Other applications
  - Other systems
  - Other departments
- Standardization and the ability to “hand off” data and patients is critical

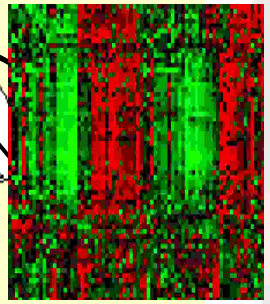
Multiple patient and research networks across the country (and world)











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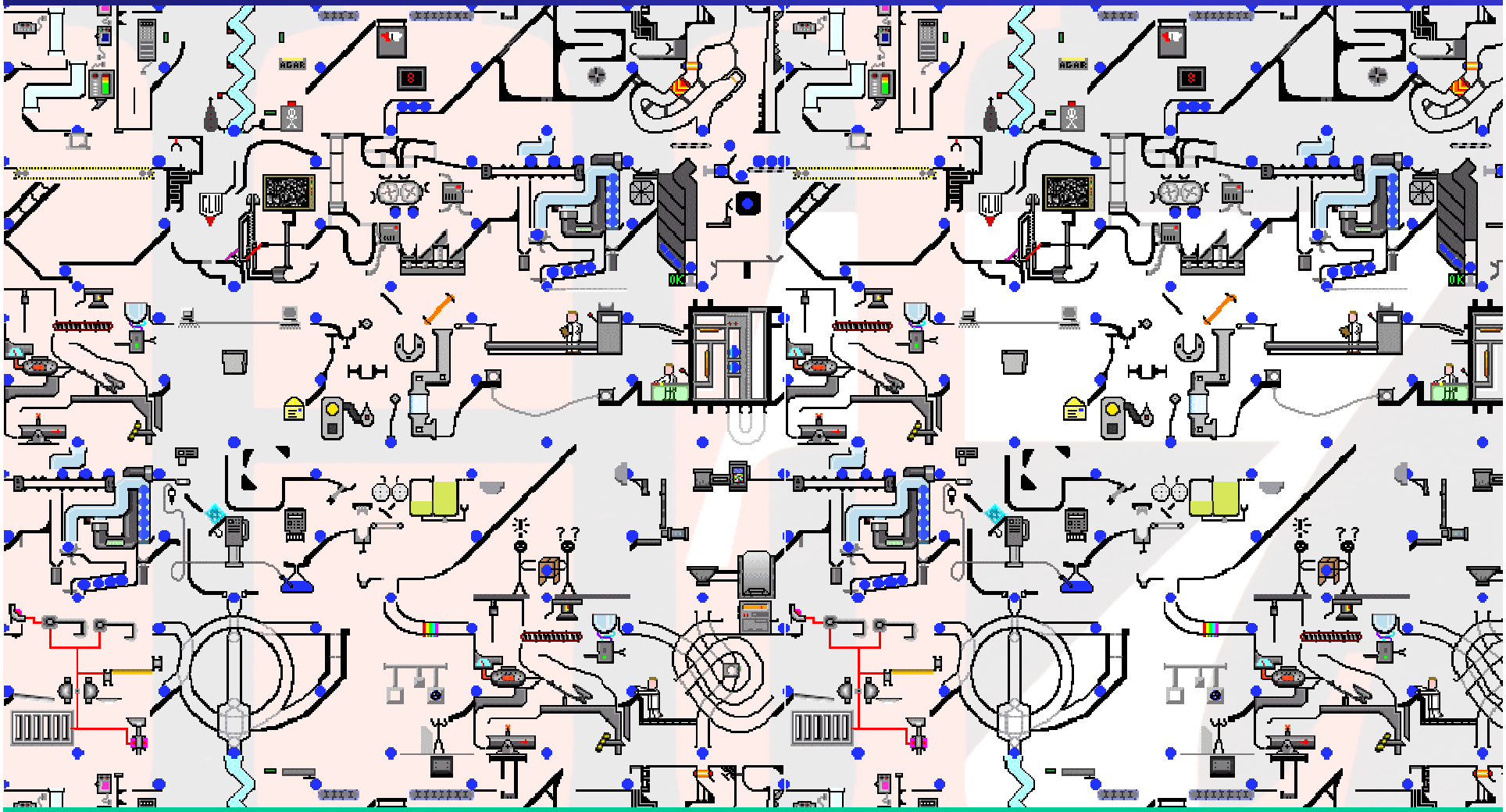

Ultimately, translational research (bench to bedside and beside to bench) requires even more connections to exchange information

HL7 Collaborative Relationships

X12N (Edifact)

US FDA

US NCPDP

DICOM

US VAH

UK: NHS National Spine Project

CEN TC 251

ISO TC 215

NIST

HIMSS/IHE

ASTM TC 31

CDISC

SAFE BioPharma

Announcement

Earlier today, a Memorandum of Understanding was signed between GS1 and HL7 that begins an exciting era of collaboration.

Thank You

My special thanks to all the volunteers,
whose 20 years of unfailing devotion to HL7,
has made this possible.

For more information,
please contact me
cjaffe@hl7.org