



Information Society
Technologies

Semantic Interoperability in eHealth

IDABC Event

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EU Commission



European Commission

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The current situation

2005	The need
<p>Increase in life-expectancy</p> <p>Ageing of population</p> <p>Follow-up of patients during lifetime</p>	<p>An accessible electronic medical record; unique identifier of patients and Health Professionals; Health cards</p>
<p>Increasing dimension of data and multiplicity of data</p>	<p>Medical record must be evolving; availability of broadband</p>
<p>Mobility of patients across borders</p>	<p>Shared information; interoperability of EHR; legal framework in place</p>
<p>Multidisciplinary Decision Support systems, epidemiology, clinical research</p>	<p>Integration of data; long term availability of knowledge; grid technology</p>
<p>Implementation cost</p>	<p>Research, implementation economically viable</p>



While these terms are the same thing

Myocardial infarction

Myocardial infarct

MI-Myocardial infarction

Heart attack

Infarction of heart

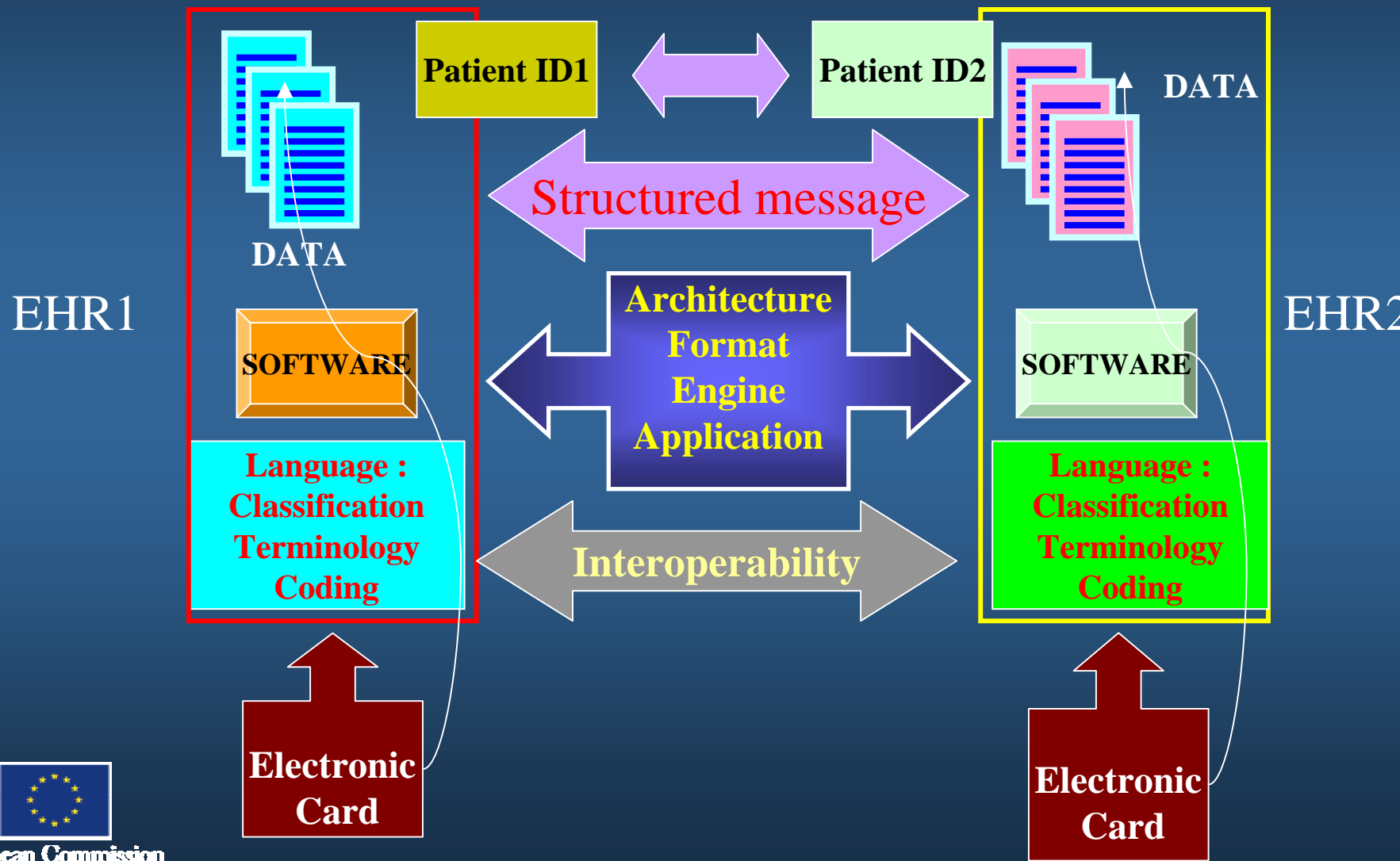
Cardiac infarction

To a computer they are all different
items

How can they be tracked, analyzed and
reported?



EHR Interoperability components



Economic and productivity Impact of eHealth

Best practices

Legal aspects of eHealth

Certification and accreditation eHealth

patient identity

Studies

eHealth ERA NET

TMA Bridge
EHR structure;
Interop. approach

Certification EHR
Specific Support Action

I2HEALTH
Identification
doctors/patient
Messages/requests

WGs CEN
TC 251

SSAs
Semantic
Interoperability

Patient ID2

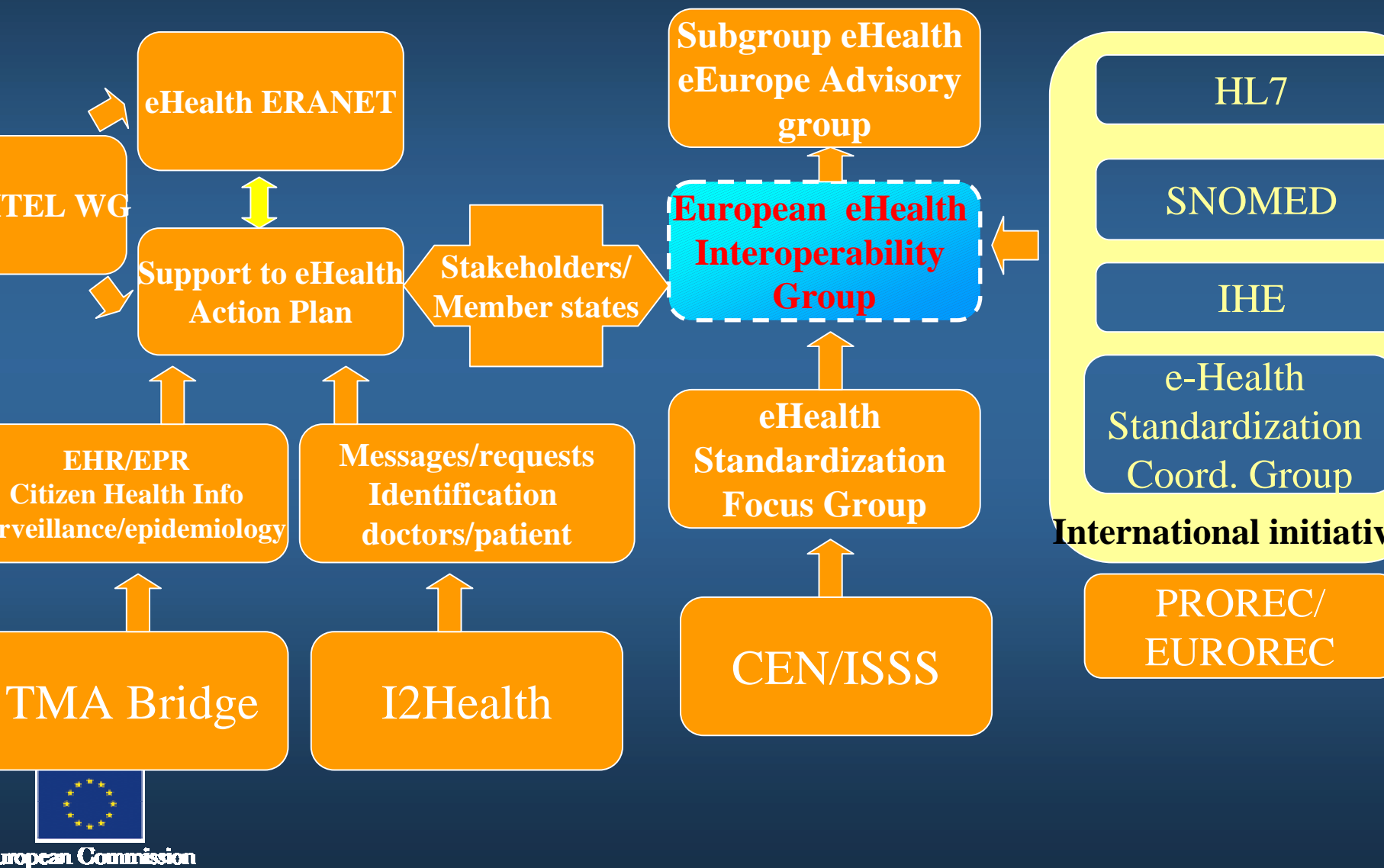
DATA

SOFTWARE

Language :
Classification
Terminology
Coding

EHR

Mapping of current initiatives in Europe in interoperability



EPR/EHR standards example

EN/ENV 13606-1,2,3,4
EHR communication

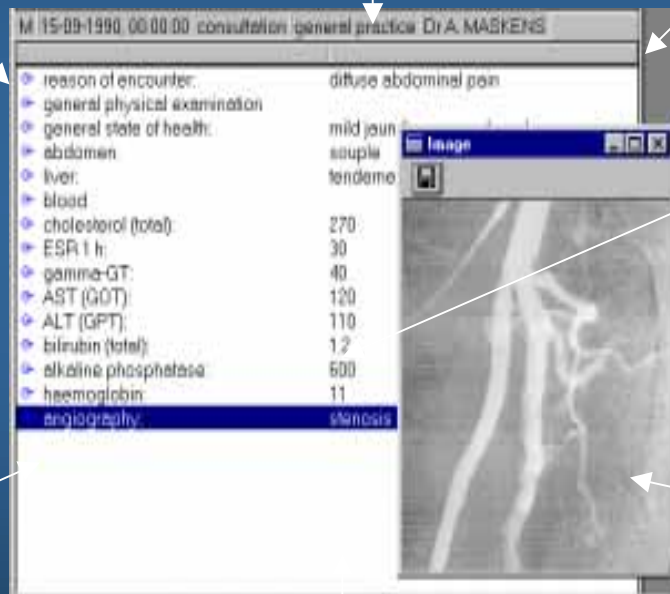
CEN/preENV 13606-1,2,3,4
EHR communication

ISO/TS
18308:2004
EHR architecture

HL7 CDA
Clinical
Document
Architecture

ASTM E1238/1384 standard
Specification for Transferring
Clinical Observations
Between Independent
Computer Systems

OpenEHR



DICOM

ISO TR 20514:2004
Electronic Health Record
Definition, Scope, and Context



Integration and Convergence

Health care terminology domain areas

Diagnoses & Procedure Codes

- CDT-2/ SNODENT
- ICD-9-CM
- ICD-10
- ICD-10-AM
- OPCS-4 (UK)

Message Specific Codes

- HL7

Nursing Codes

- PNDS
- NANDA
- NIC
- NMMDS
- NOC
- OMAHA
- PCDS
- HHCC

Convergence
SNOMED Clinical Terms

Clinically Specific Codes

- DICOM
- LOINC
- SNOMED RT
- NHS Clinical Terms

Drug Codes

- NDC (US)
- UK Drugs



Current implementation

- A limited number of meetings/WGs; ensure cooperation between current initiatives
- Increase efficiency, and pursue tangible results (from content to process to structure)
- Involve all Member States and all relevant stakeholders
- Ensure political support
- Issue guidelines at EU level
(Recommendation in 2007)

