

International Health Terminology Planning

Semantic interoperability
for better health information systems

Pierre Lewalle, Bedirhan Üstün

Classifications and Terminology Team
Dept of Measurements and Health Information Systems
World Health Organization, Geneva

Having it right !

Health system information
or
Health Information System

2 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



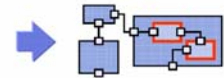
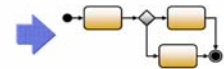
Focus: the information paradox



3 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006

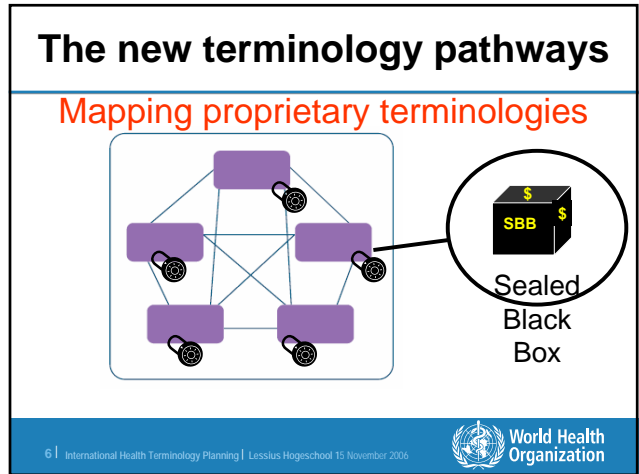
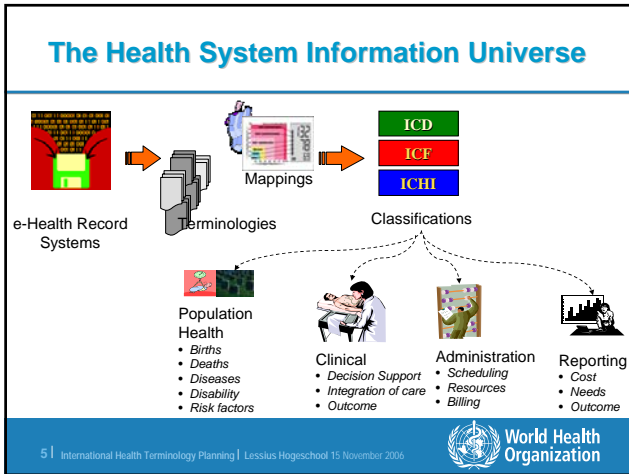


Approaches



4 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006

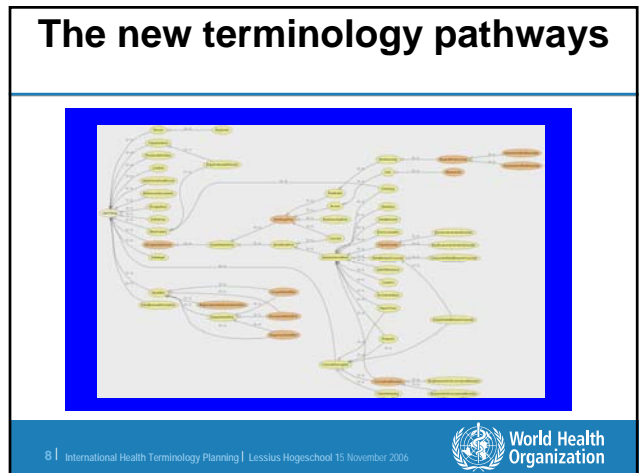


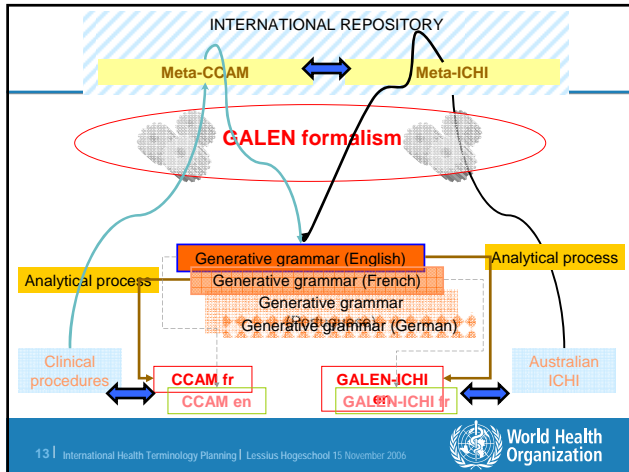


Bee-farming

- **Administrative structure**
 - Groups (Coordinating Group, Workgroups)
 - Post-docs as worker bees
- **Reviews**
 - Epidemiology & Scientific Stream
 - Clinical
 - Public Health
- **KM Platform**
 - Internet based platform
 - *Online classifications* journal
- **Field Trials**
 - Practice Networks
 - Special trials
- **Mapping Diagnosis**
 - Using formal terminologies and operational definitions
 - Chapter V to **Map of Medicine**

7 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006





The Constitutional Mandate

- In line with WHO's constitutional mandate and core functions to develop of common norms and standards on health information, we propose to bring several parties together in the field of **health terminology** in a **network** designed to **share knowledge and collaborate towards creation of international norms and standards.***

Assets for the international community

In the current Health Information Systems numerous terminologies (and other ordering systems, such as nomenclatures, classifications) have been used. They include, among many others:

- WHO international classifications such as ICD, ICF and other derived or related classifications,
- a number of WHO terminologies like the WHO Drug Dictionary, the traditional medicine terminology, the International Nonproprietary Names (INN) for pharmaceutical substances, etc.
- Health terminologies produced nationally or internationally on particular subjects by public or private institutions in WHO Member States.

Most of these terminologies have emerged **independently** and **without a vision** of common overall information system that is **interoperable** across various domains, users and languages.

Several elements or **fragments** of terminologies need now to be **integrated** with appropriate and relevant standardization and **quality assurance** procedures to respond to the needs in digitalizing health information systems.

An international reference system

- A terminology infrastructure serving as a international health terminology reference system:
 - Proper underlying ontology and knowledge representation
 - Tools and procedures for standardization
 - Multilingual applications that enable the same constructs be consistently applied in a comparable manner in different cultures.
 - Linkages between relevant terminology entities and aggregation logic (e.g. coding into ICD, ICF... DRGs etc)
 - Quality Assurance procedures

17 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



Concrete measures

- WHO guidance to Member States on relevant norms and standards, and support to capacity building in countries to facilitate the uptake of international standards for the development of national by-products and applications (incl. possible services based on terminology data, as well as similar kinds of structured content)

18 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



Basic Principles

- Multilingualism
- Web-based data distribution
- Continuous Development and Quality Improvement
- Shared technological standards
- International Public Good
- Relations with established products
- Measures for equity and balanced dissemination

19 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



International Health Terminology Network

Based on the requirements cited above, a terminology infrastructure is proposed to be spearheaded by WHO involving academic centres of excellence and other interested parties with expertise and resources.

20 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



Invitation

Expressions of interest
from academic and other institutions,
whether public or private,
and from interested individuals
are welcome!

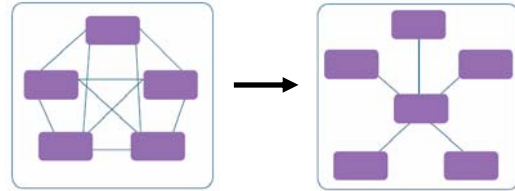
Classifications and Terminology
WHO
Geneva

21 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



The new terminology pathways

From mapping...
...to semantic interoperability



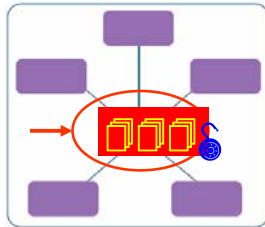
22 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



The new terminology pathways

**International Standards for
Health Information...**

**Open Source
Reference
Registries...**



Proprietary
application

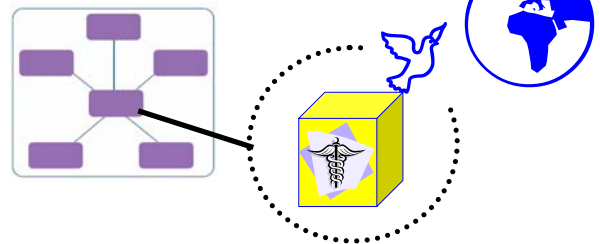
Proprietary

23 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



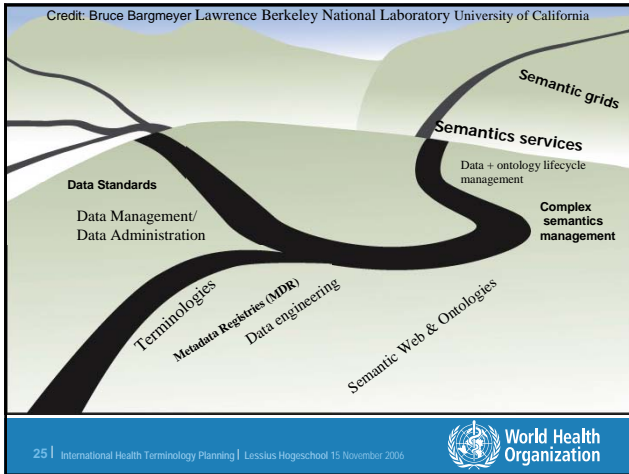
The new terminology pathways

...as international public good



24 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006






THANK YOU!

Pierre Lewalle
Measurements and Health Information Systems
World Health Organization
Geneva
lewallep@who.int

26 | International Health Terminology Planning | Lessius Hogeschool 15 November 2006



World Health
Organization