



CODATA TASK GROUP ON
MULTIMEDIA, DATA, AND INFORMATION

Multimedia

Where do we go from here ?



**International CODATA Symposium on Multimedia in Science and Technology - MIST 2005 -
European Academy, Berlin, Germany September 19-20, 2005**

International ICSU-CODATA Symposium Berlin, ICSU - International
Council of Scientific Unions, CODATA- Committee on Data for Science and Technology

Using Maps and Models, SuperSigns and SuperStructures

Heiner Benking

Please note:

This is only the POWERPOINT section with reference to



SuperSigns and SuperStructures

(after a short introduction and orientation section)

The other part of the CODATA - MIST 2005 presentation with the focus on:

Maps and Models

was taken from the CODATA – ISGI 2005

which took also place in BERLIN the week before. Pls. see next slide.

Please note also:

The collection of overheads without audio is not very helpful. Pls. Come later to find the full „multi-media“ presentation on the web. The following slides might help only for a first impression and as a reference to follow the links.

Maybe see the abstract for the relevance for the future of multi-media and the CODATA MIST 2005 recommendations from all Participants (chief editor Nahum Gershon).

ISGI
Berlin 2005



International Symposium on the Generalization of Information



International ICSU-CODATA Symposium Berlin, Sept 14-16, 2005
ICSU - International Council of Scientific Unions
CODATA- Committee on Data for Science and Technology
in cooperation with International Cartographic Association ICA
and the Physikalisch-Technische Bundesanstalt, Berlin, PTB.



Granularity, Topicality, and Generalization

**Reflections about maps and models, orienting
generalizations and their possible pragmatic and
ethical implications and challenges**

Heiner Benking



MAPs & MODELS

& Vizualisation



SuperSigns & SuperStructures

SUPER-STRUCTURE



In some of the next slides we see a proposal from 1993 with Paul Uhler, CODATA, USA and others to show how long we are already trying to establish “common frames of references” across scales to locate and relate data and information, and also „signs” in (next slides), coded – or non coded data.

The proposals for a conceptual superstructure were done for example for the RIO 1992 process, see summary and outlook on behalf of NOEL BROWN, UNEP-RONA

Or the ICSU CODATA 1992 in Beijing „Bridges and a Masterplan” and 1994 in CHAMBERY with special focus on spacial space-scapes 3 and multi-dimensional. Title: A Conceptual Superstructure of Knowledge

The author has developed models, schemas or grids to locate and combine knowledge since the late eighthies, (see also the CODATA- ISGI later in this presentation), see KnowMap series,

And note the we called it around Knowledge Organisation (ISKO 2002) and work around Ecological Integrity and the EARTH CHARTA in 2003 a “Global Covenant”. The Encyclopedia of Systems and Cybernetics (Charles François) helped me establish some definitions for what will be presented in the next slides.

EWOC 04, Toronto, October 2004

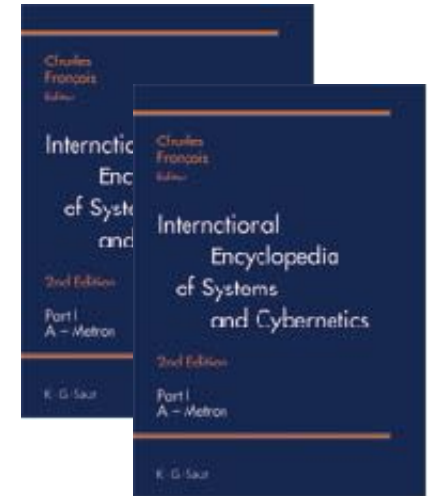
SYSTEMS ENCYCLOPEDIA



Vol. 22, no. 1
(October 2004)

*Official Newsletter of the
International Federation of Systems Research*

SECOND EDITION OF THE INTERNATIONAL ENCYCLOPEDIA OF SYSTEMS AND CYBERNETICS



Charles François (editor), KG Saur Verlag-Thomson, München, 2004
Updated and augmented in more than 740 pages, **1700**
articles, some of them with figures, tables and diagrams,
and **1500** bibliographical references.



16:00 Uhr Rundgespräch im Cum Laude

Encyclopedias & Atlases in Libraries

Future Aspects

**in regard to systematic neo-pragmatic thinking along and across
representations, systems, concepts, and models**

18:00 Uhr Vortrag in der Saur Bibliothek

Systemics as a general integrated language of concepts and models

Charles François

Founder and Editor of the International Encyclopedia of Systems and Cybernetics

Heiner Benking

Independent Facilitator and Futurist

Member of the Academic Advisory Board of the Encyclopaedia of Systems and Cybernetics

LINKING HETEROGENOUS ENVIRONMENTAL DATA FOR MULTIPURPOSE
APPLICATIONS:

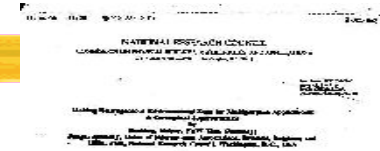
A CONCEPTUAL SUPERSTRUCTURE

by

Benking, Heiner, FAW Ulm, Germany

Judge, Anthony J.N., Union of International Associations, Brussels, Belgium; and

Uhlir, Paul, National Research Council, Washington, D.C., USA



- I. **A: STATEMENT OF THE PROBLEM AND RATIONALE FOR PAPER/CONCEPT**
1. Increasing complexity of multidimensional problems and resulting need to integrate diverse data and information sources in resolving problems must be: a) disciplinary (all disciplines), b. Intersectorial (gov., industry, academia, public), c) international (even for local or national problems there are usually some international dimensions)
 2. Proliferation of databases and digital information at all these levels make finding, understanding, and using all of the relevant information extremely difficult, if not impossible,
 3. Numerous barriers to effective integration exist a) Examples...
 4. Imperative to Overcome these barriers

B: STATEMENT OF THE SOLUTION

C: ORGANIZATION

II. DESCRIPTION OF CONCEPT

A Conceptual Superstructure or Scaffolding

Other Attempts/Models

Potential Applications, Examples, Why not worked/have been insufficient

Why this is different

III. POTENTIAL APPLICATIONS, In research, Policymaking, Business Planning, Education,...

Examples, Summary, E: Summary of broad applicability

**Extract of chapters of
original research proposal/
concept from 1993**

IV. IMPLEMENTATION OF THE CONCEPT, A:, B:

V. CONCLUSION AND RECOMMENDED ACTIONS

SUPER-SIGN



I strongly recommend to visit:

Harley, J.B. (1932-1991)/ **Woodward, David** (1942-): - The history of cartography vol.1; cartography in prehistoric, ancient, and medieval Europe and the Mediterranean (1987) [University of Chicago press; Chicago/London;

<http://imaginarymuseum.org/MHV/PZImhv/>

Wood, Dennis (1992), **The Power of Maps, Guilford Press, 1992**

Oliver, A., *MA in Fine Art at Cardiff School of Art.*

http://www.annao.pwp.blueyonder.co.uk/text_patterson.htm

Denis Wood has stated first that maps are Supersigns and Anna Oliver has in her MA so aptly summarized that extract a few lines from her work „Maps as Signs and Codes“ here for this presentation to support this thinking and these terms when thinking about the futures of MULTI-MEDIA:

Maps as Signs and Codes



Denis Wood, in his book *The Power of Maps*, describes maps thus: 'Maps are about relationships. The map is a highly complex supersign, a sign composed of lesser signs, or more accurately a **synthesis of signs**; and these are supersigns in their own right, systems of signs of more specific or individual function.....the map image as a whole is the supersign, and the various systems it resolves to are its constituent signs, signs that can only have meaning in relation to other signs.' In this case, the myth (according to Barthes) is **signified by the whole, the supersign.**

Wood (1992, p108) describes how a map is a conglomeration of codes. He defines a code as that which assigns the signifier to the signified, in so doing creating a sign. So in order to understand a map, we must be able to understand the codes which make up the map.

CODE:



'an interpretive framework, a set on conventions or rules, which permits the equivalence of expression and content. A code legislates how something may be construed as signifying, as representing something else . In this respect signs are encoded in formation and decoded in interpretation; and it is only through the mediation of a code that signification is possible. ' 3

Wood defines two types of codes: intrasignificant and extrasignificant. Intrasignificant codes are indigenous to the map. They can be iconic, linguistic, tectonic, temporal and presentational. (Wood, 1992, p117)

Extrasignificant codes operate 'outside' the map itself, and can be thematic, topic, historical, rhetorical, and utilitarian. (see maps and myths above)

'The map is simultaneously an instrument of communication - intrasignification - and an instrument of persuasion - extrasignification and its propensity toward myth.'

Conclusion

As Denis Wood said, 'maps are about relationships'.

'The map is simultaneously an instrument of communication - intrasignification - and an instrument of persuasion - extrasignification and its propensity toward myth.' (p141)

The London Underground Map was revolutionary in its day in the way it jettisoned superfluous information used on the maps of the day and focussed completely on the important relationships in the map: that is, between the lines, the stations and the river. The information given is pared down to the absolute essential, the resultant design is elegant in its minimalism, and affects the way Londoners and others perceive the geography of London.

With Patterson's "The Great Bear" the opposite is true: the navigation information is removed and instead replaced with more complex, less comprehensible layers of information, from names to lines to the title. It pretends to offer ...the opportunity to travel the famous names of history and popular culture, passing a succession of comedians on the way to a philosopher.' The piece of work becomes, however, a 'metaphor for the "connectedness" of things,suggest[s] new relationships between them, parallel readings, other ways of configuring the data which govern our lives.'

The Myths of Maps



Barthes describes myth as a mode of signification (not a concept, or an idea, or an object), but one on a more complex level than a 'simple' sign. A myth occurs when a signifier (in this instance ink on a page) comes together with a signified (the concept of the London Underground network) to make a sign, that is, the London Underground Map, and the sign then goes on to act once again as a signifier, in this case the idea of an easy to use transport network, also an easily navigable city. It is this last part which is the myth, in other words a second order signification, an idea that there is another layer of meaning to the sign, frequently an ideology.

However there is new information. The myth could be seen as the idea that it is possible to construct a map of cultural figureheads, that there might be an easy way to systemise such an unruly concept.

Maps and Allegory



'Allegory is the extrinsic union, or the conventional and arbitrary juxtaposition of two spiritual facts - whereby it is posited that this image must represent that concept.' - 'In allegorical structure, one text is read through another, however fragmentary, intermittent, or chaotic their relationship may be, the paradigm for the allegorical work is thus the palimpsest.'" To use the term 'allegory' to describe all presentations of one thing by another, would be to render the term so unspecific as to be useless. The London Underground map can be seen however as an allegory, of other maps, in that the information from geographically correct maps taken and changed into coloured lines, circles and text of the map. However the Patterson map lends itself much more to being designated 'allegorical' - the layers of information/ implication being so much more complex.

Craig Owens also associates appropriation with allegory: 'Allegorical imagery is appropriated imagery; the allegorist does not invent images but confiscates them. He lays claim to the culturally significant...in his hands the image becomes something other. He does not restore a original meaning that may have been lost or obscured, ...rather he adds another meaning to the image.'

Maps and Death of the Author - needs discussion !!



One of the characteristics of postmodernist work is that of the 'death of the author', or the fall from importance of the author / artist, to be replaced by the importance of the reader.

Wolff describes how a piece of work is no longer seen as a unique creation, created in isolation by the author, rather it is a manifestation of the coming together of social structures and a reflection of / result of current ideologies, beliefs and values. She describes this as '...the personal mediation of a group consciousness'. (Wolff, 1981, p119)

'A text is made up of multiple writings, drawn from many cultures, and entering into mutual relations of dialogue, parody....a texts unity lies not in its origin but in it's destination, the birth of the reader must be at the cost of the death of the author'. A map is already an object in which the presence of the artist / author is frequently minimised, many maps aiming to give the impression that they are less a personal point of view than an accurate interpretation of 'fact'. Many maps are nowadays put together by many people, with information fed into computer software which generates the final images. Curiously though, maps have the same copyright status as works of art.

Bibliography

Barthes, Roland (1977) *The Death of the Author*, quoted in Wolff, Janet, *The Social Production of Art*, Wolff (1981) p117

British Council Website, <http://www.britishcouncil.org/singapore/arts/mcdet14.htm>

Croce, Benedetto (1913), *Guide to Aesthetics*, quoted in *Art In Theory 1900-1990*, Charles Harrison and Paul Wood, 1992, published by Blackwell Publishers, p112

Harley, J.B. (1932-1991)/ Woodward, David (1942-): - *The history of cartography vol.1; cartography in prehistoric, ancient, and medieval Europe and the Mediterranean* (1987) [University of Chicago press; Chicago/London; <http://imaginarymuseum.org/MHV/PZImhv/>

Oliver, A., *MA in Fine Art at Cardiff School of Art*. http://www.annao.pwp.blueyonder.co.uk/text_patterson.htm

Orth, E. W.: *Was ist und was heißt Kultur? Dimensionen der Kultur und Medialität der menschlichen Orientierung*, Königshausen & Neumann, Würzburg, 2000 – see also: „Der Blaue Reiter”

Wood, Dennis (1992), *The Power of Maps*, Guilford Press

Bibliography:



Cassirer

Barthes, Roland (1977)

Croce, Benedetto (1913)

Deleuze

Harley, J.B. (1932-1991)

Hussers

James

Jonas, H.

Merleau-Ponty

Oliver, A.

Orth, E. W.

Peirce, C.S.

Plessner, H.

Ritter, C.

Stachowiak, H. 81923-2004)

Wood, Dennis (1992)

more details to be added - listing to be extended !!

KnowMap

Vol. 1, No. 5, August 2001

People feel fine with **icons (images)** and **symbols**, but when Peirce in his sign theory introduced something in-between what he called **index** they are somehow destabilized and frightened - not able to believe in the either - or world of words or metaphoric pictures.

Just for the exercise we want to test Peirce's index here by considering his third category a spacial map or model. This would create room for communication and sensations when linking and merging of realities and bridge the media breaks. This in-betweening is further explored in ...

from chapter: [Profound Ignorance and In-Between](#)

[Spacial versus Spatial](#) Part III :

Panoramic Thinking and End of This Journey

Heiner Benking: **Alte und Neue Räume, Ordnungen
und Modelle für Orientierungen und Vereinbarungen**
UNESCO Conference: The Unifying Aspects of Cultures, Vienna 2003



**From Cusanus and Peirce, to Warburg ...
and further down the road less travelled**

„Models“ N. v. Kues (Cusanus)	„Signs“ C.S. Peirce	Library „levels“ A. Warburg	„Cognitive Panorama“ H. Benking See: SYSTEMS entries
ANALOGON	INDEX	ORIENTATION	CONTEXTS
SYMBOLON	SYMBOL	WORDS	SUBJECTS
ICON	ICON	IMAGES	OBJECTS
		ACTIONS	Systematic, communicative ETHICS & PRAGMATICS See: Jonas / Stachowiak

3 Steps Towards an „Orienting Generalisation“

1. since 1988

Cognitive Panorama

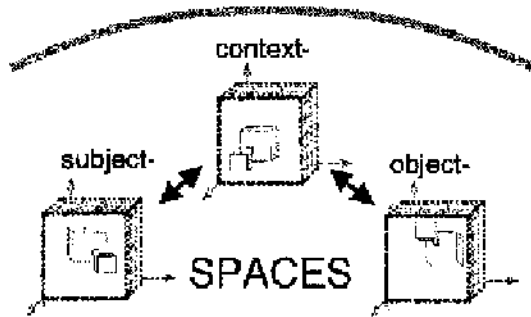
2. since 1988, respectively 1992

Sign- & Mediaintegration

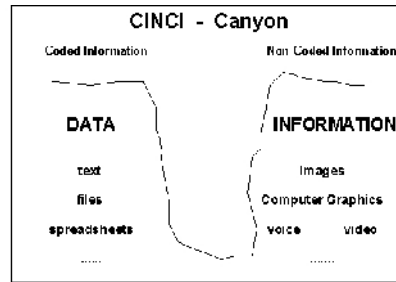
3. since 1990 resp. 1997

Orientation Generalization

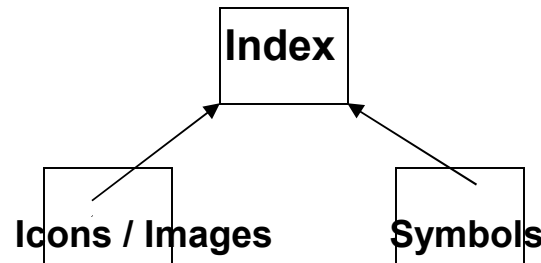
PANORAMA



Has been developed since 1988 as a TOPOGRAM with a „Blackbox“ Index-Space, 1992 „Masterplan CODATA and 1995 Conceptual Superstructure ICSU CODATA ISSS Systems Sciences & Club of Budapest 1994-1996 Council of Europe „meta-paradigm“ 1996 Knowmap Synopsis 2001 since 1999 „Switching Systems“



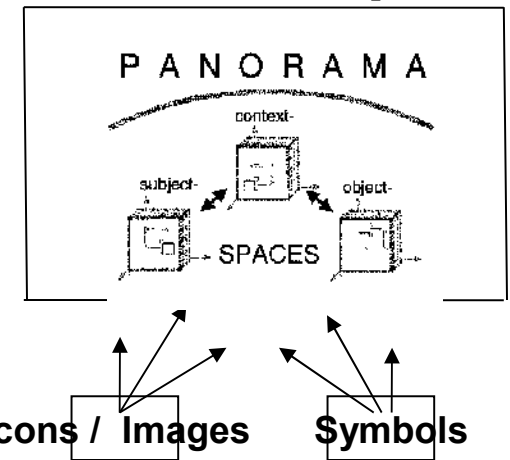
See Fig. 1 in [Bridges and a Masterplan, ICSU-CODATA 1992](#) from ONLINE '92



The three sign systems (C.S. Peirce) set in relation to each other (Knowmap 2001) and combined with Abby Warburg's Layers in 3.

Action (Warburg) and Ethics (Jonas) demand, as prerequisite, for an expanded framework of cohesion and relation for media, cultures, worlds...

The Panorama as an Index-Space:



For more see a [list of publications](#) relating to the „subjects“ [humanities](#) and [cultures](#), systems, [education](#), media-integration, technology, computer graphics, orientation, library-sciences, [cybernetics](#), [environmental research management](#) (1981-2004).

Heiner Benking: Alte und Neue Räume, Ordnungen und Modelle für Orientierungen und Vereinbarungen

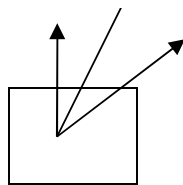
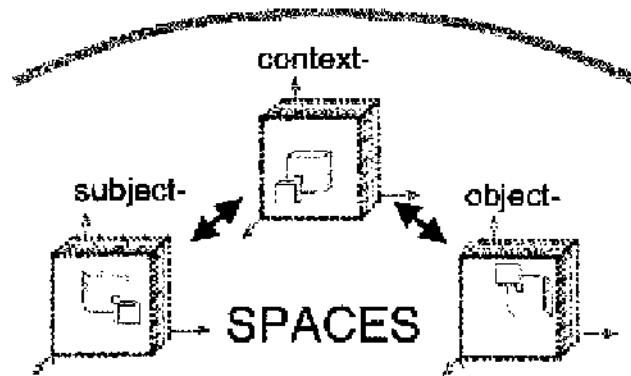
UNESCO Conference: The Unifying Aspects of Cultures, Vienna 2003



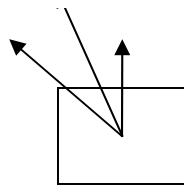
REALIZE & PONDER &
COMMUNICATE & ACT



P A N O R A M A



Icons / Bilder



Symbols / Symbole

NeoPragmatics &
Ethics & Action



Embodied visual (Schau-
Logik) Models for
orienting generalisations
(Grob-Orientierung)



Signs, maps, schemas
and/or Models !

Kim H. Veltman

Learning and Communication with Old and New Media

UNESCO Conference: The Unifying Aspects of Culture, Vienna 2003



Topics of Kim Veltman covered in the last years include:

Media as Extensions of Man - World Views, Theories of Space, Vision and Representation - Five Changes in the 20th Century - Relation and Scale - Intangible and Tangible Culture - Texts as Integrators of Culture - Rediscovery of Meta-Narratives - Local-Regional-National-International-Global - Language as Unique - Challenge of Different Levels of Distance - Cultural Activities as an Integrating Path

more.... from [TUAC Session](#): Media as Extensions of Man, World Views, Theories of Space, Vision and Representation, Five Changes in the 20th Century, Relation and Scale, Intangible and Tangible Culture, Texts as Integrators of Culture, Rediscovery of Meta-Narratives, Local-Regional-National-International-Global, Language as Unique, Challenge of Different Levels of Distance, Cultural Activities as an Integrating Path, see also *****



10. Cultural activities - Figure 1.

Six goals and nine means as ingredients for a new model of culture

CULTURAL GOALS	TECHNOLOGY	MEANS
1. Connecting	Pre-literacy	1. Thinking, Mental Sense Making Mythology Religion Philosophy
2. Ordering		2. Doing, Physical Sense Making Building Making
		3. Expressing Literature Art Mathematics
3. Imitating	Literacy	3 Representing
4. Matching	Print	4. Expressing Directly via Written
5. Mixing		5 Translating Media
6. Exploring		6. Transforming Media
	New Media	7. Publishing with Tolerance
		8. Sharing
		9. Helping



Please note:

After section on SuperSigns and SuperStructures
(after a short introduction and orientation section)

The following slides are part on Maps and Models
was taken from the CODATA – ISGI 2005
which took also place in BERLIN the week before.
Pls. see the next slide.

ISGI
Berlin 2005



International Symposium on the Generalization of Information



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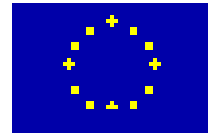
Granularity, Topicality, and Generalization of Information

Reflections about maps and models, orienting
generalizations and their possible pragmatic and
ethical implications and challenges

Heiner Benking



Ptolémée 98



Premier forum des solutions pour développement des musées et expositions - Journée Access Multimedia
17. - 18. Novembre 1998 - Cité des Sciences et de l'Industrie

Basic classes of simulated reality and their proponents

Reality	Nature, Man Made World
Virtual Reality	Sutherland, Furness
Augmented Reality	Feiner, Stricker
Augmented Virtuality	Gelernter, Ishii
Double Augmented Reality	Mankoff
Blended Reality	Turner; Benking
Merged and Morphed Realities	Judge, Benking, see: spatial metaphors & User Interface design see: Composite Cognitive Panorama or Panopticum

<http://www.ceptualinstitute.com/genre/benking/visual/visualization.htm> extend with and from Veltman 98

Model Thinking & Pragmatics

Herbert Stachowiak 1965 - 2004



Studium Generale, Springer, 1965

Scientific Thought, UNESCO 1972

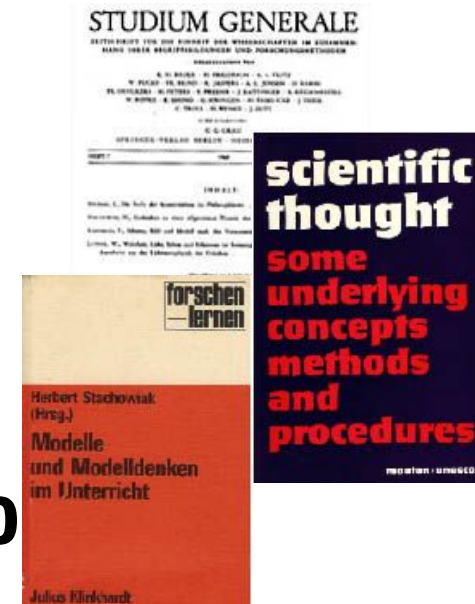
Allgemeine Modelltheorie, Springer 1973
General Model Theory

Modelle und Modelldenken im Unterricht
Klinkhardt 1980

Modell und Kunst, 1981

Pragmatics Pragmatik, Vol. I-V
Meiner 1986-96

s.a.: **Quergeist**



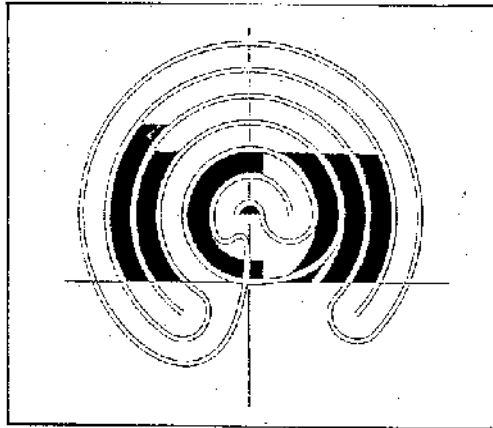
Global Sharing and Coping

Starting Points

I could have also called this UIA guest page **GLOBAL CHANGE** or **LOCAL AND GLOBAL CHANGE** - as my work started about global environmental issues in 1988 with such wide and universal themes. Only because I was involved in two or more projects at that time, and have a certain background which was about preparing and documenting decisions and presenting results, I was able to make the bridge, combine what normally is not seen as one - or in one solution. As both project concepts are not only of wider interest and unique in their approach, specially in their time we are proposing here to follow each background independently and then join in again the flow of events.

HARMONIZATION

The first and most central entry points have been around a G7 and SRU German Environmental experts initiative which was taken up by the UN- Environment Programme UNEP - HEM.



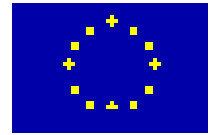
GLOBAL CHANGE

The other started with the GLOBAL CHANGE conference 1988 in Moskow.

Germany and other countries had been invited to present „Challenges to Science and Politics“ in form of Conferences and Exhibitions. As I was invited to contribute I had to think anew on how such complex Issues could be communicated to the broader public, raising awareness and consciousness, and being correct and helpful for scientists, politicians, and industry at the same time. I go public now 1998 as after having this touring exhibition 8 years in Germany, but never been shown outside Germany, and being updated and in high demand, there is high danger of losing this piece and milestone. Politics look east and local when the exhibition was opened in May 1990. The result we have no public eye and information about the exhibition, its scope and results. As this is fatal in my view, I fee I have to change and address that.




Ptolémée 98



Premier forum des solutions pour développement des musées et expositions - Journée Access Multimedia
17. - 18. Novembre 1998 - Cité des Sciences et de l'Industrie

ns titutions Programmes Databases Methods Ref. Mat. Guided Tour Thesaurus Location Region

H E M I S
Environmental Information System



Ins titutions
Programmes
Databases
Methods
Ref. Material

Guided Tours
Subject Thesaurus
Location
Region
Help

EXIT

Choose Choisir Wählen Sie
English Français Deutsch



GLOBAL LEARN DAY

WELCOME TO EUROPE



KNOW-MAPS FOR KIDS

patterns can be meanings that connect

A Universal Ordering System for Disciplines and Phenomena
 ICC - Information Coding Classification I. Dahlberg

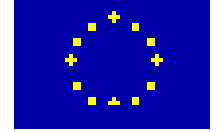
- | | | |
|---|-----------------------|-------------------------------|
| | Matrix columns | Matrix levels |
| 9 | Culture | Distribution and Synthesis) |
| 8 | Science & Information | Application and Determination |
| 7 | Economic & Technology | Technology and Production |
| 6 | Socio | Institution or Content |
| 5 | Human | Persons or Content |
| 4 | Bio | Property Attribute |
| 3 | Cosmo & Geo | Activity, Process |
| 2 | Energy & Matter | Objects, Components |
| 1 | Form & Structure | Theories, Principles |
| 0 | Subject Areas | General Form Concepts |

General Form Concepts	Theories, Principles	Objects, Components	Activity, Process	Property, Attribute	Persons or Content	Institution or Content	Technology & Production	Application & Determination	Distribution & Synthesis
Form & Structure 11	Mathematics 111	Physics 121	Chemistry 131	Biology 141	Geology 151	Astronomy 161	Medicine 171	Law 181	History 191
Energy & Matter 21	Mechanics 211	Physics 221	Chemistry 231	Biology 241	Geology 251	Astronomy 261	Medicine 271	Law 281	History 291
Form & Structure 31	Astronomy 311	Mathematics 321	Physics 331	Chemistry 341	Biology 351	Medicine 361	Law 371	History 381	Geology 391
Energy & Matter 41	Mechanics 411	Physics 421	Chemistry 431	Biology 441	Geology 451	Astronomy 461	Medicine 471	Law 481	History 491
Human 51	Mathematics 511	Physics 521	Chemistry 531	Biology 541	Geology 551	Astronomy 561	Medicine 571	Law 581	History 591
Form & Structure 61	Mathematics 611	Physics 621	Chemistry 631	Biology 641	Geology 651	Astronomy 661	Medicine 671	Law 681	History 691
Energy & Matter 71	Mechanics 711	Physics 721	Chemistry 731	Biology 741	Geology 751	Astronomy 761	Medicine 771	Law 781	History 791
Form & Structure 81	Mathematics 811	Physics 821	Chemistry 831	Biology 841	Geology 851	Astronomy 861	Medicine 871	Law 881	History 891
Energy & Matter 91	Mechanics 911	Physics 921	Chemistry 931	Biology 941	Geology 951	Astronomy 961	Medicine 971	Law 981	History 991
Form & Structure 01	Mathematics 011	Physics 021	Chemistry 031	Biology 041	Geology 051	Astronomy 061	Medicine 071	Law 081	History 091
Energy & Matter 02	Mechanics 021	Physics 031	Chemistry 041	Biology 051	Geology 061	Astronomy 071	Medicine 081	Law 091	History 101
Form & Structure 03	Mathematics 031	Physics 041	Chemistry 051	Biology 061	Geology 071	Astronomy 081	Medicine 091	Law 101	History 111
Energy & Matter 04	Mechanics 041	Physics 051	Chemistry 061	Biology 071	Geology 081	Astronomy 091	Medicine 101	Law 111	History 121
Form & Structure 05	Mathematics 051	Physics 061	Chemistry 071	Biology 081	Geology 091	Astronomy 101	Medicine 111	Law 121	History 131
Energy & Matter 06	Mechanics 061	Physics 071	Chemistry 081	Biology 091	Geology 101	Astronomy 111	Medicine 121	Law 131	History 141
Form & Structure 07	Mathematics 071	Physics 081	Chemistry 091	Biology 101	Geology 111	Astronomy 121	Medicine 131	Law 141	History 151
Energy & Matter 08	Mechanics 081	Physics 091	Chemistry 101	Biology 111	Geology 121	Astronomy 131	Medicine 141	Law 151	History 161
Form & Structure 09	Mathematics 091	Physics 101	Chemistry 111	Biology 121	Geology 131	Astronomy 141	Medicine 151	Law 161	History 171
Energy & Matter 10	Mechanics 101	Physics 111	Chemistry 121	Biology 131	Geology 141	Astronomy 151	Medicine 161	Law 171	History 181
Form & Structure 11	Mathematics 111	Physics 121	Chemistry 131	Biology 141	Geology 151	Astronomy 161	Medicine 171	Law 181	History 191
Energy & Matter 12	Mechanics 121	Physics 131	Chemistry 141	Biology 151	Geology 161	Astronomy 171	Medicine 181	Law 191	History 201
Form & Structure 13	Mathematics 131	Physics 141	Chemistry 151	Biology 161	Geology 171	Astronomy 181	Medicine 191	Law 201	History 211
Energy & Matter 14	Mechanics 141	Physics 151	Chemistry 161	Biology 171	Geology 181	Astronomy 191	Medicine 201	Law 211	History 221
Form & Structure 15	Mathematics 151	Physics 161	Chemistry 171	Biology 181	Geology 191	Astronomy 201	Medicine 211	Law 221	History 231
Energy & Matter 16	Mechanics 161	Physics 171	Chemistry 181	Biology 191	Geology 201	Astronomy 211	Medicine 221	Law 231	History 241
Form & Structure 17	Mathematics 171	Physics 181	Chemistry 191	Biology 201	Geology 211	Astronomy 221	Medicine 231	Law 241	History 251
Energy & Matter 18	Mechanics 181	Physics 191	Chemistry 201	Biology 211	Geology 221	Astronomy 231	Medicine 241	Law 251	History 261
Form & Structure 19	Mathematics 191	Physics 201	Chemistry 211	Biology 221	Geology 231	Astronomy 241	Medicine 251	Law 261	History 271
Energy & Matter 20	Mechanics 201	Physics 211	Chemistry 221	Biology 231	Geology 241	Astronomy 251	Medicine 261	Law 271	History 281

**The ICC is in the MMI Library
 a basis for teaching wholeness and connectedness -
 what we know and how little we know !**



Ptolémée 98



Premier forum des solutions pour développement des musées et expositions
Journée Access Multimedia 17. - 18. Novembre 1998 - Cité des Sciences et de l'Industrie



Scales Qualitative

1. World
2. Continent
3. Country
4. Province
5. City
6. Building
7. Ground-Plan
8. Room
9. Wall
10. Object

Kinds of Maps

1. Climate
2. Cultivation
3. Energy
4. Food
5. Geology
6. Medicine
7. Politics
8. Population
9. Religion
10. Terrain

Kinds of Choices

1. Access
2. Learning
3. Levels
4. Media
5. Quality
6. Quantity
7. Questions
8. Space
9. Time
10. Tools

Why? - Purpose

1. Everyday
2. Emergency
3. Business
4. Education
5. Environment
6. Government
7. Health
8. Legal
9. Leisure
10. Religion

Levels (of Knowledge)

1. Classifications
2. Definitions
3. Explanations
4. Bibliographies
5. Partial Contents
6. Full Contents
7. Internal Analyses
8. External Analyses
9. Restorations
10. Reconstructions

Round-Table:

Ethics

in Knowledge Representation and Organization



Impulse Statement:

What do we need ? Where do we want to go ?

A Linguistic Turn ? , An Iconic Turn ?

Communication Turn, Spatial Turn?,...

or a Pragmatic Spin ?

The construction and ethics
of shared frames of references

TAGORE-EINSTEIN COUNCIL

**Eighth International Tagore - Einstein Conference
Asian Pacific Weeks in Berlin 15-28. September 2003**



Wanted: A Global (Integral) Covenant

**Reflections and a work report
towards shared frames of references and visions
in a big-picture overview „mode“ or „scaffolding“**

Heiner Benking
Independent Futurist and Facilitator

please see also:

Ecological Integrity and Earth Charter 2002 presentations

Contemporaneousness of the Non-Contemporaneous
Die Gleichzeitigkeit des Ungleichzeitigen

Culture and Civilization:

Comparative Cultural Studies:

Culture, Cultural Policy, and the Media

**Homogenisation, Standardisation, Harmonisation,
Linguistic-, Iconic-, Spacial-, Integral Turn,...**

Where do we go from here in an age of a globalised "Cyberculture"?

**Heiner Benking,
Independent Facilitator and Futurist**



**SUSTAINABLE INFORMATION SOCIETY -
VALUES AND EVERYDAY LIFE**

s i s
Kouvola 27.-28.9.2001

An Integral Agenda for Coping with Globalisation and Cyberculture

**A Report and Reflections and about sharing
extra dimensions and modern (communication)
technologies**

**Heiner Benking
Independent Futurist and Facilitator**

**Global Ecological Integrity, Human Rights, and Human Responsibilities:
Intersections Between International Law and Public Health, 2003, June 27- July 1,
&**

Open Space, [The Earth Charter in Action](#), June 26- 30, Urbino, Italy

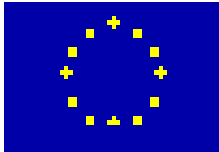


These are only 30 (out of 60) powerpoint slides as presented at the:

EARTH CHARTA OPEN - SPACE:

**and available during the conference:
Global Ecological Integrity, Human Rights, and Human
Responsibilities**

**After this selection you find 2 „hyperlinked“ slides which
were written ad-hoc directly before the session
to invite further explorations and digging deeper into areas
of interest**



Welcome to the Future



CeBIT

European Commission MEDICI Framework

13.- 20. March 2002

Culture Navigation and Reference Rooms: A Futuristic „Out-look“

Questioning the next turn in Culture and „CyberCulture“ –
What will happen after the „linguistic-“ and „iconic turn“ ?

Heiner Benking

Independent Facilitator and Futurist

Associate, Millennium Project, Berlin CoLab

EWOC 04, Toronto, October 2004
by Heiner Benking, Berlin
Tagore-Einstein Council, Open-Forum, PNW,...



Towards one possible global embodied Covenant: Models, - not just Systems, Signs, Words and Images

A work report
towards developing *shared* models
for *broader* and *contextual* understanding and a concert of *orienting*
generalizations for helping to *overcome* dualistic traps and include
specialist *and* generalistic *cultural* activities.

Heiner Benking
I Independent Facilitator and Futurist

ENCOS 2004

**1st European Networks Conference on
Sustainability in Practice, 1-4 April 2004, Berlin**



Windows into and a WorkReport on:

- **E-Learning**
- **International Cooperation**
- **Education for Sustainability**

Heiner Benking
Independent Facilitator and Futurist



Innsbruck, August 23-27 1999

S8: Culture in the Multimedia Information Society

Portals, Switching Systems and Reference Schemas

Heiner Benking

http://www.thur.de/philo/Benking/extra_skin.html

http://www.thur.de/philo/Benking/effe_en.html

<http://www.geocities.com/~acunu/millennium/resume/res-hb.html>

Language Theory for the Computer

Johannes Heinrichs, Heiner Benking

<http://benking.de/systematik-9.html>

<http://www2.hu-berlin.de/soz-oeko/>



WISSEN ORGANISATION GESELLSCHAFT

INTERNATIONALER HEINZ VON FOERSTER KONGRESS

In cooperation with:

American Society for Cybernetics (ACS)

2003 Conference Vienna, Austria, Nov. 13-15



Heinz von Foerster und das Biological Computer Laboratory

Future Prospects for Constructivism

Cybernetics – quo vadis ?

Heiner Benking
Independent Facilitator and Futurist



**Gemeinsamer Kongress der Leibniz - Sozietaet
und der Deutschen Gesellschaft für Kybernetik**
Berliner November 2003 - Harnack - Haus,
Max - Planck - Gesellschaft zur Förderung der Wissenschaften e. V.



(Deutsche) Gesellschaft für Kybernetik

Cybernetic Futures – kybernetische Zukünfte

Heiner Benking
Independent Facilitator and Futurist

ISGI
Berlin 2005



International Symposium on the Generalization of Information



International ICSU-CODATA Symposium Berlin, Sept 14-16, 2005
ICSU - International Council of Scientific Unions
CODATA- Committee on Data for Science and Technology
in cooperation with International Cartographic Association ICA
and the Physikalisch-Technische Bundesanstalt, Berlin, PTB.



Granularity, Topicality, and Generalization

**Reflections about maps and models, orienting
generalizations and their possible pragmatic and
ethical implications and challenges**

Heiner Benking



PLEASE NOTE:

This is only a subset

- **without the MAPS and MODELLING section and LOOK-BACK of the author of works done from 1985-2005 –**

PLEASE visitit <http://benking.de/systems/codata/>

Or for some more slides:

http://benking.de/systems/codata/CODATA-MIST2005-ppt_files/v3_document.htm

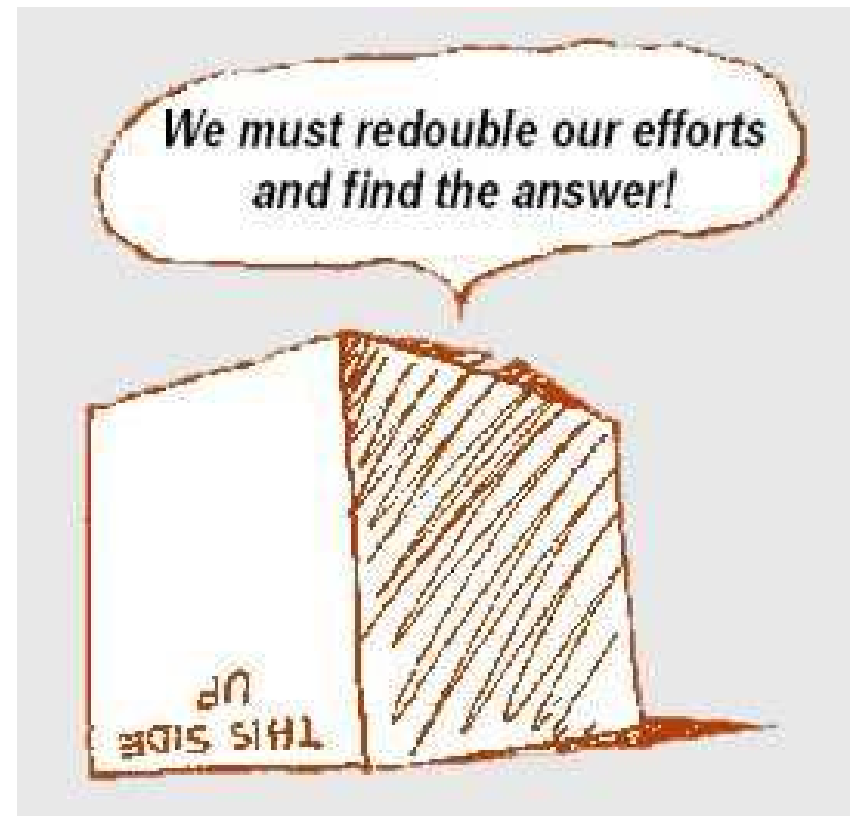
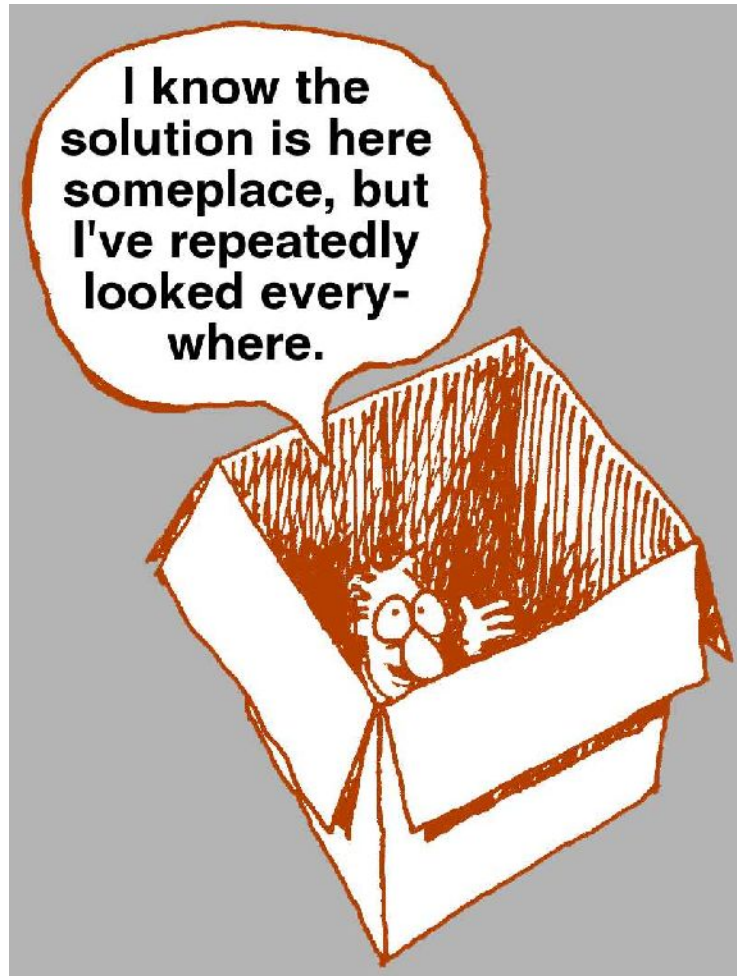
Kurt Hanks – Out of the Box Thinking



<http://hanksconsulting.com/>

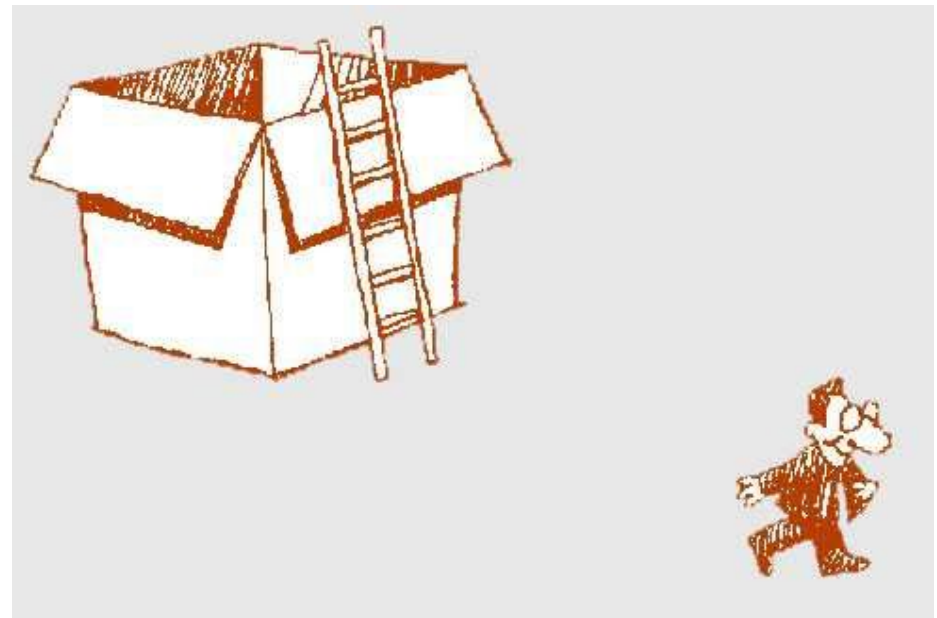
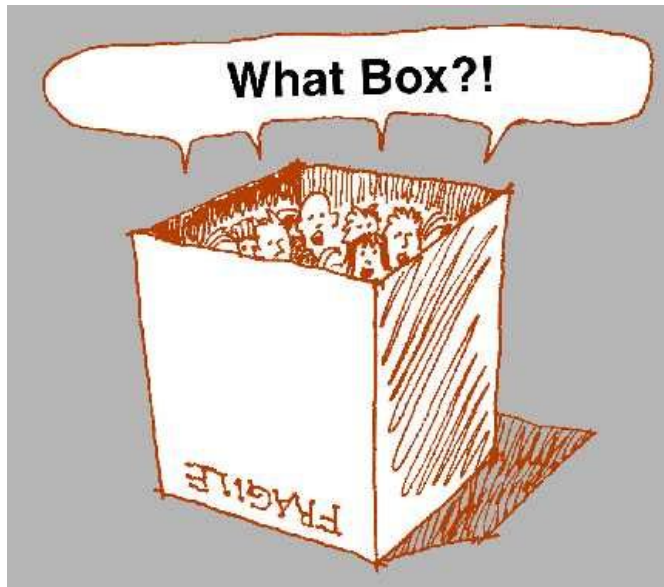
Kurt Hanks – Out of the Box thinking

<http://hanksconsulting.com/>



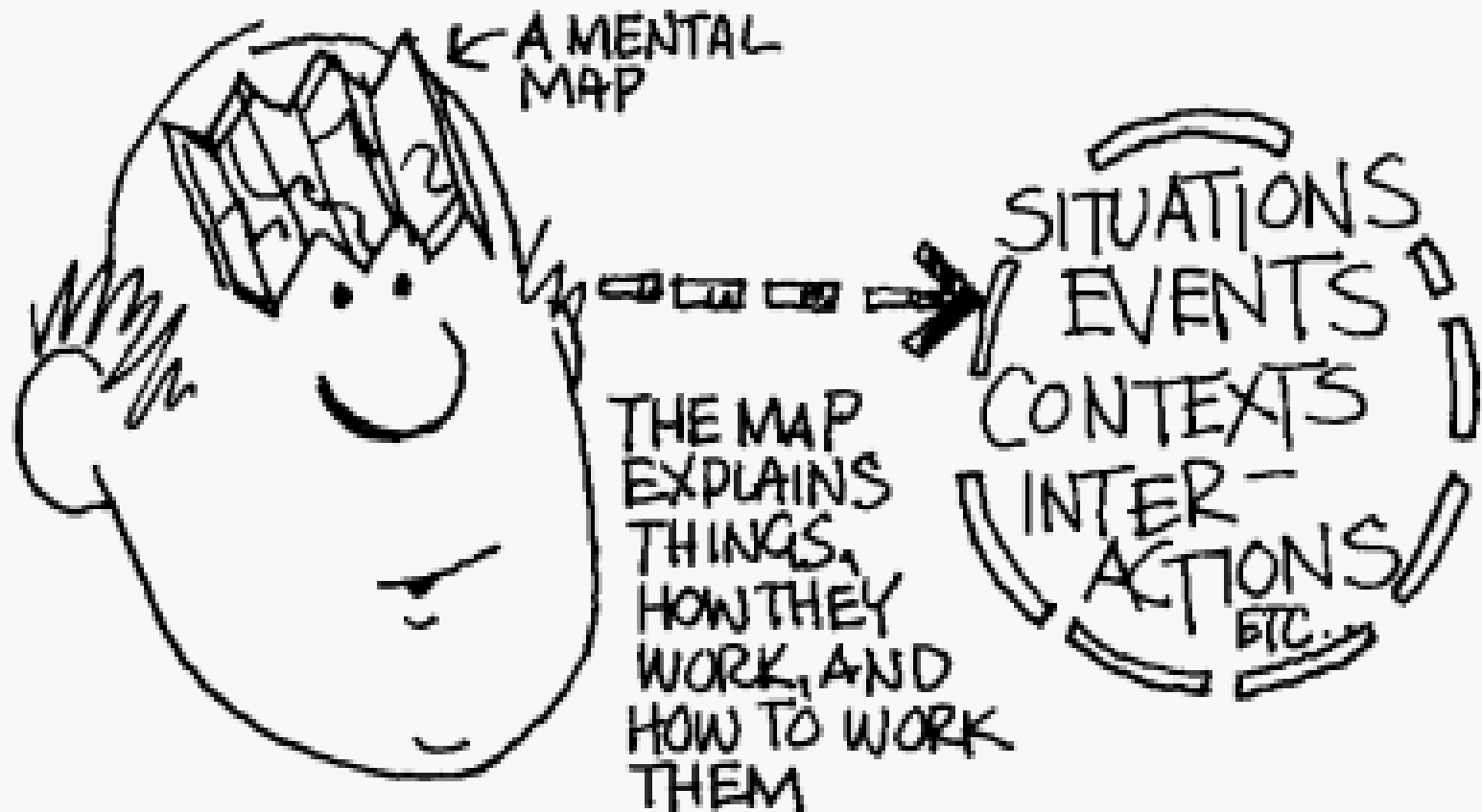
Kurt Hanks – Out of the Box thinking

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Kurt Hanks – Paradigm Mapping

<http://hanksconsulting.com/>



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<http://hanksconsulting.com/>





CODATA TASK GROUP ON
MULTIMEDIA, DATA, AND INFORMATION

Multimedia

Where do we go from here ?



**International CODATA Symposium on Multimedia in Science and Technology - MIST 2005 -
European Academy, Berlin, Germany September 19-20, 2005**

International ICSU-CODATA Symposium Berlin, ICSU - International
Council of Scientific Unions, CODATA- Committee on Data for Science and Technology

Using Maps and Models, SuperSigns and SuperStructures

Heiner Benking