Semantic Web and BPM

Christian Fillies

Fillies & Friends Consulting
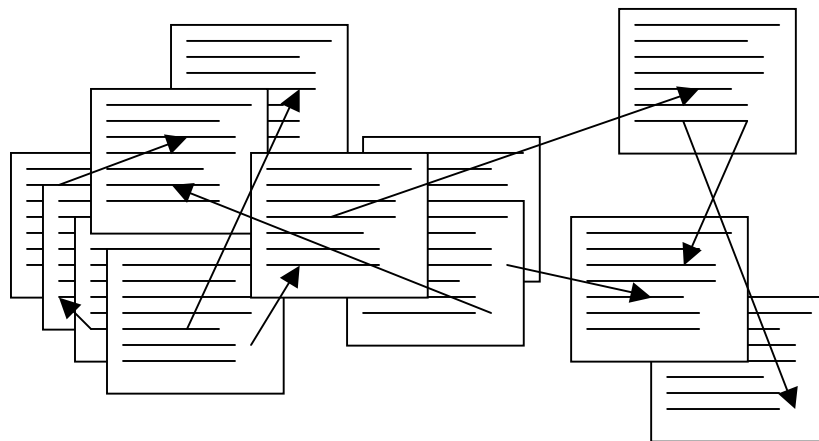
Dr. Frauke Weichhardt

beratung im netz

Gabriele Koch-Süwer
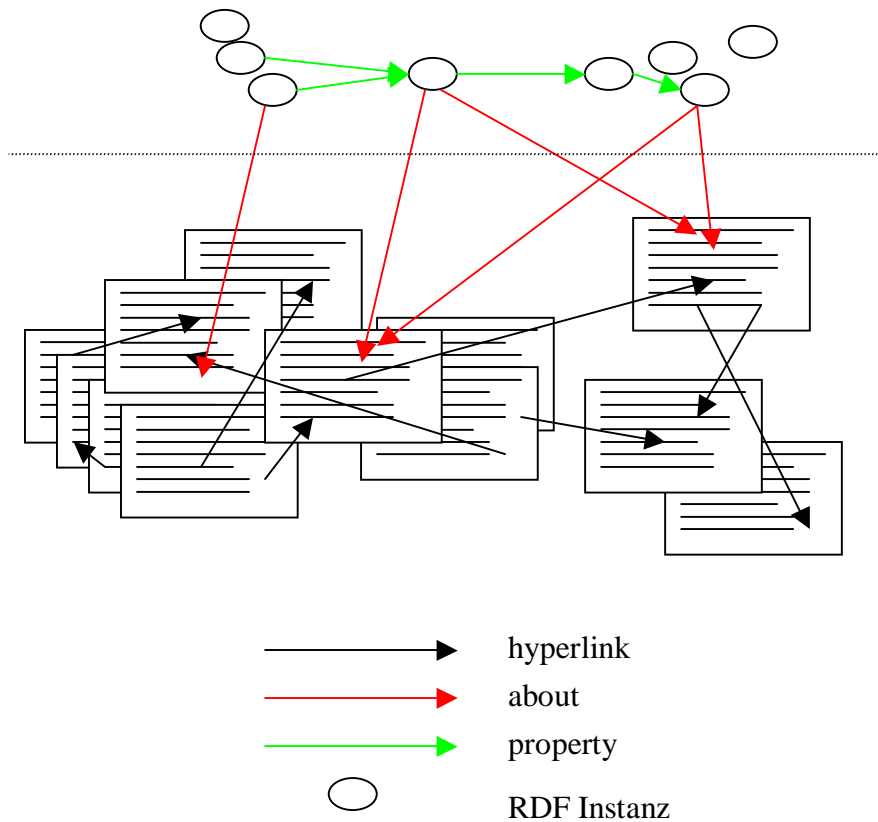
Gedilan GmbH

The HTML Web

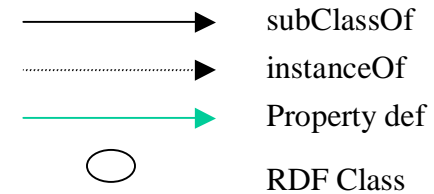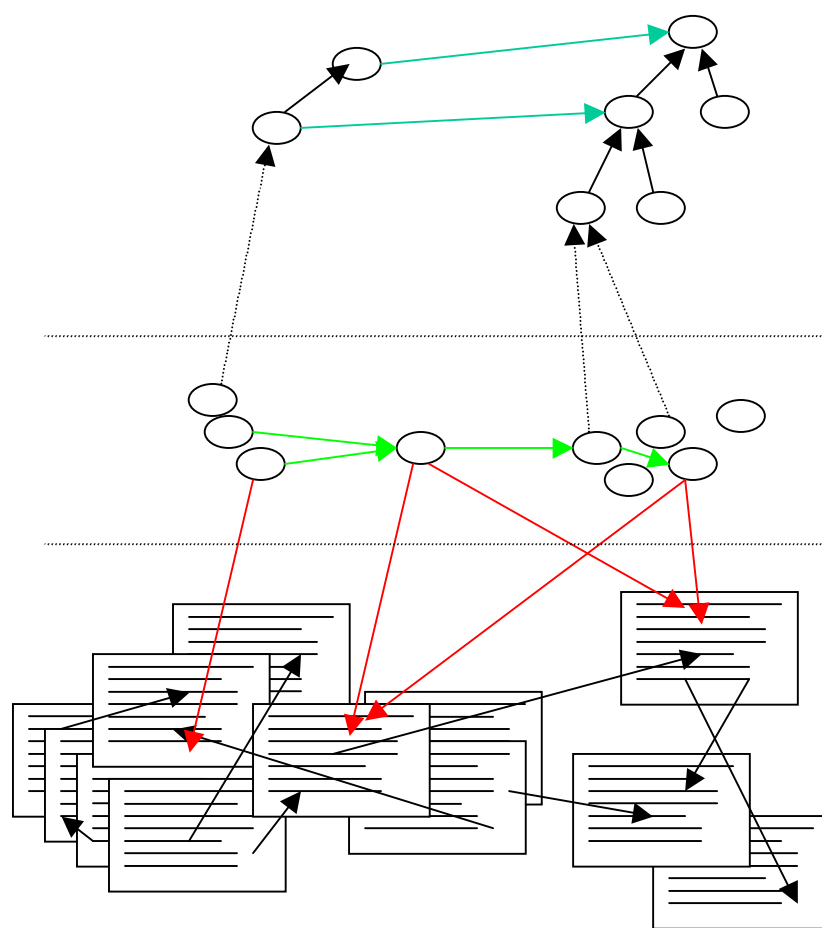- Basically text and images

- Restricted search capabilities

- Content of a page only accessible after opening

→ Hyperlink

The Semantic Web (RDF)

• Model of the page contents is attached to each page

• Finding and comparing pages with related topics

•Models have hyperlinks to other models

→	hyperlink
→	about
→	property
◯	RDF Instanz

The Semantic Web (RDFS, OIL, DAML)

→ subClassOf

⤑ instanceOf

→ Property def

◯ RDF Class

- Definitions of common language and concepts

- Intelligent inference engines and agents

- No global repository

- Reference Ontologies

Fillies&Friends 2001

RDF(S): Background

- Intended for representation "meta-data", basis for Web-based ontology-language

- W3C Recommendation

- "Because it is already there"
  - pushed hard by W3C (T.B-L)
  - $ 80M DAML program of DoD
  - 20 M € program of EU in FP5 (2001)
  - Foundation of eEurope Program in FP6
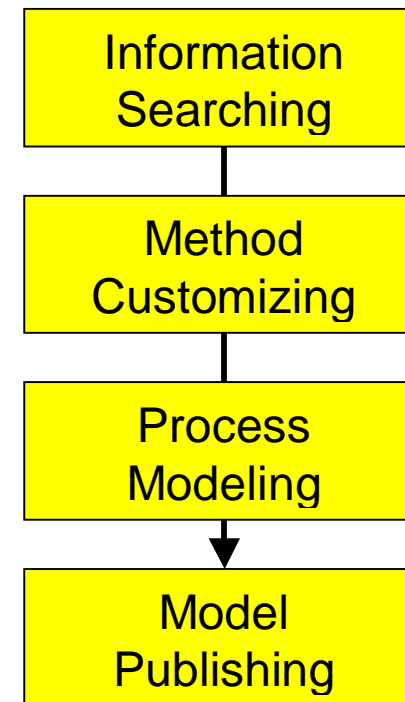
Who will enter all that data?

- Process and knowledge management folks

- Organizations, which create standards

- Everybody, who wants to found on the semantic web

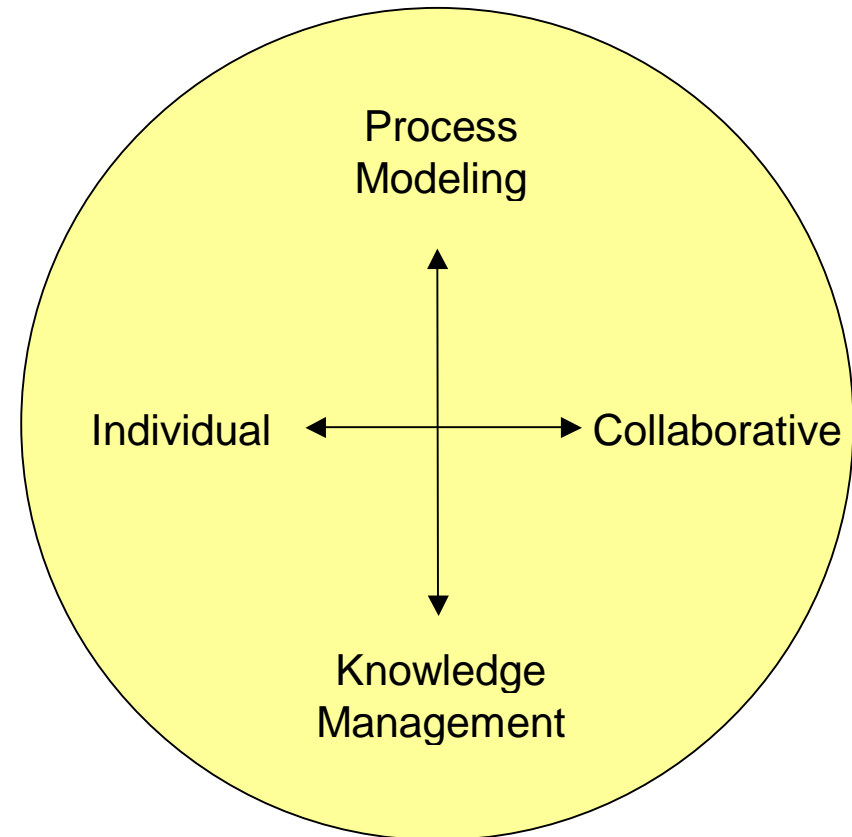(question brought up already by D.B. Lenat)

BPM with the Semantic Web

- **Using the resources**

  - Specialize information models
  - Process models

- **Publish the models for reuse**
  - Intranet
  - Internet

Information Searching
Method Customizing
Process Modeling
Model Publishing

Ambient Tools for the Semantic Web

- Easy to use

- Low Cost

- Integrated in MS-Office

- Ontology editor

- Indexing service

- Method independent

- Static and dynamic modeling

Process
Modeling

Individual ⟷ Collaborative

Knowledge
Management

SemTalk™

VISIO

+

GUI

+

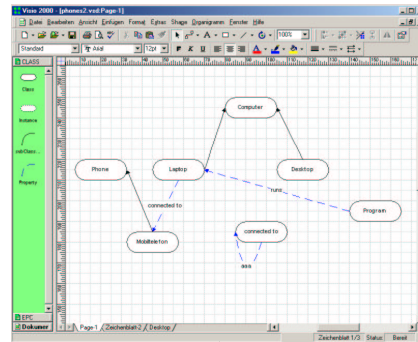**Logic**

VBA / COM

Graphical Browser

COM

K-Model Engine

XML   XML

RDF(S)   RDF(S) Servers

- Navigation and Consistency in Visio

- Model Objects for Visio Shapes

- RDFS Classes for Model Objects

- GRID:Hyper-linked Models

Current BPM Tools

	Visio	ARIS	SA2001	Bonapart	Alphabet	SemTalk
Symbols	+	+	+	+	+	**+**
Model-objects	-	+	+	+	+	**+**
Symbol Types	+	-	+	-	+	**+**
Classes	-	-	+-	+-	-	**+**
Diagram Types	+	-	+	-	+	**+**
Graph. Meta model	-	-	-	+-	-	**+**
Consistency	-	-	VB Rules	Built in	?	**Model**
Methods	many	One with filters	many	one	many	**many**

SemTalk™ Plug-In Architecture

Generic Object Modeling RDFS, OIL. DAML-O	BPM: EPC, CSA PROMET
	Data Warehouse
	DMS and KMS
	CRM
	E-Business Prozesses
	MS Office
	EAI: BizTalk
	eDefense
	eHealth

The Knowledge Web

- The Semantic Web describes the semantics of any kind of resources

- Appliances that a aware of semantics have knowledge!

- Smart applications can be build easily using SemTalk™ inference engine runtime for COM of Java.