

Gardens of Meaning

... or why the Semantic Web is for Vulcans

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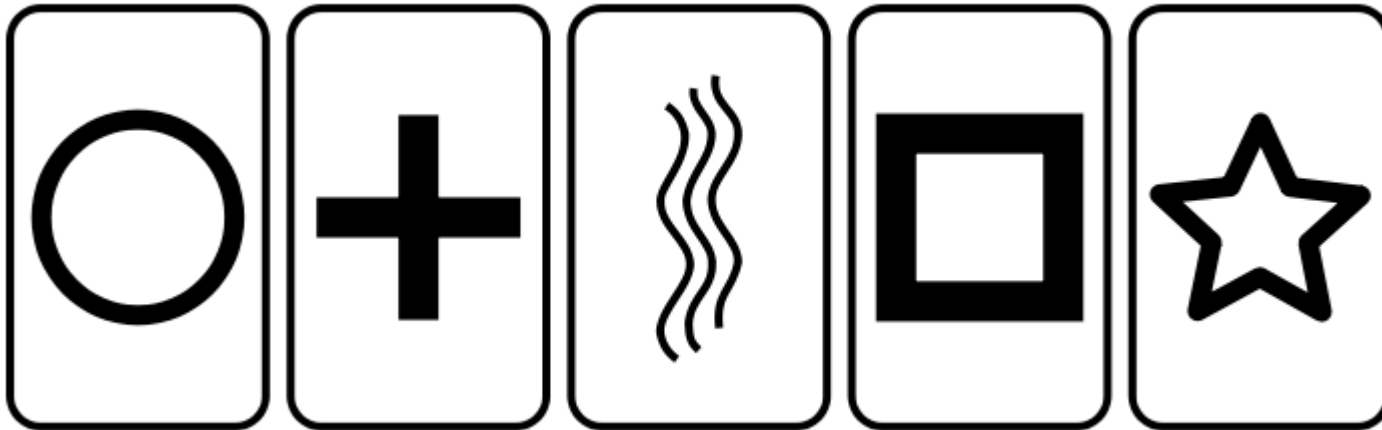
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Overview

- A completely unstructured sequence of thoughts (with some ranting).
- The Value Grid for Semantic Technologies.
 - See <http://purl.org/net/aliman>

What am I thinking...?



Telepathy...

- ... is not possible?
- We rely on communication.
- *“It is by universal misunderstanding that all agree. For if, by ill luck, people understood each other, they would never agree.”* Charles Baudelaire.
- *“There's never going to be a great misunderstanding of me. I think I'm a little whacked.”* Pamela Anderson.

“Techlepathy” ...

- My computer can't make me happy, because it doesn't know what I'm thinking.
- *“Think? Why think! We have computers to do that for us.”* Jean Rostand
- *“Computers are useless. They can only give you answers.”* Pablo Picasso
- If my computer knew what I was thinking, it would probably take offence.

What needs changing...

- Transfer thought directly between people.
- Transfer thought directly to computers.

The Semantic Web (1)

- All humanity can share thoughts directly with each other.
- Thoughts can connect and mingle.
- Global consciousness.
- End war and invent the Warp Drive.



The Semantic Web (2)

- All humanity can share their thoughts with their computers.
- Computers will know exactly what we mean.
- End to frustration.
- (Initial risk ... talk nicely to your computer.)

How does this happen?

- Ontologies ...
 - Can absorb brain waves.
 - Sit around one for a while.
 - See things from other points of view.
 - Reach a shared understanding of the World.
 - World Peace.

Talk to computers?

- Computers are logic machines.
- Humans are illogical.
- Ontologies ...
 - Translate raw brain waves into pure logic.
 - Ontologies can tell us when we contradict each other ...
 - ... and when we contradict ourselves.
 - Inner peace and harmony.

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First Contact

- Because of the Semantic Web, and especially Ontologies, we will soon be able to make contact with other planets (especially Vulcans).
- But maybe, Vulcans are already among us ... ?

Er ...

- Ontologies ...
 - ... can't really absorb brain waves.
 - ... can't really translate brain waves into pure logic.

Mystery of Conceptualisation

- “*Formal specification of a [shared] conceptualisation...*” Tom Gruber
- What is a “shared conceptualisation”, and how do we go about cultivating one?
- We can't ever know if we actually “share” a conceptualisation.
- If only we were Vulcans ... we could “mind meld”.

The Art of Logic

- *“Logic: The art of thinking and reasoning in strict accordance with the limitations and incapacities of the human misunderstanding.”*
Ambrose Bierce
- Most people need special training to be able to formalise their thought.
- If only we were Vulcans ... dedicated to Pure Logic.

The Semantic Web is for Vulcans

- The Semantic Web would work so well on Vulcan!
 - Mind meld.
 - Dedicated to pure logic.

Towards the Management of Meaning

- Bootstrap problems
 - Intellectual endeavour
 - Complex social process
 - Quality criteria / objectives
- Deployment problems
 - Effort and scalability
- Evolution problems
 - Managing dependencies

Themes

- Economy and value
- Quality control and risk management
- People and process management
- Humans and computers (tools)

What is needed?

- Process model and methodology
- Theory of change and dependency management

What is needed?

- Tools where both the theory of change management and the process model and methodology determine the design of the user environment and the ways in which users can interact.
 - I.e. Tool design informed by an understanding that ***the role of the tool is to support and enable a social process.***

Radioactive Waste Information

- Transfer information to future generations
 - Findable
 - Understandable

Collaborative Ontology Engineering

- Tools ...
 - Who are they for?
 - Who is collaborating?
 - What collaborative activities (games) do they engage in?
- Three relationships in ontology engineering:
 - Domain expert to domain expert
 - Domain expert to ontology engineer
 - Ontology engineer to ontology engineer
- cf. OntoEdit (Sure et al. 2002)

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Less Formality

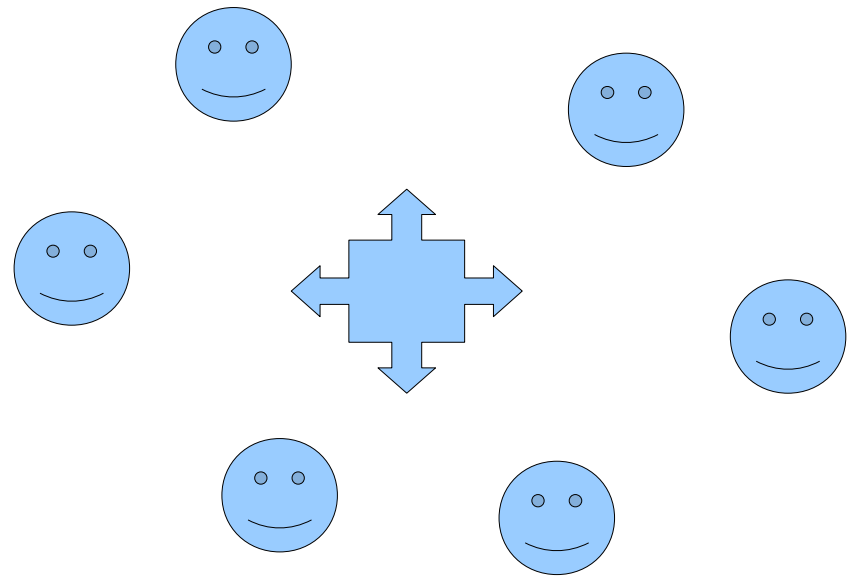
- Possible to go a long way towards construction of a “shared conceptualisation” without ever using formal languages?
- Redefine role of “ontology engineer”
- Introduce new roles ...
- **Collaboration engineering!**
 - Kolschoten et al. (2004)

Social Processes

- A collaboration must be *structured* and *directed*.
- Repeatable, predictable collaborative processes.

Conceptualisation is a *social process*

- Structure the social process ...
- Convergence and divergence



Gardens of Meaning

- A metaphor, for discussing the **structure**, **politics** and **dynamics** of conceptualisation processes.

Main Concepts

- Shared work spaces.
- Different types of work space associated with different collaborative activities.
- Work space implements rules and constraints of the activity, supports communication and interaction (in real time).
- Activities are part of a collaborative process.
- Underlying the process is a model of change, specifically designed to enable dependency management (adaptive applications).

Main Concepts (2)

- Informal, intuitive, facilitation ...

Main Working Areas

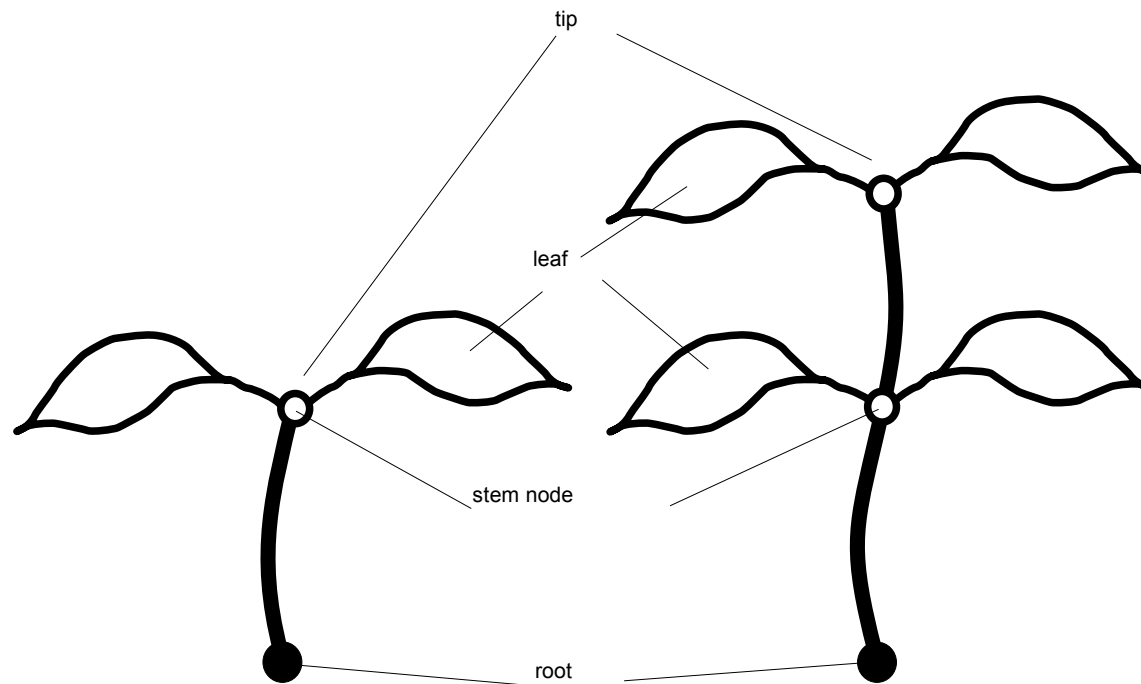
- Greenhouse
 - Forming the “seeds of meaning”
- Vineyard
 - Cultivating and organising vines (~ threads of meaning)

Greenhouse

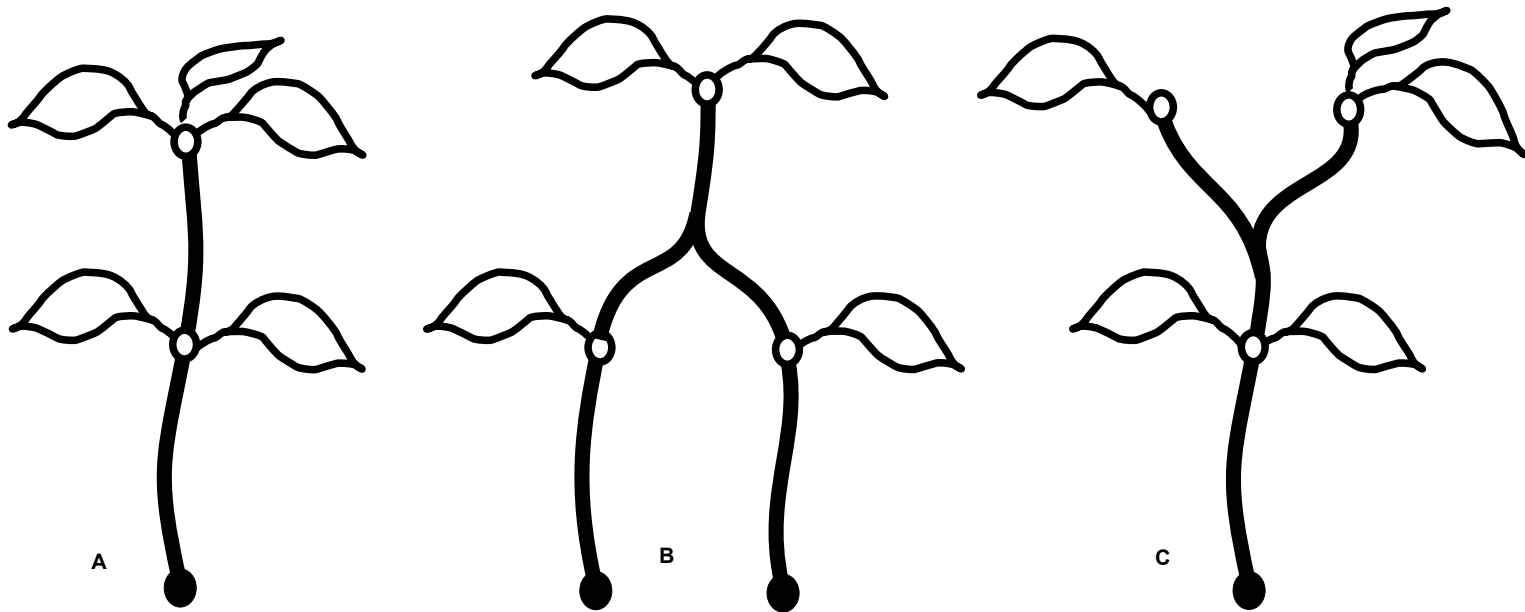
- Collect & organise informal expressions of meaning.
 - Text labels.
 - Unstructured text.
 - “Tags”.
 - Multimedia ...
- Recognise & establish “concepts”.

Vineyard

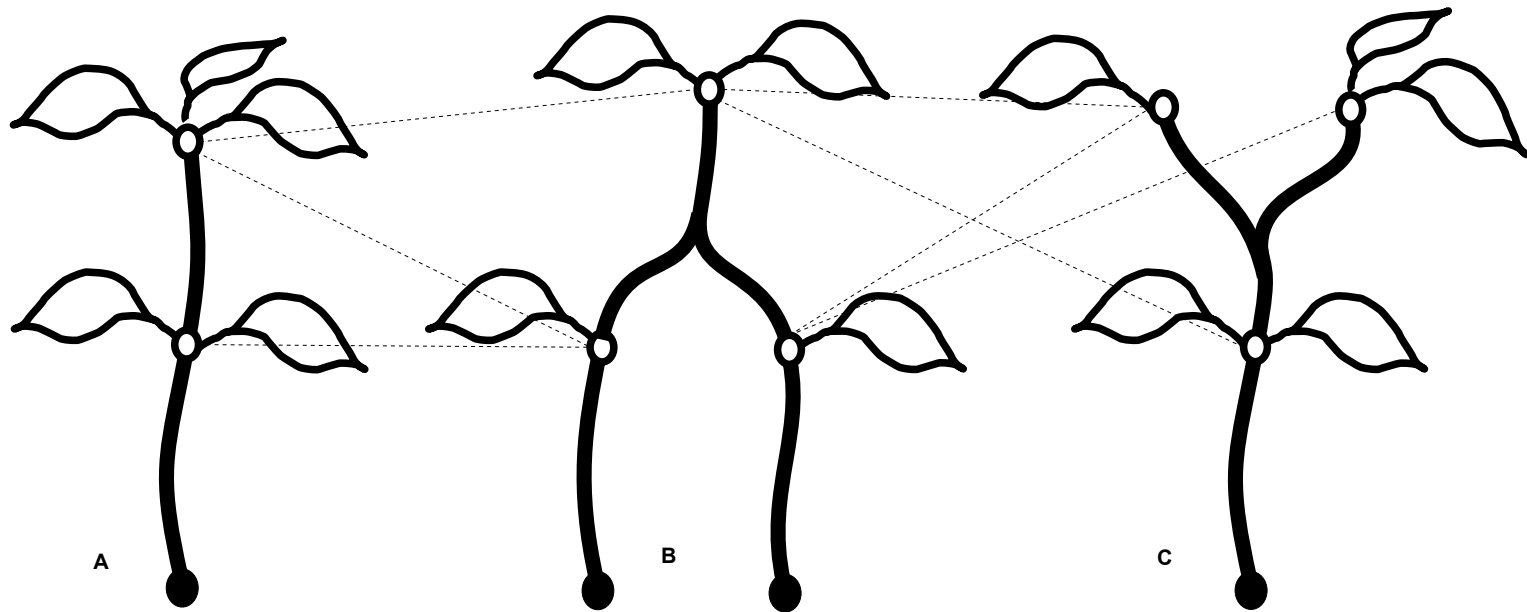
- Cultivate established meaning, refine, organise, reorganise.



Vineyard (2)



Spiders' Web



Where to go from here ...

- Identify collaborative activities.
- Propose collaborative process.
- Details of politics, interaction, games and rules.
- Test it, build a support tool.

References

- Gwendolyn L. Kolfschoten, Robert O. Briggs, Jaco H. Appelman and Gert-Jan d, **ThinkLets as Building Blocks for Collaboration Processes: A Further Conceptualization**, 2004
- Frits K. Pil and Matthias Holweg, **Evolving from Value Chain to Value Grid**, 2006
- *“I've made an odd discovery. Every time I talk to a savant I feel quite sure that happiness is no longer a possibility. Yet when I talk with my gardener, I'm convinced of the opposite.”* Bertrand Russell