

Ontology Summit 2010:
Creating the Ontologists of the Future

Panel Session-1:
Surveying the Landscape and the Possibilities

**Doing a Realtime Delphi Study
on the
Future of Ontologists**

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(v 1.0)



Future Outlook of the Ontologists

**Mission: to develop an outlook on the
"Future of Ontologists"**

we will try to gain insight from the perspectives of:

- the market - potential employer of the ontologist;
- the educator - the ontology training / education provider; and
- the individual - the ontologist or ontologist-to-be);

Outlook Time Horizon

- Now
- in 2.5 years
- in 5 years
- in 10 years
- in 20 years

... if we want to develop education and training strategies for the ontology professionals in the year 2020, we better do so by first trying to understanding what it would be like for ontologists then.

Tool & Process for our Future Study

- we will be making use of the Realtime Delphi process and the RTDelphi tool (developed by the Millennium project)
- We need to collect insights from a panel of experts in the domain (and that is YOU!)
- This future-study process will be our cross-cutting support to our other track, who will be needing your input

The (Conventional) Delphi Study

- First developed at RAND in the early 1960's
 - "just how much could be known about the future?" (Olaf Helmer and Nicholas Rescher, 1959)
 - "*Report on a Long-Range Forecast*" (Ted Gordon and Olaf Helmer, 1964)
- A means of eliciting and combining expert judgments while avoiding the pitfalls of conference room confrontations.
- Using sequential questionnaires, each building on the previous round.
- Required features:
 - Participants guaranteed anonymity
 - Feedback of reason for extreme opinions
- Has been used in thousands of studies

Real-Time Delphi

- First developed in a DARPA study by Ted Gordon and Adam Pease (2004).
- The object was to invent a technique by which a commander could rapidly collect and synthesize opinions of field personnel, using Delphi, to help reach a decision.
- Since then, many improvements and adaptations.
- The system is:
 - Web based (see: www.realtimedelphi.net, code “automobiles”)
 - Does not use “rounds” as the conventional Delphi
 - Permits revisits during the study

Description of RTD

- An on-screen form presents a series of questions, and for each:
 - A space to enter the participant's answer
 - The number of responses given so far
 - The average (or median) response of the group so far
 - A button that opens a window to give reasons behind the response and that shows the reasons given by others
- The questionnaire is updated immediately after response submitted
- The respondent can revisit any time to continue answering, edit personal answers, and see the group's inputs
- The analysis allows a wide and vast range of clustering

Applications

- Collection of judgments about when certain **developments*** might occur, their importance, and impacts and reasons for extreme opinions
- Providing information for and sharpening of scenarios, strategies, decision making, planning, ...
- Input/output and cross impact matrices
- Environmental monitoring

**a development is an event or a fact that could have a significant impact on the future of a field, sector, world, etc.*

Our Cohort

Ontology Summit 2010 -- Future Developments an outlook on the Future of Ontologists

This study is designed to collect views concerning developments that might impact the future of ontology, its teaching, and the future of ontologists.

Mission: to develop an outlook on the "Future of Ontologists," by gaining insights from the perspectives of ontology-experts from the market and education sectors, and ontologists themselves. Accordingly, you are invited to access and address the questions of the respective sector. However, if you consider yourself in several categories, please access the questionnaires individually and address the questions each time from the respective perspective (although the questions are similar, providing different answers based on the different perspective is not only acceptable, but expected.)

Hence, if you represent:

* **the market** - potential employer of the ontologist, please access:

- <http://www.realtimedelphi.net>
- enter your email (at your first visit, since the system doesn't recognize your email, you'll be prompted to register)
- use the code: ontologm

* **the educator** - ontology training / education provider, please access:

- <http://www.realtimedelphi.net>
- enter your email (at your first visit, since the system doesn't recognize your email, you'll be prompted to register)
- use the code: ontologe

* **the individual** - ontologist (or ontologist-to-be), please access:

- <http://www.realtimedelphi.net>
- enter your email (at your first visit, since the system doesn't recognize your email, you'll be prompted to register)
- use the code: ontology

If you have any questions, please feel free to email Elizabeth at <elizabeth@millennium-project.org>

Future of Ontology

Elements that might impact the future of ontology and related teaching

Questionnaire

	Statements about ontology	Timeframe <i>Group answers appear after you and several respondents have answered.</i>	Impact <i>Group answers appear after you and several respondents have answered.</i>	Consequences <i>Group answers appear after you and several respondents have answered.</i>
1	Ontology is taught in at least one department at most universities.	<p>What is the probability of this to happen in the following timeframes?</p> <p><input type="checkbox"/> already here (please explain)</p> <p><input type="checkbox"/> 75 1-2.5 years</p> <p><input type="checkbox"/> 85 2.5-5 years</p> <p><input type="checkbox"/> 100 5-10 years</p> <p><input type="checkbox"/> 10-20 years</p> <p><input type="checkbox"/> beyond 20 years</p> <p><input type="checkbox"/> never</p> <p>Submit only this cell <input type="button" value="go"/></p> <p>Please explain your reasoning. click here</p>	<p>What would be the general impact on the field?</p> <p><input type="radio"/> Huge</p> <p><input type="radio"/> High</p> <p><input checked="" type="radio"/> Average</p> <p><input type="radio"/> No impact</p> <p><input type="radio"/> Counterproductive</p> <p>Your answer has been entered, and you may change it at any time.</p> <p>Submit only this cell <input type="button" value="go"/></p> <p>Please explain your reasoning. click here</p>	<p>What developments might help trigger this one and/or what developments this might trigger?</p> <p>To proceed to the answer form please click here</p>
3	Ontology education program(s) will begin to get accreditation. (Please provide in the "Reasons" section your views on how can accreditation commence, and which body will be first to do it.)	<p>What is the probability of this to happen in the following timeframes?</p> <p><input type="checkbox"/> already here (please explain)</p> <p><input type="checkbox"/> 1-2.5 years</p> <p><input type="checkbox"/> 2.5-5 years</p> <p><input type="checkbox"/> 5-10 years</p> <p><input type="checkbox"/> 10-20 years</p> <p><input type="checkbox"/> beyond 20 years</p> <p><input type="checkbox"/> never</p> <p>Submit only this cell <input type="button" value="go"/></p> <p>Please explain your reasoning. click here</p>	<p>What would be the general impact on the field?</p> <p><input type="radio"/> Huge</p> <p><input type="radio"/> High</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> No impact</p> <p><input type="radio"/> Counterproductive</p> <p>Submit only this cell <input type="button" value="go"/></p> <p>Please explain your reasoning. click here</p>	<p>What developments might help trigger this one and/or what developments this might trigger?</p> <p>To proceed to the answer form please click here</p>

Please put your Visionary Hat on now!

I want to elicit **Developments** from everyone here today (as experts in the domain) that we can possibly use for our RTDelphi Study

Questions for you ⁽⁰⁾

- I will be asking a few questions, and would need everyone to response by typing their answers onto the online chat-room
- Now, please type in the cohort you are planning to represent, when you answer:
[the market | the educator | the ontologist]
- When responding to the following questions, please think along the following time frame:
[now | in 2.5 years | 5 yrs | 10 yrs | 20 yrs | beyond 25 yrs | never]

Questions for you ⁽¹⁾

- What major "**development(s)**" (please express in one statement) do you foresee happening to the domain of Ontology or to the Ontologist profession over the following 20 years?
(e.g. "ontology gets accepted by the scientific community as a science, like physics, chemistry, biology, psychology")

Questions for you (2)

- What do you see as important emerging trends concerning ontology, ontologists or ontology training/education over the next 20 years?

Questions for you (3)

- About how many "ontologists" (or professionals doing work that requires an "ontology education or training") do you estimate the world might need over the next 20 years?

Questions for you (4)

- What are the potential futures of ontology in academia? (e.g. university departments, mandatory credit courses, undergrad, grad, PhD, etc)

Questions for you (5)

- What needs to happen between now and the day when we will have "ontology departments" in universities and enterprises?

Questions for you ⁽⁶⁾

- If you were to educate the general public about "ontology," what do you expect them to learn, know or understand?

Thanks You!

- Questions?