



Focus of the OII-MTI project: the organization and performance of “DPSN’s”

What do they do?

They address a certain class of human problem: “**knowledge**-problems”,

To solve them requires acquiring **information** that is otherwise not available.

The goal is eventually to use the new information to extend and enhance those human capabilities that we refer to as “knowledge”.



Problem attributes – elements of a typology describing the “*tractability*” of problems for distribution approaches to solutions

- **Partitionable?** – integral vs *multi-part*
- **Decomposable?** – *separable* vs non-decomposable
- **Granularity?** – *fine grain* vs lumpy sub-tasks
- **Sub-task solution methods?** – *known* vs unknown
- **Error tolerance for answers?** – low vs substantial
- **Relative duration of solution cycles?** – fast vs slow
- **Recurrence of problem form** – frequent vs rare



Shared structural features of our DPSO cases:

- participants are **not continuously co-located**
- coordination is **IT-network supported**
- key interactions are of **large-group** type
- contributors are **not employees** of the DSPO
- coordination is **not centrally planned/managed**
- new information is **produced by one or more** of three procedures:
 - aggregation
 - permutation and recombination
 - cumulative incremental elaboration



Differentiating structural features of the cases

Self-governed collaborations [B&R Group III]:

- CERN's-ATLAS designing its architecture
- Mozilla fixing bugs in its *Firefox* browser
- “Simple Wikipedia” controlling the standard of readability
- “A Swarm of Angels” making an open content movies

Governed by intermediary platform-provider

One-sided platforms : [B&R Group II]:

- Information Aggregators: Digg's News, etc.
- Prediction Markets: [B&R Group I]:

Two-sided platforms: [B&R Group I]:

- Sermo -- Broadcast search (prize is peer esteem)
- Seriosity's Attent Game – Organization members gain attention
- InnoCentive – Broadcast search for inventions –cash prize



Dimensions of problem-resolution processes:

	1-sided platform		2-sided platform				
	<i>Group II</i>		<i>Group I</i>			<i>Group III</i>	
PROCESS TYPE:	Information Aggregators	Prediction Markets		Broadcast Search		Collaborative Peer-production	
EXAMPLE:	Digg News	Iowa Pol. Hollywood	Seriosity -Attent	Inno- Centive	Sermo	ATLAS, ASOA, FireFox	
Collectivity or Community	<i>Passive</i>	<i>Passive</i>	<i>Competitive</i>			<i>Associative</i>	<i>Cooperative</i>
Shared Purpose	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>Occasional</i>	<i>Yes</i>	
Info Controls	<i>Central</i>	<i>Central</i>	<i>Central</i>	<i>Central</i>	<i>Central</i>	<i>Self-Organized</i>	
Governance Modality	<i>Exit</i>	<i>Exit</i>	<i>Exit</i>	<i>Exit</i>	<i>Exit (&Voice)</i>	<i>Voice (& Exit)</i>	
Cycle Durations	<i>v.short</i>	<i>varied to long</i>	<i>short</i>	<i>moderate</i>	<i>short</i>	<i>varied to very long</i>	