



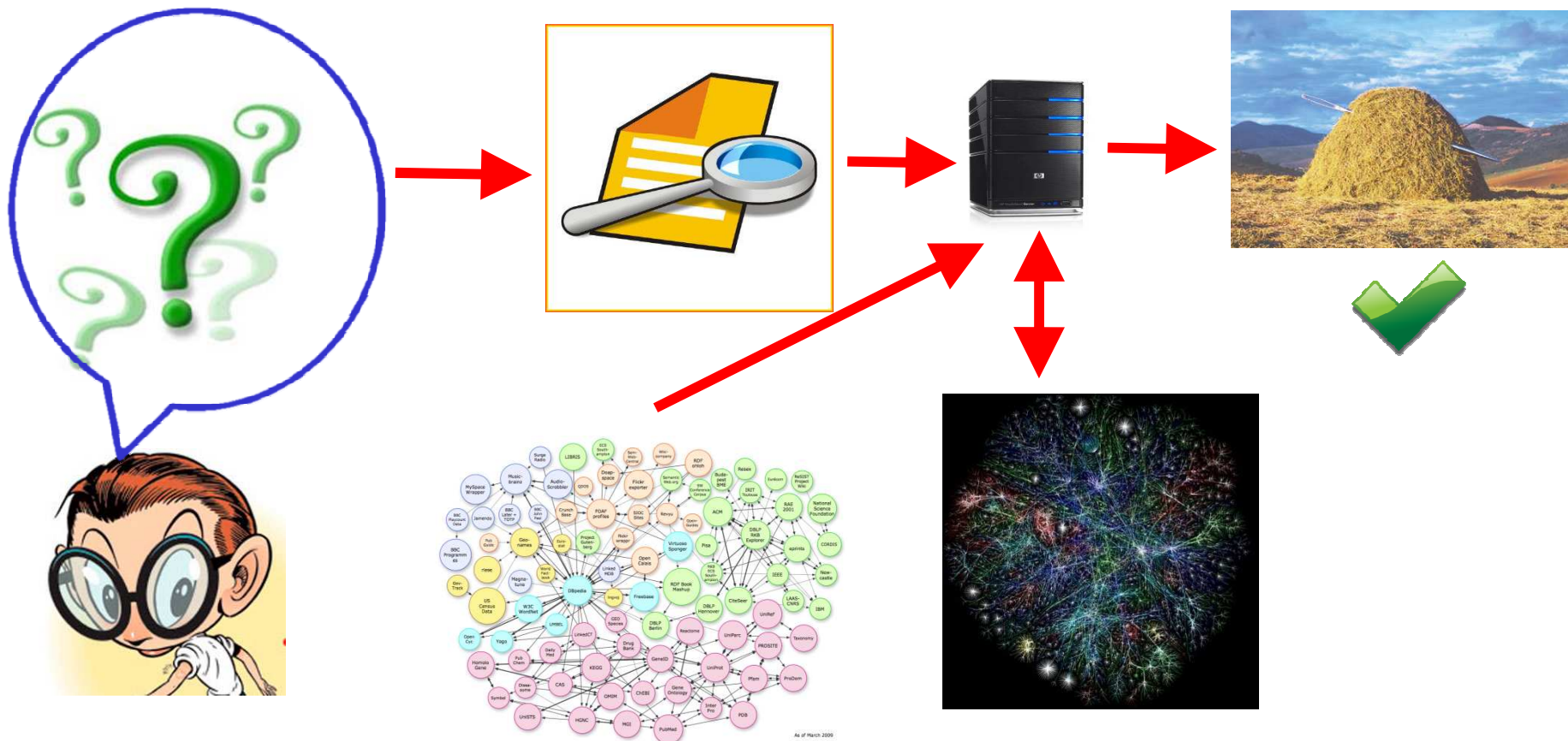
Search in the FI: SME and Citizens Perspectives

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Search Definition

- ❑ 'Best' use of available (human or machine generated) knowledge to provide the user with meaningful information even if his/her request is poorly formulated and typically unanticipated by the system.



Search: a cross-disciplinary topic

Search involves a number of different disciplines within the FI, including:

- ❑ **FCNs:** a) content as the main ingredient of media, and b), networks in terms of improving the user's experience and satisfaction;
- ❑ **IoT:** resource and information discovery from a sea of heterogeneous devices and sensors;
- ❑ **IoS:** service discovery approaches range from keyword search over service directories to semantic approaches which delineate between a service capability (what the service does), non-functional properties, and descriptions of service behaviour.

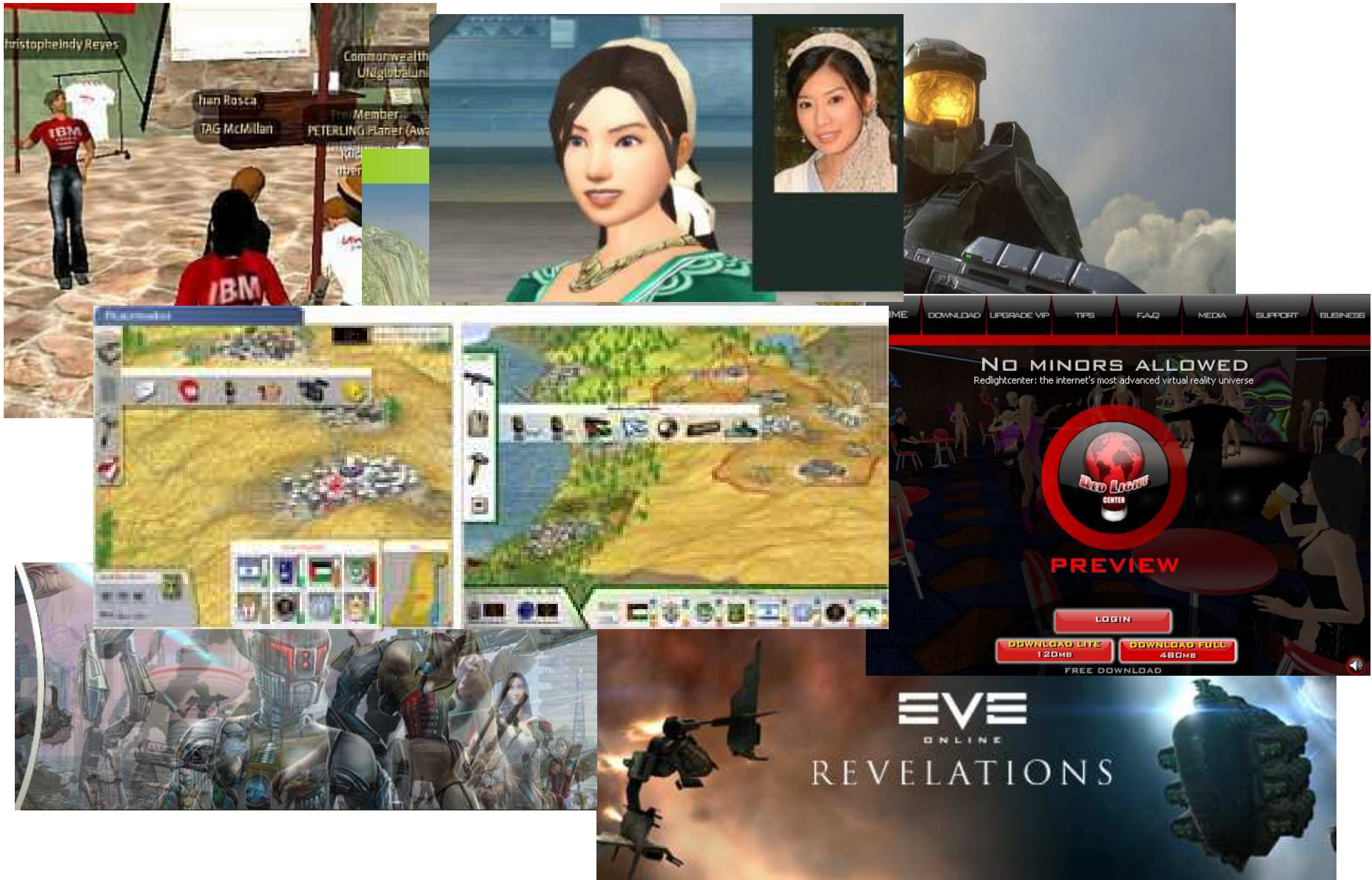
FIA Stockholm objective

**Towards common understanding
between the different communities**

Heterogeneity & Diversity	Human Factors	Real Time Issues	Security & Privacy	Evaluation & Benchmarking
<p>Q1.1: How do we best support the formulation of search queries over possibly rich FI artefacts, over a set of different types of devices and modalities?</p> <p>Q1.2: Given the Polymorphic facets of the Internet how a SE should look like? Are the open, federated search services a/the solution</p> <p>Q1.3: Do we need specific infrastructures and representations to support search by agents?</p> <p>Q1.4: Can we chain (interoperate) search and discovery engines?</p>	<p>Q2.1: how do we support discovery using social/emotional cues, individual vs group (is the group an average over the individuals?).</p> <p>Q2.2: How do we best take into account the diversity of the user community?</p> <p>Q2.3: How do we address ranking, user feedback about the relevance of search results, and quality of the recovered information?</p>	<p>Q3.1: How do we manage service & discovery in the FI in real-time when everything (producers, consumers, networks) is recomposing and moving in real-time?</p> <p>Q3.2: How do we manage the visibility of services in real-time?</p> <p>Q3.3: How do balance visibility and real-time requirements?</p> <p>Q3.4: How do we manage changing relationships?</p> <p>Q3.5: Should we discern between different types of urgency?</p>	<p>Q4.1: How do we manage privacy, trust and security within search?</p>	<p>Q5.1: How can we evaluate our SEs in FIRE facilities?</p>

Main Issue for FIA Valencia
Search in the FI: SME and Citizens
Perspectives

Socialisation



New (Immersive) Media



New communication experiences



Emerging applications

Who Citysense™ Live San Francisco Nightlife Activity

- How busy
- See the
- Find c
- Find c

Citysense was built to show you where the action is, right now.

Using a billion points of GPS and WiFi positioning data from the last few years – plus real-time feeds – Citysense sees S.F. from above and puts the top live hotspots in your hand. You don't even need to sign up, just go to citysense.com on your BlackBerry, download, and open.

BlackBerry



See overall activity & top hotspots

Just look at the map and you can see if it's a good night to go out. The city is 21% busier than normal for right now? Let's go. But where to? Check out the top hotspots in real-time and head out.

What's at hotspot #1?

Click over to Yelp or Google and find out what's going on at the #1 hotspot: Bars? Clubs? Restaurants? Then check out what's at #2.

<http://www.citysense.com>

Emerging applications

The screenshot displays a Windows Internet Explorer browser window. The address bar shows the URL <http://www.isearch-project.eu/isearch/search/test1.php?categoryId=Aircrafts>. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar contains various icons for search, share, and navigation. The main content area shows a search engine interface with a grid of airplane models. Each model is accompanied by a caption and a '3D' icon. The models shown are:

- C_cBmysliwicz (Find Similar)
- C_c2-plat (Find Similar)
- C_c51b (Find Similar)
- C_cAcrotwin (Find Similar)
- C_cAirplane14 (Find Similar)
- C_cAirplane101 (Find Similar)

An inset window is open, showing a detailed 3D view of a white airplane model. The inset window's address bar shows the URL http://www.isearch-project.eu/isearch/search/models/C_cBmysliwicz/. The inset window includes a toolbar with navigation controls (Zoom, Pan, Spin, Fit) and a 'PARALLEL GRAPHICS' logo. The status bar at the bottom of the inset window shows 'Internet' and '100%' zoom.

The main browser window's status bar shows the URL http://www.isearch-project.eu/isearch/search/test1.php?mid=C_cBmysliwicz&h3D=1&h2D=2&hAu=0&start=0&count=0&categoryId=Aircraft. The Windows taskbar at the bottom shows the Start button and several open applications: SquirrelMail 1..., Search Engin..., http://www.is..., Inbox - Micros..., RE: Reminder..., FINAL, Microsoft Pow..., and EN. The system tray shows the time as 8:50 pm.

Session objectives

- ❑ Identify user needs and unsolved challenges that are important and will require search technologies for solutions
- ❑ Identify potential FI related applications that require interactive forms of ICT collaboration among users and providers

Agenda

- ❑ Search in Content/Media: State-of-the-art and future challenges in multimedia search, **Francois Bourdoncle, Exalead**
- ❑ Search in multimedia health records, **Martin Huber, Siemens**
- ❑ Search and mine, with hindsight, **Julien Masanes, European Internet Archives**
- ❑ Green ICT challenges: use-cases and related search technologies, **Daniel Barthelemy, AMAP**
- ❑ Smart cities and search applications, **Cedric Ulmer, SAP**

Panel

**Moderators: John Domingue, The Open
University & Nozha Boujemaa, INRIA**

Questions for the panellists (1/2)

- ❑ 1. What search technologies can help citizens and answer urgent needs?
- ❑ 2. What are the main search requirements from an end-user point of view and from a (search service) provider point of view?
- ❑ 3. Why is search so important to everyday Internet access in the context of citizen's everyday life and what needs fixing within the next 5-10 years?
- ❑ 4. Will application domains or socio-economic considerations deliver the right requirements for the FI, or can it be designed without any application in mind?

Questions for the panellists (2/2)

- ❑ 5. What research challenges associated to search in the specific vertical domain are the most significant?
- ❑ 6. What should an architecture for the FI necessarily contain in order to be able to make the search applications of the future?
- ❑ 7. How can we test and validate the Future Internet core platform/components/architecture? How search is related to this?
- ❑ 8. Your ideas, thoughts or comments on how to progress through FIA and the EU projects in order to make a lasting impact on Future Internet search?