User scenarios and user requirements from media professionals

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Index

1. What is the profile CCMA?
2. Importance of user requirements
3. Process followed at SEMEDIA
4. URs from media professionals
5. Brief demo

1. CCMA Profile

- **Who are we?**
  - We are **Broadcasters**: 5 TV & 4 radio channels

  - CCMA was founded on May 30, **1983**
  - Our hallmarks: quality, public service
  - TV3 and Catalonia Radio are **Catalonia's main communication media**: TV3 is the most watched TV by the country's citizens.
  - We also publish on other media: **DTT**, PDAs, podcast, **internet**, **mobile phones**, etc

1. CCMA Profile

- **ICT department is involved in 2 R&D projects:**
  - **SEMEDIA**

  - FP6, STREP, 2007-2009
  - Objective: To develop tools that improve access, search and retrieval of media content in 3 different environment

1. CCMA Profile

- **ICT department is involved in 2 R&D projects:**
  - **I3MEDIA**

  - Co-Founded by CDTI, 2007-2010
  - Objective: To investigate and develop technologies that will allow automatic intelligent media creation and management

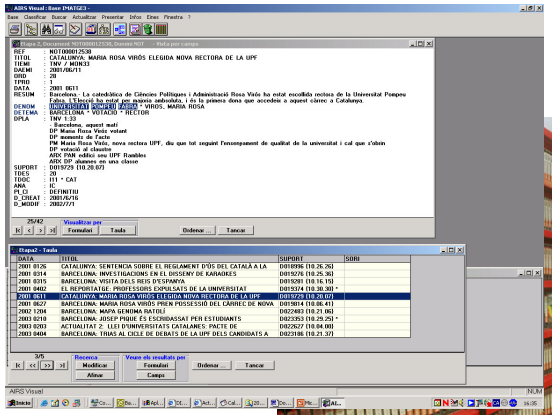
1. CCMA Profile

- **Our role in the project:**
  1. No Basic Research.
  2. Provide **Data set**
  3. Lead **user requirements** and scenarios. Industrial requirements.
  4. We **integrate** others technologies, and use our MAM as a **prototype bed**
  5. **Test and feedback** from profesional and end users

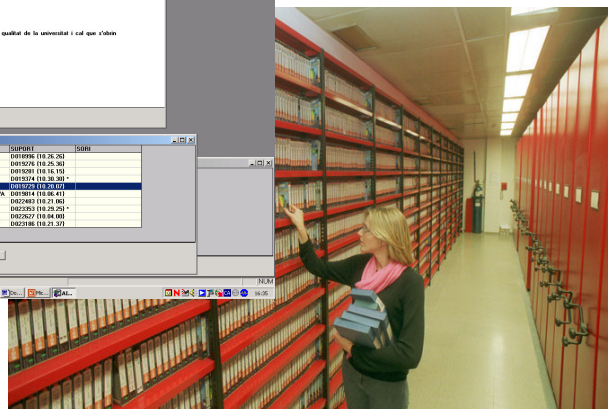
1. CCMA Profile

- **Why R+D projects?**
  - Face research with less risk and in an open an collaborative way
  - Get in touch with SOA
  - Mainly, **we want to improve our M.A.M.!!!**
    - Competitivity has increased in **Broadcast** environment:
      - Number of TV channels
      - Changes in contents consumption
    - **Efficiency is a must**

1. CCMA Profile



From videotapes archive, text database ...



to digital archive, online accessible.

1. CCMA Profile

Digition M.A.M. in numbers:

- Operating since 2003
- >100.000 digitized hours
- 3 petabytes of robot storage capacity
- 1,850 users
- 27,714 annual broadcast hours
- 53% in-house production
- Integrates all broadcast needs: ingest, playout, editing, archiving, assets management

2. Importance of User Requirements

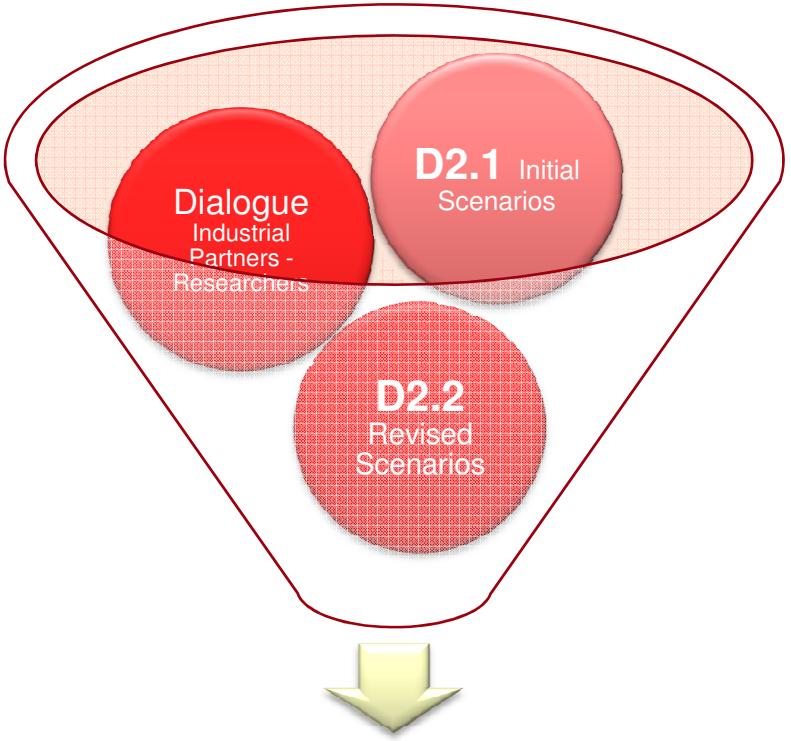
- There is a **gap** between **researchers** and **industrial** partners needs & objectives
- Industrial partners have pressure on P&L
- Innovation (product, process, mkt, business model) is necessary for them to survive
- User requirements **must be present in the whole lifecycle** of innovation

3. Process followed at SEMEDIA

- One year process to understand:
  - the 3 scenarios of use
  - their users' requirements

- 634 + 1.338 questionnaires
- Also used: focus groups, interviews, observation, external group meetings
- BBC, S&M, Yahoo! & CCMA

- Public version available at www.semedia.org



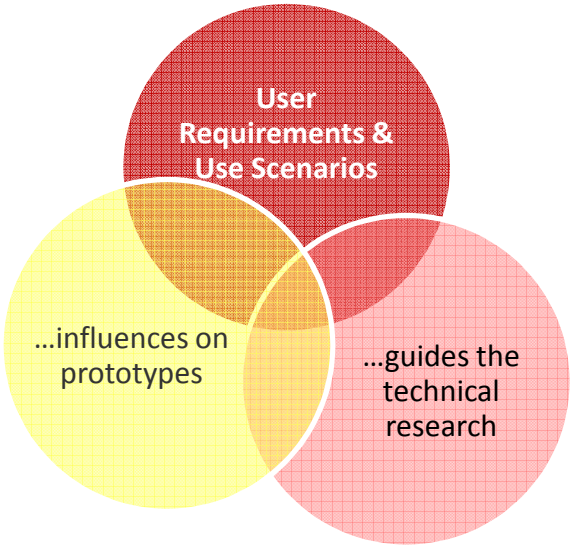
Results were…

3. Process followed at SEMEDIA

- **Initial results were:**
  - We were able to understand a wide range of industry practices
  - Clarified the 3 scenarios for media search
  - **Selected the 15 technologies to develop**
  - Identified users' main requirements
- **And then we asked:**
  - How can we help you to do your work more efficiently? An with more quality?
  - What are your typical daily tasks? **What do you need** exactly?
  - How would you like new tools to look like?
  - Others: **time-saving, usability, usefulness**

3. Process followed at SEMEDIA

- Guiding technical research by means of UR should be an iterative process
- Best way to assure it:
  1. Establish a group of test users (in our case, 9 professionals from Archives, 5 from News, and 2 from Sports Department)
  2. Integrate technologies
  3. Perform tests
  4. Analyze results
  5. Give feedback to researchers



4. URs from media professionals

- **Some conclusions:**
  - Technologies are highly welcomed by users
  - **Need to be integrated in own systems, scalable, and speedy or no success at all**
  - Media content labelling is a labour intensive, time consuming process**: automatic annotation of metadata is a priority**
  - Some technologies are a doubt and have to demonstrate their usefulness in prototypes
  - Use cases and user requirements are **dynamic** (users skills evolve)

4. URs from media professionals

- For the future practices, common research interests can be identified:

Computer vision (+audio):

Visual and similarity search, copy detection, **event detection, Face/Audio**/Logo/ Product **recognition**

Text analysis:

Controlled vocabularies, **semi-automated indexing**, text clouds, collaborative search, **UGC**

User interfaces:

Clustering, Ambient Displays, Timelines, User profiling, **Fast & Intuitive Navigation, effective ranking**

Production automation:

Audit trail, **Federated search, Metadata generation**

4. URs from media professionals

As a summary, when developing multimedia search systems, engines and services, you should:

- **Be ambitious! Think big, you are doing research!**
- **However, do not use system-oriented benchmarking (no guarantee at all)**
- **Instead, involve users from the very beginning:**
  - **Test is a must. The sooner, the better!**
  - **Use large datasets**
  - **Understand end customers and business strategies and needs from the beginning**
  - **Try to think ahead: accuracy, scalability, speed, usability, modularity.**
  - **Users tolerate errors and imperfection quite well, though!**

5. Brief demo

Time for a short demo...

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