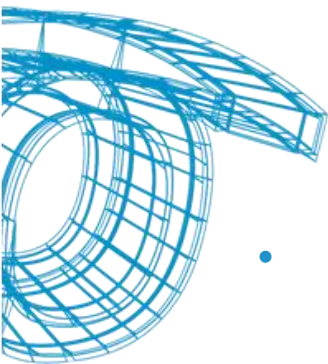


# Vicomtech

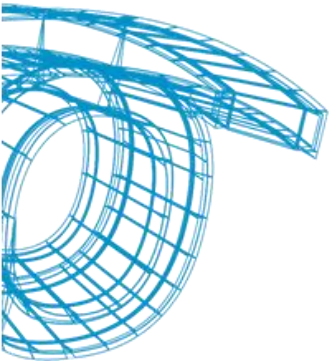


- Visual Communication and Interaction Technologies Centre) is an applied research centre for Interactive Computer Graphics and Multimedia
  - Non-profit association
  - More than 80 researches (23% PhD)
  - 47 publications in 2009 (14 candidates for ISI-Citation Index)
  - 3 patents registered in 2009
- Vicomtech is closely related with the local audiovisual industry through the Basque Audiovisual cluster and by developing R&D projects with the local companies
- Vicomtech is actively participating in NEM strategic agendas at local, national and European level

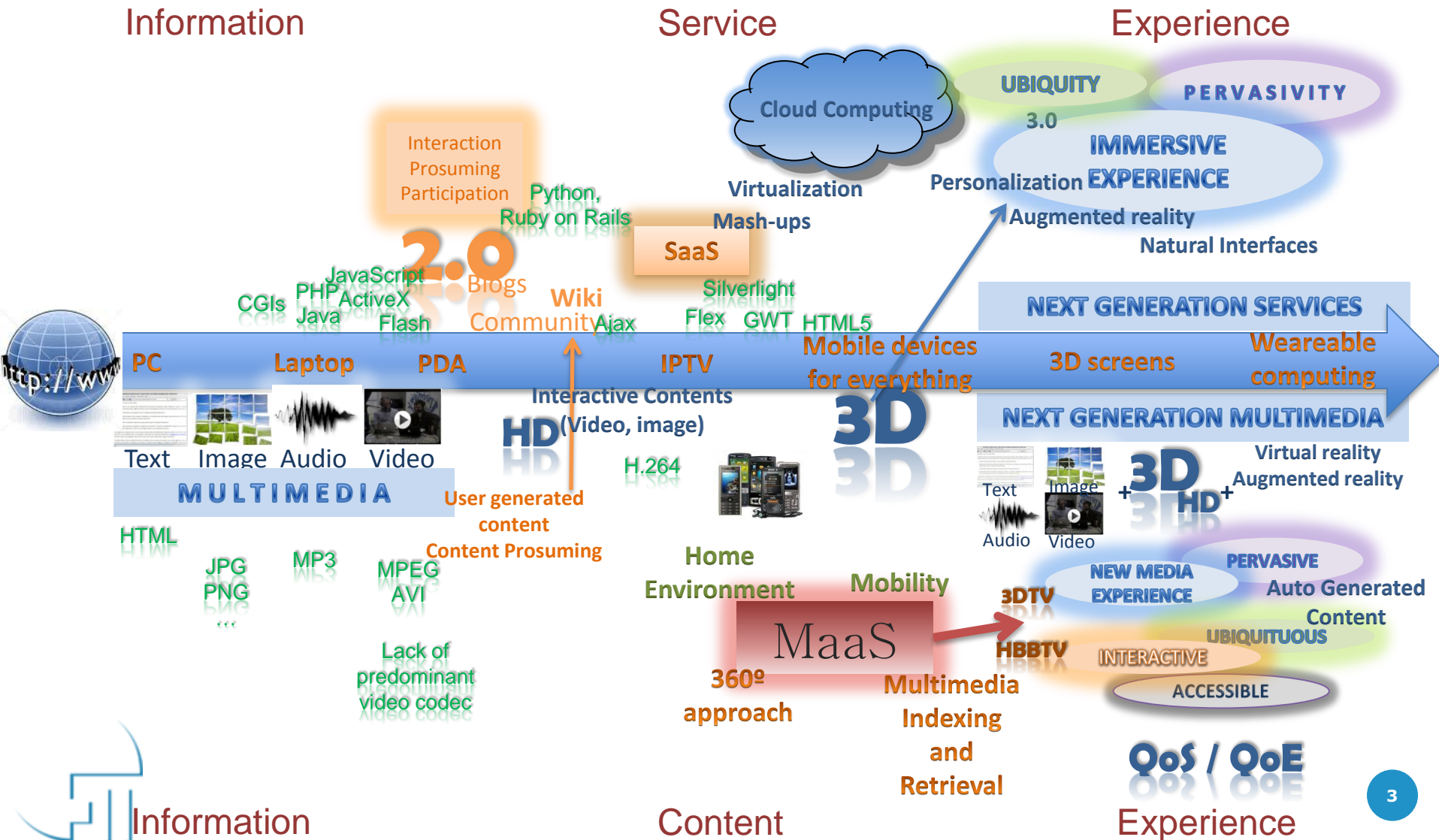


# Introduction

- \* Internet has evolved from being a worldwide information repository to a global *content & service cosmos*.
  - Every user can access or provide any kind of content or service
- \* Key factors of current situation
  - Mobility: Contents and services can be accessed from anywhere and... they also can be **provided from everywhere**
    - This is a real revolution from the content creation point of view
  - Services have evolved to a higher level of abstraction
    - SaaS (Software as a Service) philosophy, virtualization, cloud computing, etc. have introduced strong advantages in:
      - Interoperability and service reusability
      - More independence from hardware infrastructures (higher scalability and better maintenance and updating features)
      - Multi-device and context-aware service development
    - New massive applications and successful business models have been created from this paradigm.
- \* Contents still lack a framework to allow similar features and foster new business models across the different value chains that are appearing in the *IP cosmos*.

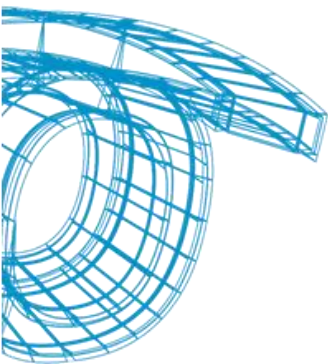


# Evolution of contents & services



## Questions (I)

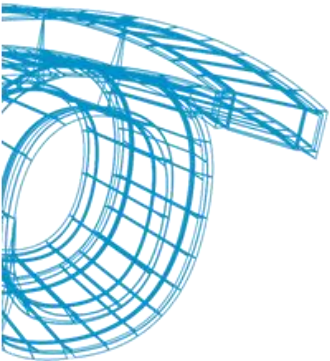
- \* Q1: Representative and appropriate use case and scenario for large-scale experimentation with the *Future Internet* platform to be built starting from 2013
  - Should include the audiovisual value chain and multimedia agents.
    - Content producers, broadcasters, net. operators, content providers, technology providers, R&D and academic groups, advertising companies, standardization bodies, etc.
  - Our proposal: **MaaS scenario**. A new framework to wrap contents as services which will be interoperable and will allow content composition by combining different MaaS elements.
    - Every content could be generated, managed, combined and consumed as a service.
  - Use case: Hybrid Multimedia Content for Professional, Home and Mobile domains
    - Content generated as a combination of stored audiovisual assets, dynamically generated contents, broadcast flows, prosumers activities, etc. A 3D “canvas” will contain all the elements and the delivery will be personalized and context aware, depending on user preferences, network status, end device properties...
    - Content management, indexing and retrieval will semantically combine individual assets.
    - Each individual multimedia element will be traceable along its lifecycle



## Questions (II)

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- \* Q2: Innovative Internet functionalities and technologies
  - High bandwidth and low latency networks for massive content distributions over IP networks
  - New service oriented technologies, protocols, transmission methods
  - Novel content definition and modeling languages and specifications to enable the MaaS paradigm
  - Novel content encoding and encapsulation formats to include all multimedia type of contents, as well as interactivity
  - Content indexing, search & retrieval technologies
- \* Q3: Core technology platform to deliver to support Future Internet usage areas and scenarios
  - A common framework to combine different types of multimedia assets (text, pictures, diagrams/charts, audio, video, 3D scenarios, 3D elements,...)
  - New paradigms and tools to enable interaction with content
  - Standard metadata structures for generic content. Tools for indexing and retrieval
    - Open solutions for DRM
  - Device independent specifications regarding to the content
  - Context aware specifications regarding to the reproduction



## Questions (III)

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- \* Q4: Experimentation environment for broad large scale testing.
  - Pan-european distributed HW facilities for infrastructure experimentation
    - Broadband, low-latency experimentation networks with multicasting features and P2P resources for collaborative content aggregation and composition.
  - Context management resources, indexing, retrieval,...
  - Content generation platforms
    - Traditional production / Prosuming
    - Novel content creation methods including 3D (VR/AR), immersive and interactive contents
  - Web, TV and Mobile technologies for content reproduction
    - Adaption layers, MaaS access, immersive and interactive devices...
  
- \* Q5: Role of Vicomtech in the FI PPP usage areas to ensure an appropriate application driven approach.
  - Vicomtech has a deep experience in S&T activities for multimedia content creation and management
    - Vicomtech can contribute to the FI PPP defining scenario specifications and developing tools for content generation and management.

