CAR Centre d'Alt Rendiment

7th ASPC forum
International Forum on Elite Sport

INSEP, Institut National du Sport, de l'Expertise et de la Performance
Wednesday August 31st , 2011 - PARIS - FRANCE

Association of Sport Performance Centres
ASPC

Real Time Training Model on a WiFi venue. Coach / Athlete Interaction

Josep Escoda
IT Manager
High Perfomance Center (CAR Sant Cugat)
Barcelona, SPAIN

Multi-Sport Venue - High Performance Training Center of Catalonia (CAR) Sant Cugat

A new technological approach in Sports Facilities

24.000 m2

€ 36 million

Sant Cugat, 2009-2010-2011

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Thanks to the efforts of the Governing Bodies

Generalitat de Catalunya
Departament de la Presidència
Secretaria General de l'Esport

CSD Consejo Superior de Deportes

Objective of the Multi-Sport Venue

-To offer coaches and sport technicians a state-of-the-art venue with world reference functionalities and useful technology.

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Training in High Performance demand a high quality personalized process

Multi-Sport Venue Principles:

- Balance Health vs Performance
- Modularity
- Integration
- Non Invasive
- Instant Feedback
- Control
- Quality
- Ecology

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Multi-Sport Venue Principles:

- Balance Health vs Performance
  Performance in focus Health is the way
- Modularity
  Grow on your needs with commitment
- Integration
  Simplify complexity. Unify the process
- Non Invasive
  Respect the freedom of sport
- Instant Feedback
  Return the relevant info to help improvement

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Multi-Sport Venue Principles:

- Control

  Where you are where you go

- Quality

  Consistency bring back the good results

- Ecology

  Enviroment is a common concern

Multi-Sport Venue Technology Requirements

- TTU - Training Units
  - Coach / Athlete / Sport Facilty / Tech Equipment
  - Differs between specific events

- TTU - Training Units Caracteritzation
  - Technologically adapted sport equipment
  - Information Systems based on IP
  - Continuos multidimensional recording
  - Permanent Biofeedback
  - Wireless based
    - (Gathering / Display / Control)

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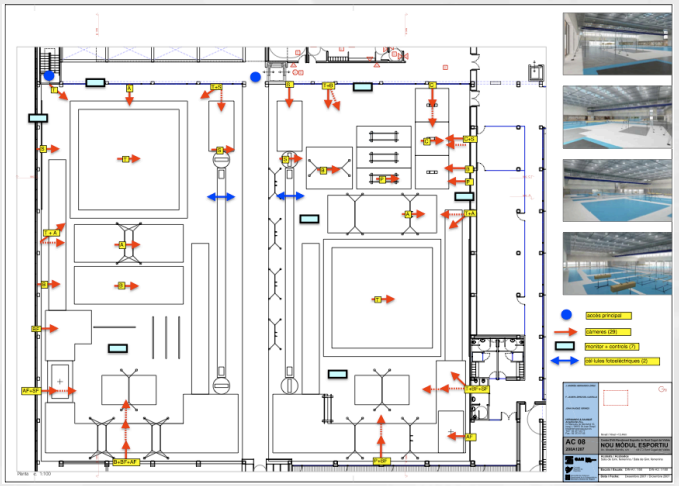
New Tools on Design

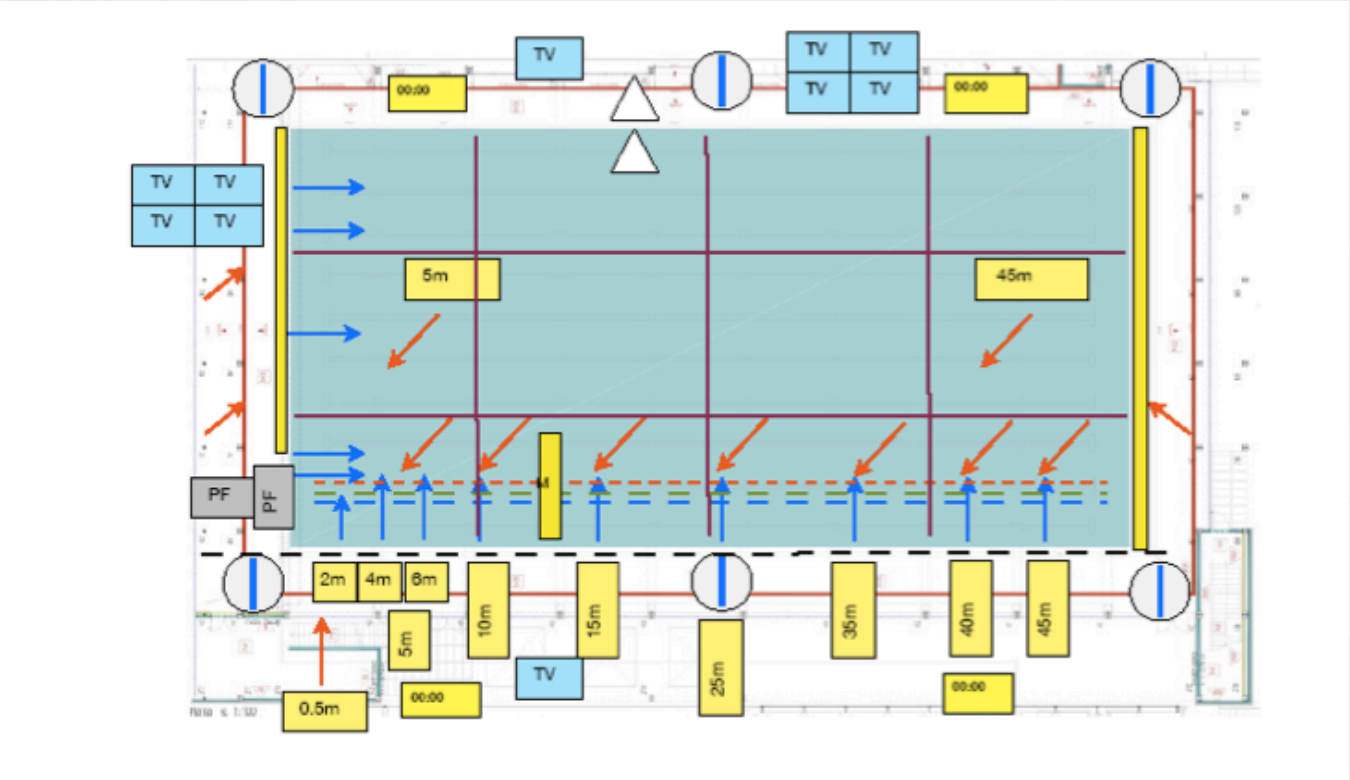
- Interactive Visualitzation on 3D to help on objects location

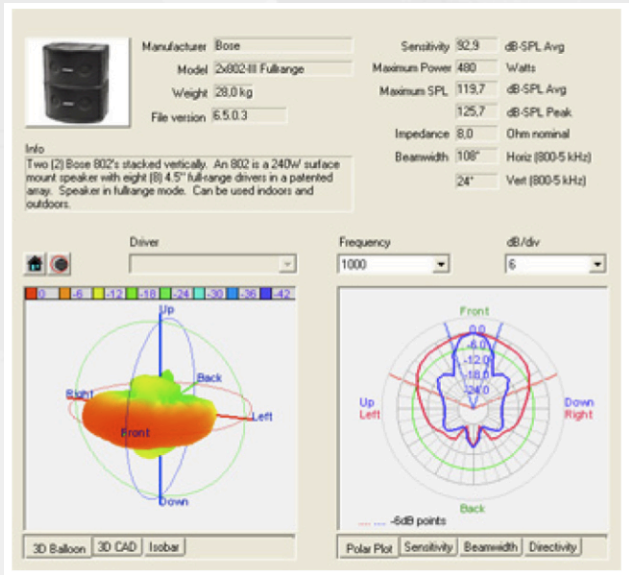


To setup 200 HD Cams
and Videowalls and
discuss with coaches

New Tools in Digital Audio – Quality of Communications

- Electroacoustic analysis of the facility by BOSE





New Tools in Digital Audio

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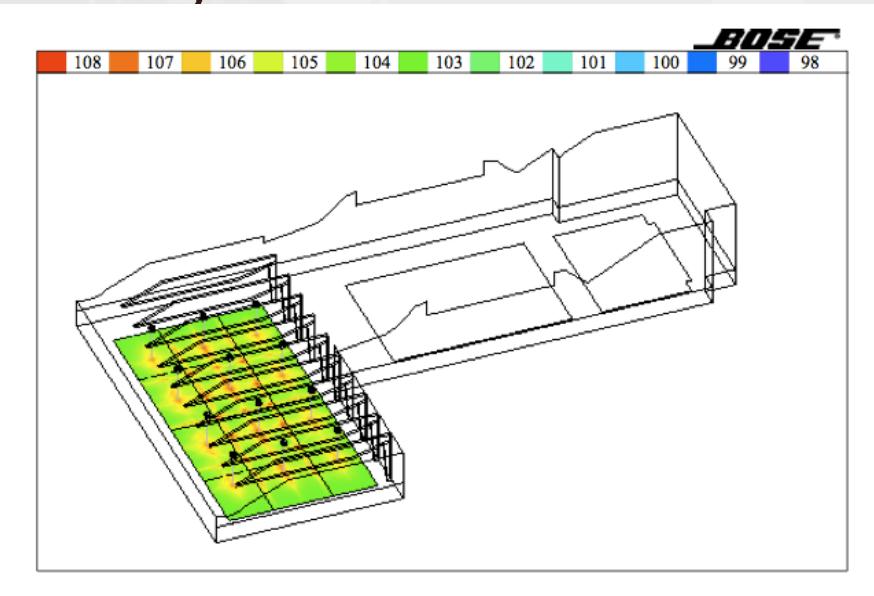
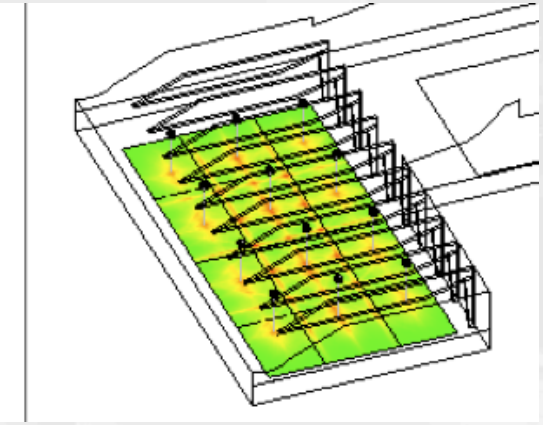


Underwater sound is the most challenging



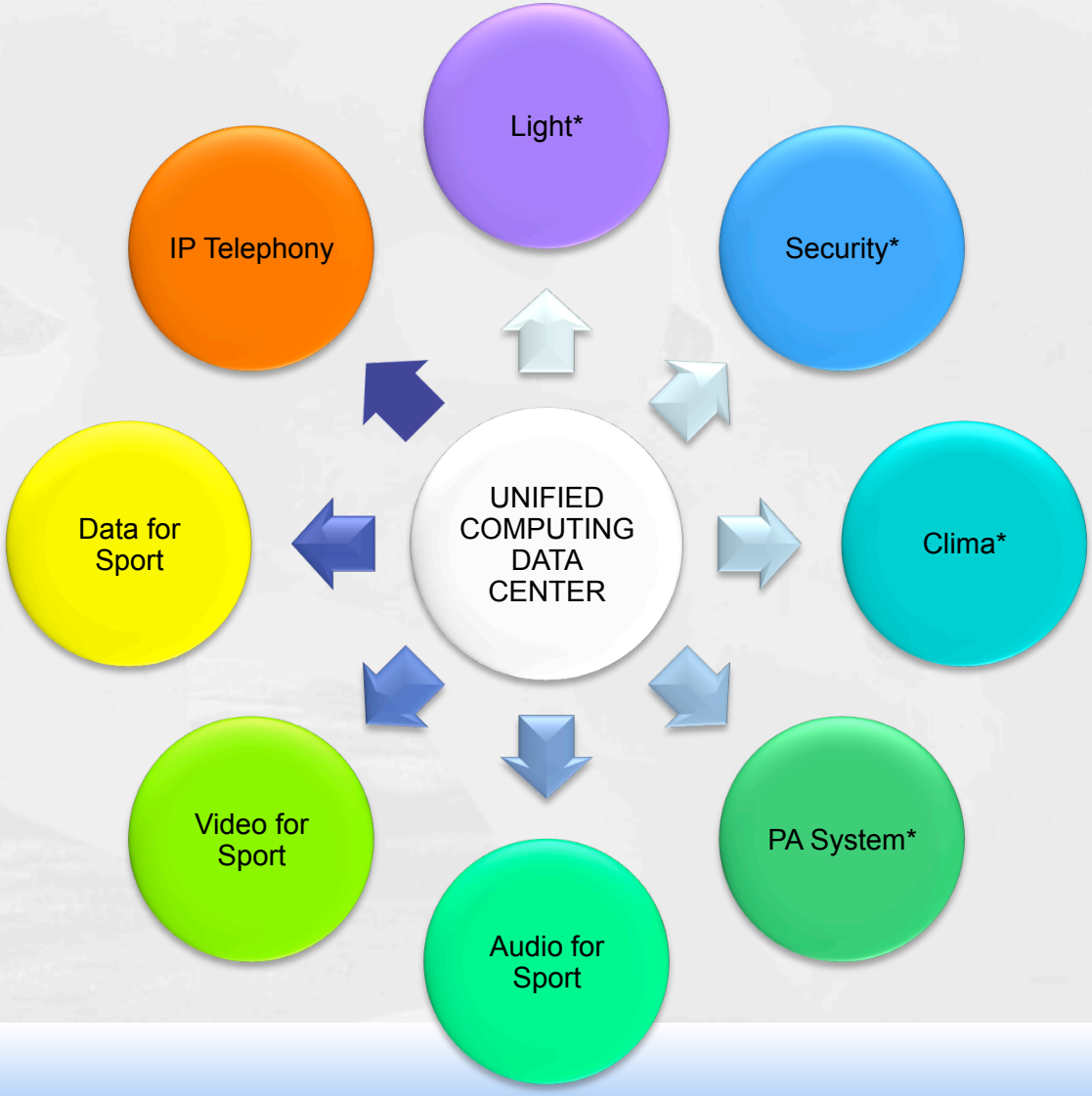
Multichannel audio
Under IP
Based on Surround
technologies

INTEGRATED CONTROL MANAGEMENT

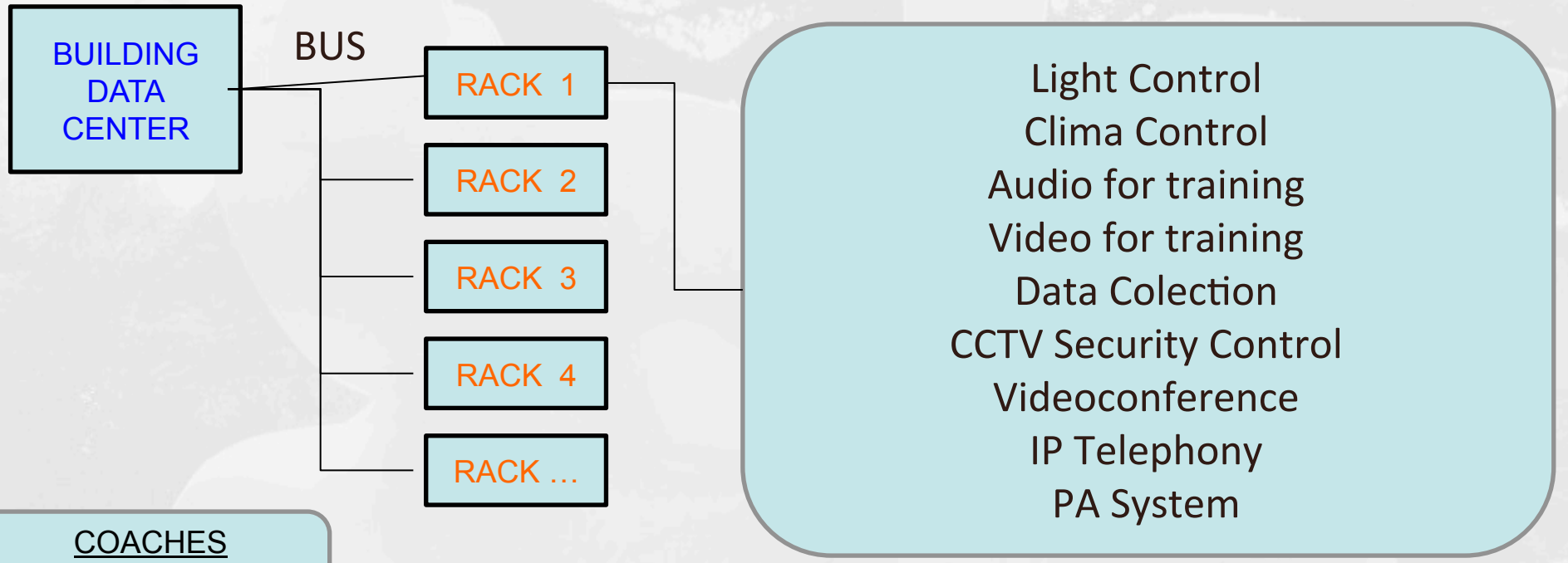
A NEW ERA OF CONTROL

- Energetic Expenditure
- Management Time
+ Time for ATHLETES
+ Performance

Integration under IP Standards



Areas / Services / Access



COACHES
- Audio & Video
-- Own Athletes Data

ATHLETES
-Music Selection
- Own Personal data

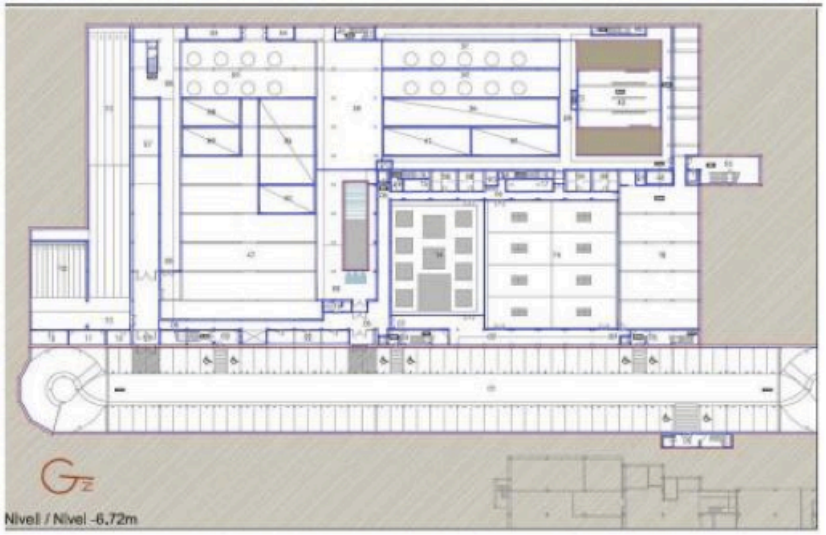
SCIENCE STAFF
- A/V/D Control

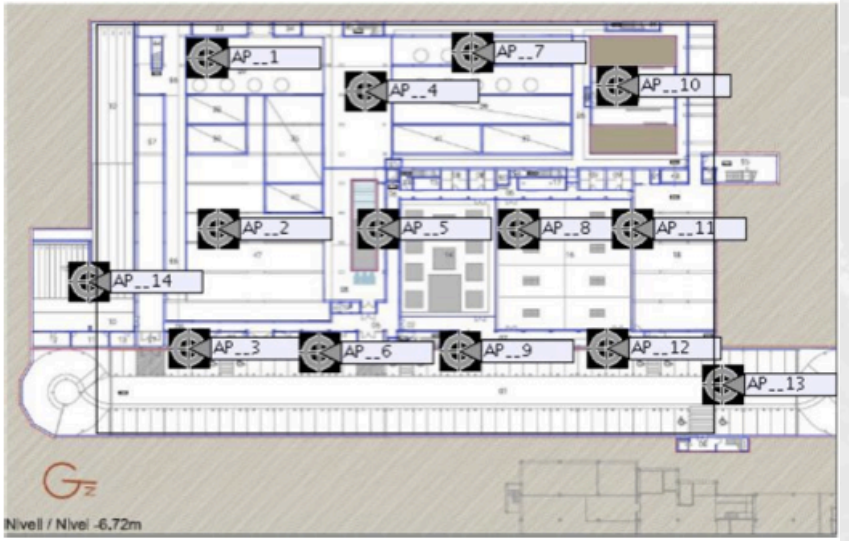
MAINTENENCE
- Light Control
- Clima Control

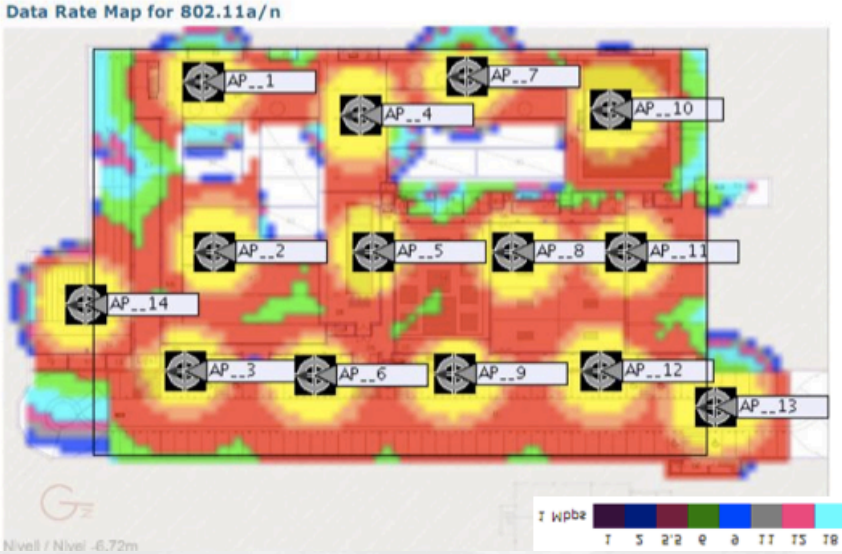
SECURITY
- CCTV Control
- Control Access

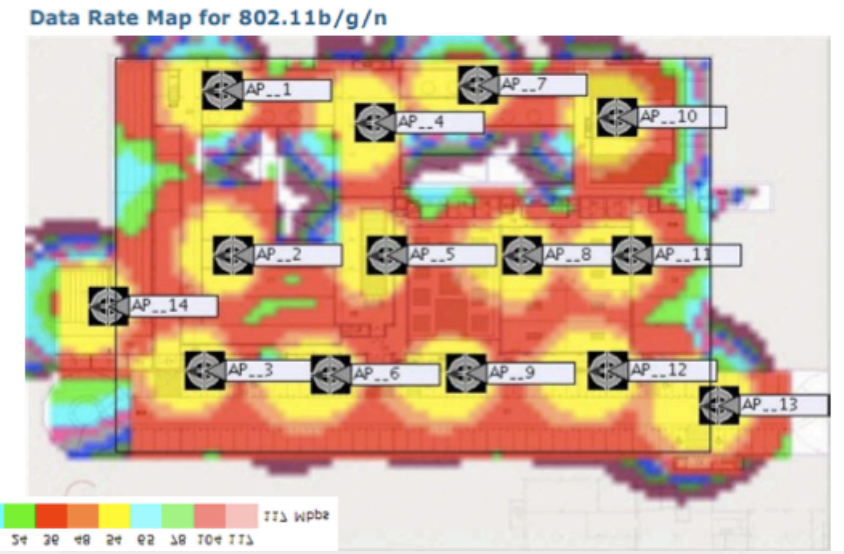
BOARD
- Overall Control

100% Wifi Coverage





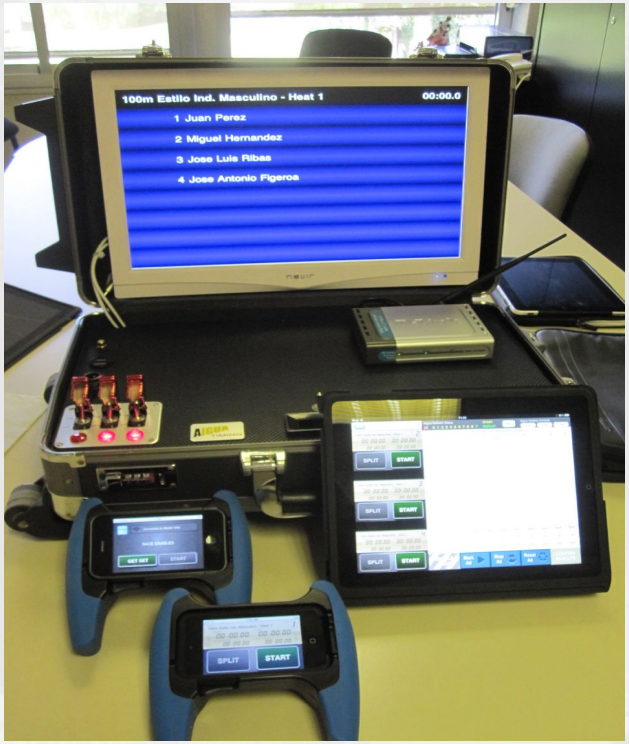




Data + Voice + RFID

Wifi Aplications

Wireless Swimming stopwaching



Wifi Aplications

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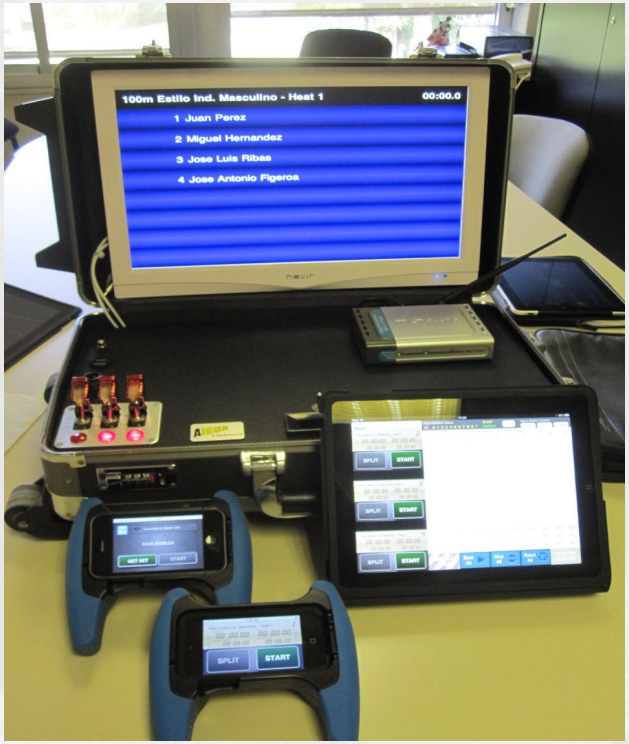
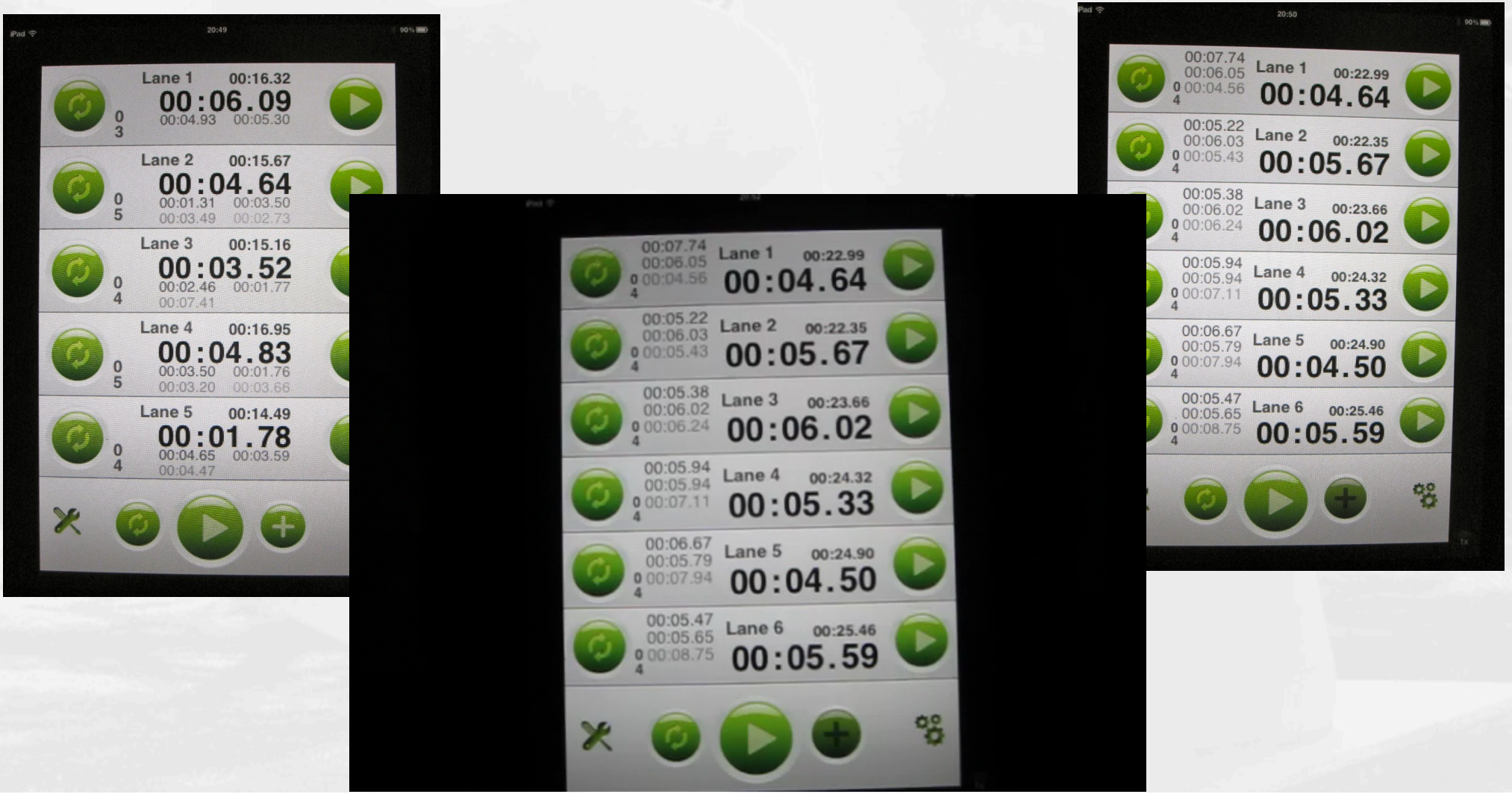


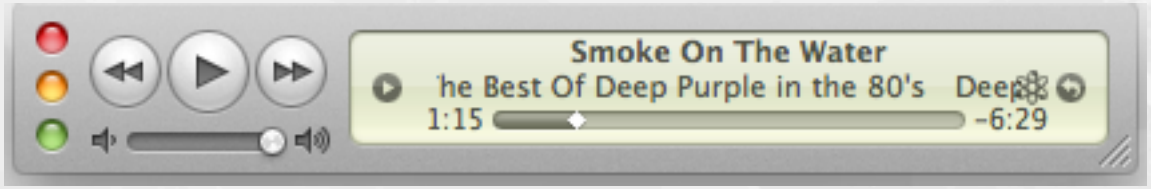
Wifi Aplications

Stopwaching on the fly for coaches



Wifi Aplications

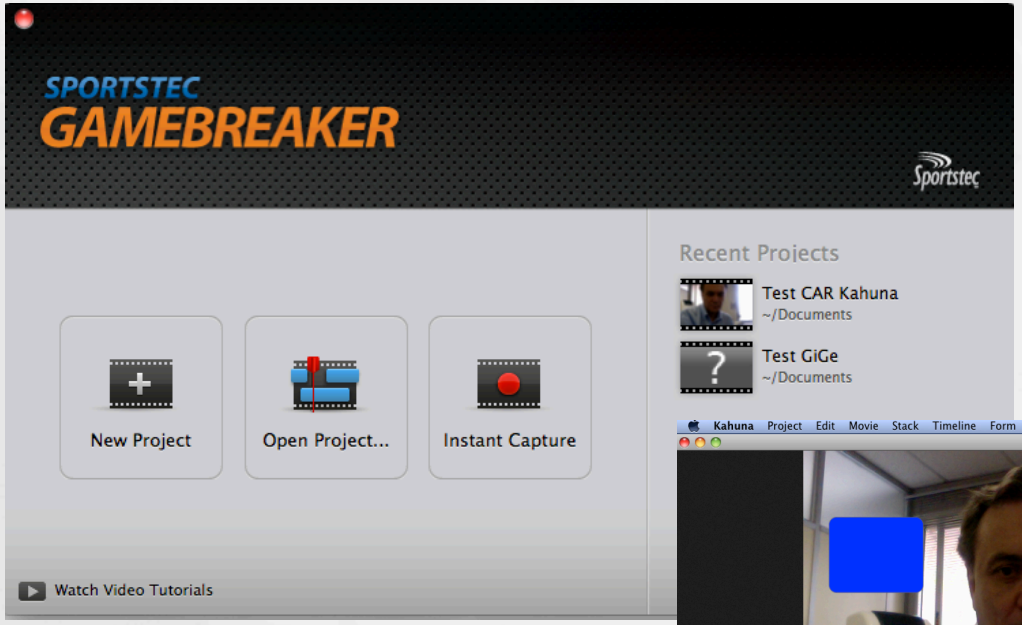
iTunes Library Music on demand



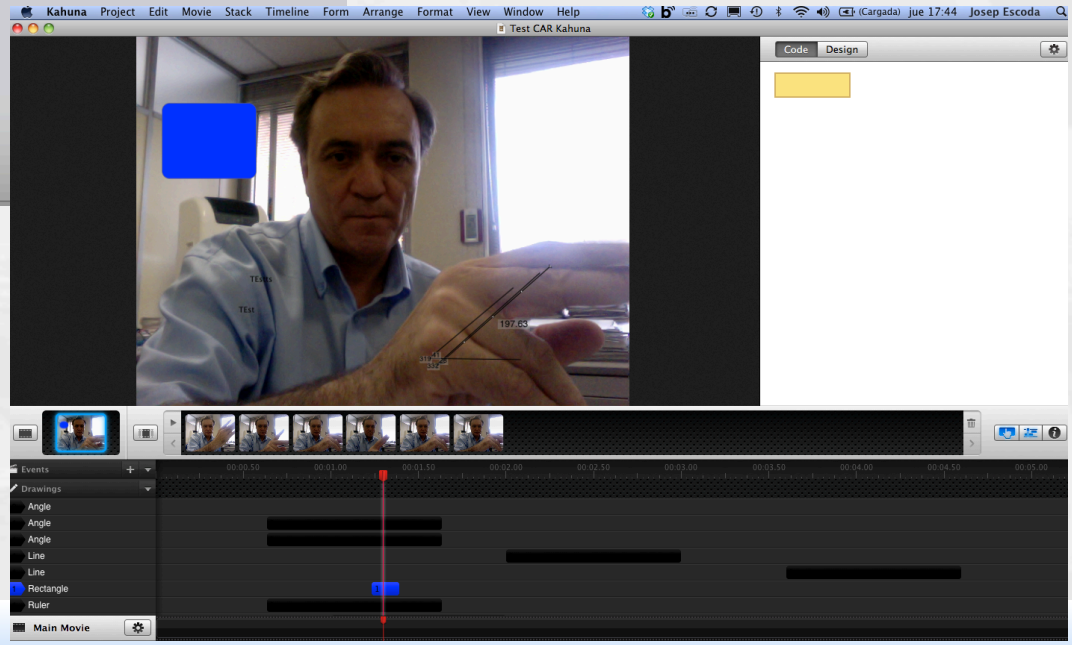
Coaches and athletes select their preferences under requirements of the training session and privileges

Wifi Aplications

Last version of Software Analysis supporting GiGe Giga Ethernet Industry Standard Cameras



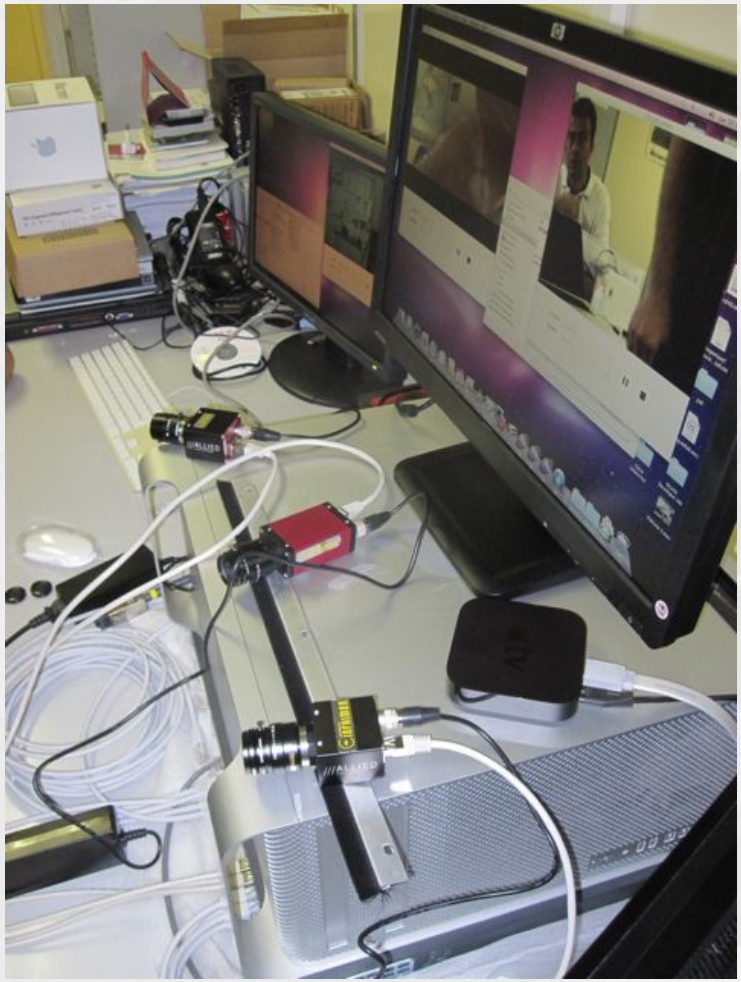
- High Definition
- High Speed
- Synced
- Power over Ethernet
- Low cost & Small size



Remote controlled on iPhones or iPads

Wifi Aplications

Pilot test with GiGe Giga ethernet Cameras



Lab testing pushing Network capacity at 1G and 10G

Wifi Aplications

SportsCode

The state of the art in performance analysis.

European Commission Grant Project

EUROPEAN COMMISSION
Community research

SEVENTH FRAMEWORK PROGRAMME

EXPERIMEDIA PROJECT

Project Number [1]	287966	Project Acronym [2]	EXPERIMEDIA

One form per project

General information

Project title [3]	EXPERiments in live social and networked MEDIA experiences
Starting date [4]	01/09/2011
Duration in months [5]	36
Call (part) identifier [6]	FP7-ICT-2011-7
Free keywords [8]	FIRE testbed facilities, social and networked media experiments, large scale user trials, smart venues, live events, social networks, conent product and delivery, 3D internet, augmented reality

European Commission Grant Project

CAR Centre d'Alt Rendiment

EUROPEAN COMMISSION
Community research

SEVENTH FRAMEWORK PROGRAMME

EXPERIMEDIA PROJECT

Atos Origin
WORLDWIDE IT PARTNER

Offering collective and participative experiences to real-world and online communities is at the heart of the Future Media Internet (FMI) and will form an essential part of entertainment, collaborative working, education, product and service innovation and advertising. Communities include 100's of professionals, 10s of thousands at live public events and millions online. Current FIRE testbeds fail to meet needs of FMI researchers in terms of testbed resources, let alone support such experimentation in the real-world where insights into the behaviour of Future Internet systems are closer to reality. Extensive research into testbeds is needed to support the R&D of large-scale social and networked media systems as well as to understand and manage complex communities and ecosystems.

EXPERIMEDIA will develop and operate a unique facility that offers researchers what they need for large-scale FMI experiments. Testbed technologies will include user generated and high quality content management and delivery, a 3D Internet platform and tools for 3D reconstruction from live events, aug-mented reality platform, tools for integration of social networks, access technologies and a range of net-work connectivity options. Testbed management services will provision, control and monitor resources by SLAs offering QoS guarantees.

Experiments will be conducted in the real-world at testbeds offering live events and real-world communi-ties to accelerate the adoption of the FMI. Testbeds include Schladming Ski Resort, Multi-Sport High Performance Center of Catalonia, Foundation for the Hellenic World and 3D Innovation Living Lab. Ex-periments will explore new forms of social interaction and rich media experiences considering the de-mands of online and real-world communities. The variety of testbeds will ensure generality of our ap-proach. A Competence Centre will promote sustainable access to venues for FMI experiments and en-gagement with the wider community.

VIDEO CONFERENCE APLICATIONS

REMOTE TRAINING REAL TIME INTERACTION

Atos Origin
WORLDWIDE IT PARTNER

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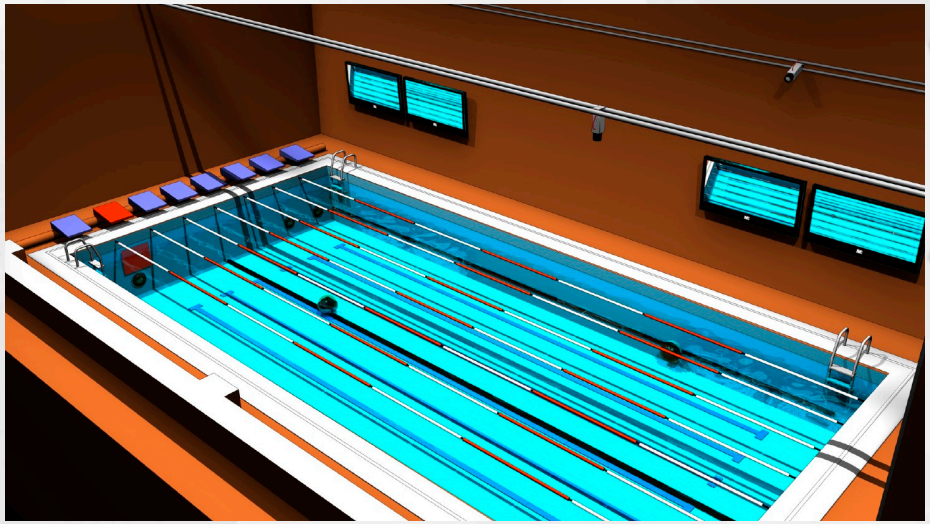
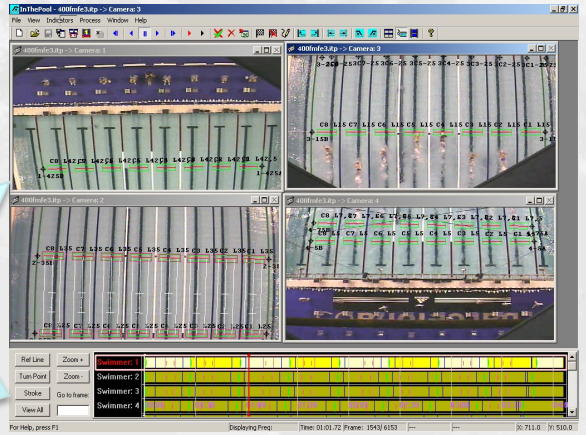
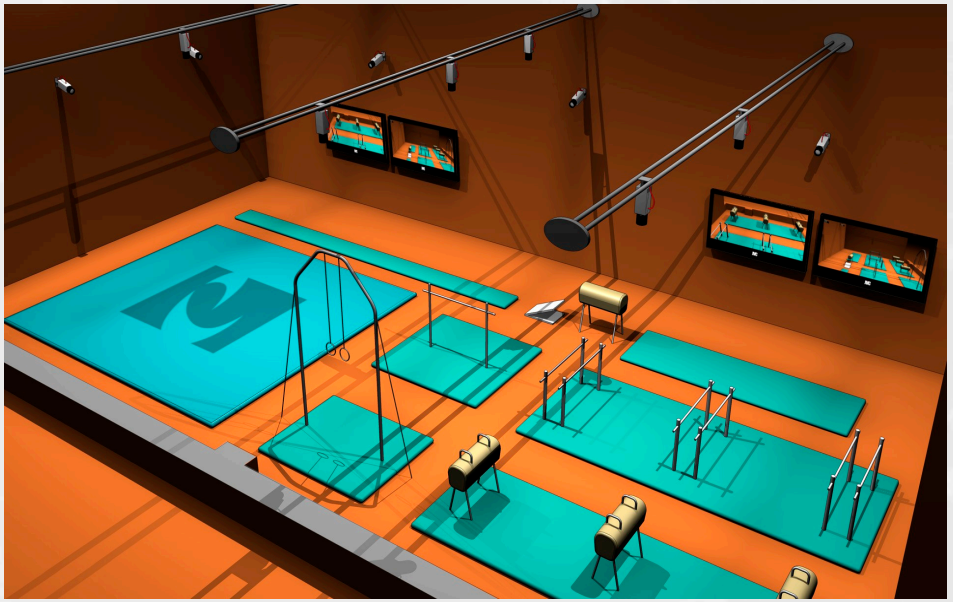
CISCO

REAL TIME CONTROL AND REMOTE TRAINING

CAR Centre d'Alt Rendiment

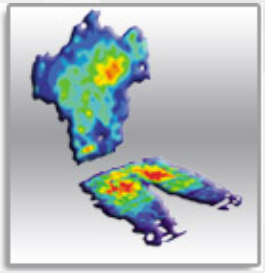






WELCOME TO THE FUTURE OF SPORT TRAINING

Innovation Concepts under IP Environment

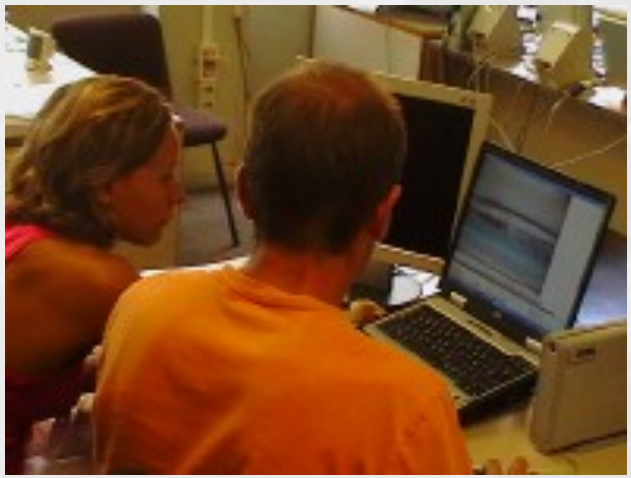


RFiD - Capture
Cam IP HD HS
IP Sensors
MXF Encapsulation

Instant review on site

High Density
Storage
XML for Sport

High Output Delivery with 10G Technoloy



Post processing any location thru Internet

CAR Centre d'Alt Rendiment

Most recent views of the facility

CAR Centre d'Alt Rendiment

Most recent views of the facility

Technology at service for training

Thank you for your time

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