

Physiological computing for outdoor activities

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Physiological computing for outdoor activities

Past experience

Sensor based computing for firemen

Sensor based computing for sports

Dreams

Athlete of the future

Intelligent guide systems

Past experience

Sensor based computing for firemen

I-Garment project sponsored by European Space Agency

Sensor packed garment for firemen



Sensor packed garment for firemen

Sensor packed garment, wirelessly connected:

Geographical position

Orientation

Limb status and movement

Heart rate real-time monitoring

Temperature real-time monitoring

Alert signals

Battery level

Up to 500 meter range and 8 hours operation

Supervisor device

Handheld supervising device with:

Location maps

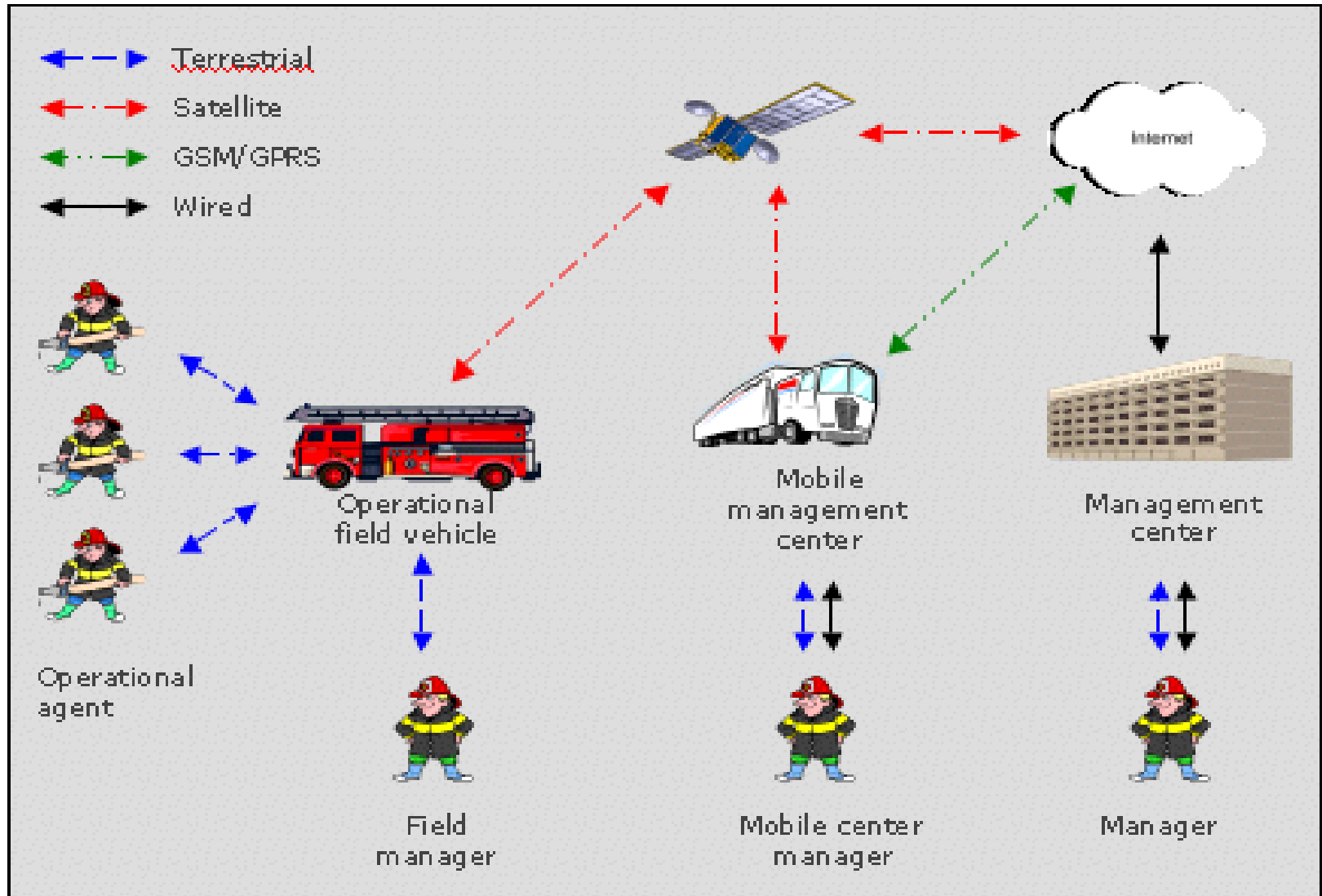
Live units location tracking

Unit status visualization

Alert system

Chat system

I-Garment system



Past experience

Sensor based computing for football

Experimental project with major international football club

NBA leads the way

<http://stats.nba.com/playerTracking.html>

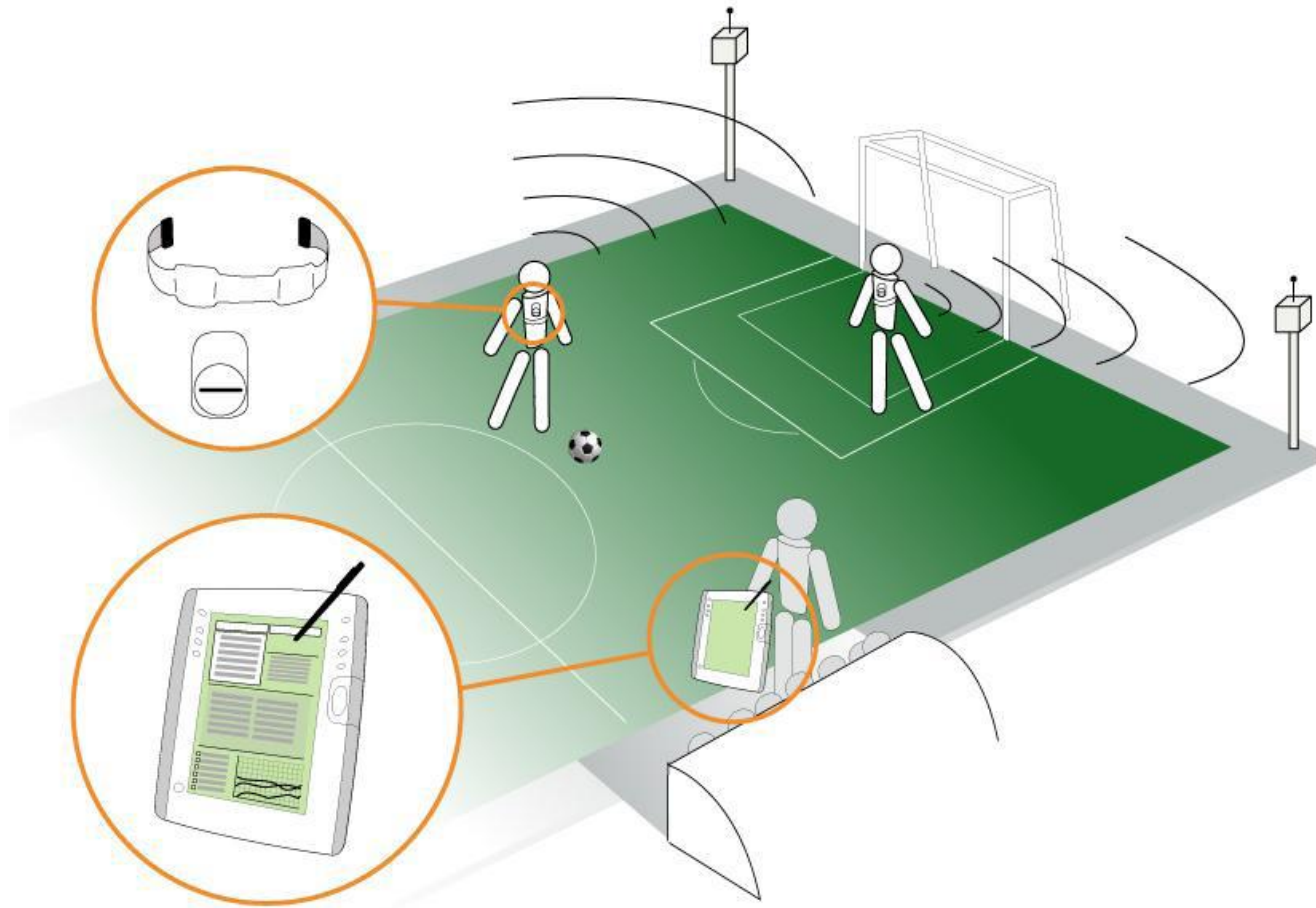
Sensor based computing for football

Biometric sensors module: heart rate, body temperature and optionally hydration level sensors, which will be embedded in an elastic strip connected to a wireless transmitter

Positioning module: To collect the players position on the field, the individuals will be equipped with Wi-Fi tags, embedded on the waistcoats

Visualization module: The management team will use a data visualization application on a table to monitor the biometric and positioning data for each athlete

Sensor based computing for football



Dreams

Athlete of the future

ESPN Magazine Special

Issue on Sports 2028

Intelligent Guides

Yvision's vision

THE ATHLETE

CONSUMING THE
INEVITABLE
MARRIAGE OF SPORTING
MAN AND MACHINE.

1 CTE SCANNING
Chronic traumatic encephalopathy, which ravaged Junior Seau, once could be found only posthumously. In January 2014, researchers scanned signs of CTE in a live brain. Next, Real-time testing helps athletes retire before the onset of CTE. **ETA: 5-10 years**

2 EYE, ROBOT
We loved them in *The Terminator*. So what's taken so long for bionic contact? Well, no more. The University of Washington has created a lens that displays a single pixel of info. Hey, it's a start. Soon players see the field from all angles or get data in, yes, the blink of an eye. **ETA: 10-15 years**

3 BRAIN WAVE
Researcher Conata may one day produce helmet and headband interfaces for live EEG brain-wave monitoring. The goal is real-time mood, focus and brain block. This is your brain; this is your brain on a monitor; this is your coach watching your brain on a monitor. **ETA: 5-10 years**

4 DESIGNER GENES
A pain physiologist has used gene therapy to spur mice to run six times farther and gain up to 40% more muscle. The upshot? Future jocks won't injure. They'll inject the gene that makes EPF, or the ACE gene, for endurance. Or the ACTN3 gene, for speed. **ETA: 5-10 years**



5 I, ROBOT
Jackie Davis spent years to building muscle memory. What a waste of time! Tony Fadell makes robots susceptible to their attach to bodies of elite athletes to help them win. Terminate: sub-robotics that groove golf drives and tennis serves in weeks, not years. **ETA: 5-10 years**

6 OSMOREGULATION REVOLUTION
Flory Sims, founder of Duracraft Inc., calls plasma conductivity (sugar-particle balance) one of the most unexplored areas of athlete optimization. Next: tamoxifen, her research shows, could boost human output by 20%—multiplying real current PTEs. **ETA: 1-5 years**

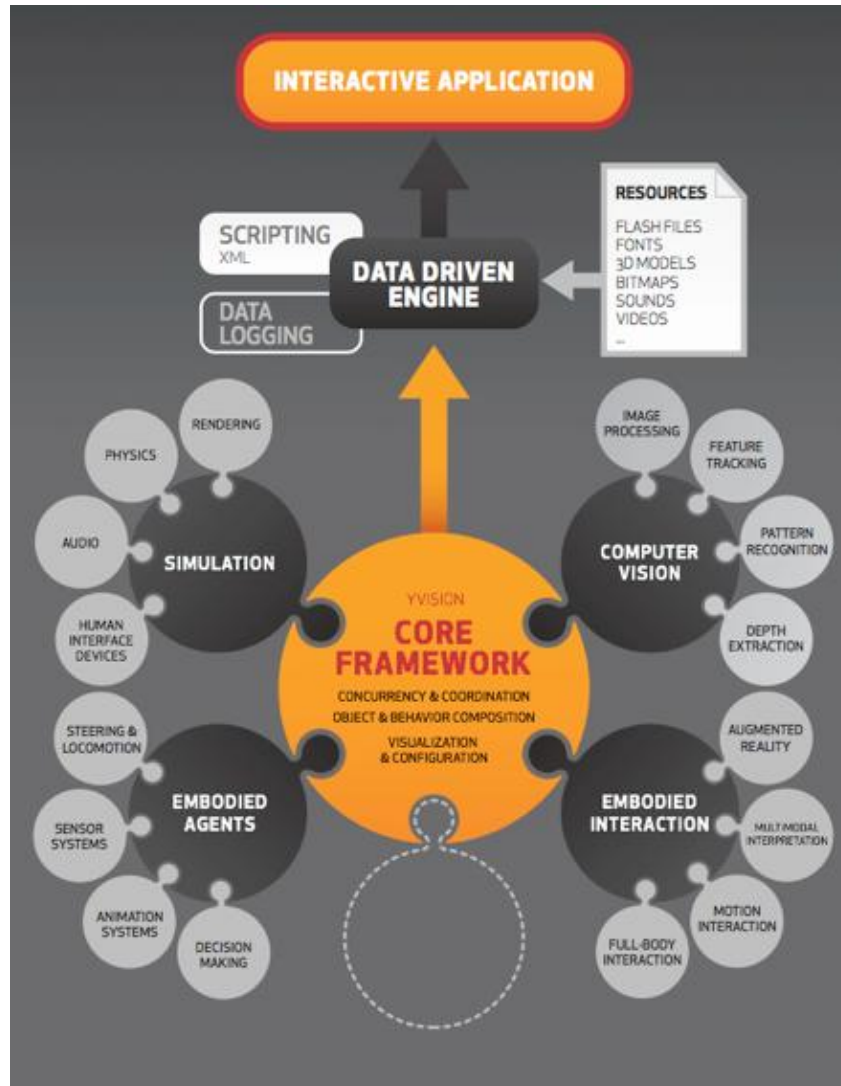
7 PERSONAL PADS
Last year POC Sports introduced a Vero-Elastic Polymer Dough in sporting gear—material that adjusts to the force of a impact. When used in sportswear garments, advanced versions of such materials will enable new generations of energy-absorbent pads. **ETA: 1-5 years**

8 MIRACLE MEDS
Perhaps you've heard of the micro-supplement injections that jocks like to get changes for their joints? Top of the stack, Bill says the trigger for cancer cells one day will be harnessing to make regenerative meds in which heal by cells rush to replace. **ETA: 10-15 years**

Intelligent guides by YVision

<http://www.youtube.com/watch?v=AmlKYMD08x8>

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