

TV-Health: A social environment to monitor and control patients at their homes

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FUB Expertise

- ❑ Fondazione Ugo Bordoni (FUB) is non-for-profit research institution based in Rome (Italy) with a long competence in e-inclusion, accessibility, and ICT for health, ageing well, and inclusion:
 - Accessibility and usability, user experience in different application sectors of ICT and mediated communication, scenario engineering and foresight methodologies
 - T-government, distance learning, teleworking, telemedicine, mediated interpersonal communication
 - Socio-organisational research, design and development of trials involving the end-users in field and in laboratory, technology acceptance evaluation by the user, predicting models of user acceptance, microsimulation models of ICT adoption and diffusion

- ❑ Main current projects in the area: APSIS4ALL (CIP ICT-PSP Programme), EasyReach (AAL-2 Programme), MediAccess (Italian Ministry of Economic Development)



TV-Health

- ❑ A system to monitor and control the health of patients in their homes and to adjust the administration of drugs, consisting of
 - A **M-stb** (Medical-Set Top Box), easy-to-use/easy-to-understand used to record and communicate elderlies' medical parameters to doctors and family
 - A **M-phone** (Medical SmartPhone) with an adaptive interface and endowed with specific capabilities, such as system alerts («You need to take a pill»), emergency button ("I need help"), sensors to determine abnormal situations (body in strange position, person out of house, ...), capability to communicate with the M-stb and exchange information, R-fid reader used to locate the right box of drugs to be taken
 - **M-sensors** (Medical sensors) placed on the patient and able to check some critical parameters in real time. The sensors can communicate with the M-stb and exchange information to enrich the patient's medical board



Architecture

- ❑ The system will continuously record the state of health of the patient through sensors and others info recorded by the M-stb / M-phone
- ❑ Doctors and relatives will constantly monitor the parameters of the patient through alert on their pc/phone/email/etc. and react to abnormal situations (e.g., values outside the norm)
 - Physicians can modify the therapy and/or change drugs administration
 - Changes will be managed through notices sent by M-stb and/or M-phone
 - Relatives can monitor the patient state and decide to visit or call their parents to check the situation
- ❑ Every M-device is connected (directly or not) with a cloud server able to instantly store and process all the data received
- ❑ Physicians and relatives are able to retrieve at any moment stored data through their terminals to check the situation
- ❑ The decision-making algorithms running in the server can generate alerts and decide the better actions

