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## ICT in Detail

**In general, the term ICT refers to a combination of technologies and services for capturing, storing, transmitting, displaying data and information electronically. The scope of the ICT Domain is actually broader and by definition multi-disciplinary, encompassing a wide range of scientific areas, with emphasis on emergent fields, pre-competitive technology development and standardization activities. The following research areas are covered by the ICT Domain. Nevertheless, the scope of the Domain is not restricted to such activities, on the contrary, open to new ideas and initiatives**



### Information science and technologies.

This area includes all the aspects related with the foundations, design, analysis, development, and application of hardware and software systems. Related areas are computer science, software development technologies, software engineering, intelligent and expert systems, advanced

interfaces, user aspects, information management, high performance computing and embedded systems.

**Telecommunications.** Research in this area concentrates on fundamental aspects and applications regarding physical, electromagnetic and functional modelling of all elements of information and communication systems such as terminals, antennas, transmission channels and propagation, as well as optical components (e.g. photonic devices), networking aspects, wireless mobile communications and the Future Internet.

**Societal aspects of ICT.** This area covers both the influence of ICT on society (technology push) and the requirements imposed by society on the ICT infrastructure and services (market pull). Interdisciplinary cooperation with other disciplines dealing with societal needs is instrumental for the development of this research area. In fact, this area is characterized by the use of ICT as enabling technology for the benefit of society, in fields like sustainable development, ambient assisted living, e-health, energy efficiency, e-learning, bioinformatics and many others.

Last updated: 07 June 2010



COST is supported by the EU RTD Framework Programme



ESF provides the COST Office through a European Commission contract



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