

Information and communications technology (ICT) is an extensional term for [information technology](#) (IT) that stresses the role of [unified communications](#)^[1] and the integration of [telecommunications](#) ([telephone](#) lines and wireless signals) and computers, as well as necessary [enterprise software](#), [middleware](#), storage, and audiovisual systems, that enable users to access, store, transmit, and manipulate information.^[2]

The term *ICT* is also used to refer to the [convergence](#) of audiovisual and [telephone networks](#) with [computer networks](#) through a single cabling or link system. There are large economic incentives to merge the telephone network with the computer network system using a single unified system of cabling, signal distribution, and management. ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network hardware, satellite systems and so on, as well as the various services and appliance with them such as video conferencing and distance learning.^[3]

ICT is a broad subject and the concepts are evolving.^[4] It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers, digital television, email, or robots). For clarity, Zuppo provided an ICT hierarchy where all levels of the hierarchy "contain some degree of commonality in that they are related to technologies that facilitate the transfer of information and various types of electronically mediated communications".^[5] Theoretical differences between interpersonal-communication technologies and mass-communication technologies have been identified by the philosopher Piyush Mathur.^[6] [Skills Framework for the Information Age](#) is one of many models for describing and managing competencies for ICT professionals for the 21st century.^[7]