

# Children - Masters of Technology?

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## **Abstract**

Children (12 years and younger) are becoming an increasingly significant consumer group for advanced computing and communications services. In some cases, children as young as three or four are using ICT products. These products are often imbedded in or 'disguised' as toys, but far too often they are designed for the generic user, i.e. adults. Furthermore, children are increasingly dependent on the PC, Internet and mobile telephones in order to achieve their educational goals, be entertained and interact with friends and family. Electronic media are extending their influence throughout children's lives to the extent that children's leisure can no longer be clearly separated from their education, their employment prospects, and their participation in the civic or the private family arena. Viewed from this perspective, accessibility becomes not merely a design objective, but an issue of central importance within the field of children's rights. The right to protection from harmful influences, abuse and exploitation, and the right to participate fully in family, cultural and social life as specified in the *UN Convention on the Rights of the Child* are all directly linked to the ICT accessibility issues.

Children are expected to use equipment designed for adults that has inappropriate physical and cognitive ergonomics for their needs. The accessibility requirements for participation in ICT of this group are not currently clearly identified or catered for, partly because no developmental account of physical, cognitive and social maturation that can be readily applied to product design exists. If not adequately taken into account this may result in problems such as inability to access services, service abuse, on-line vulnerability to exploitation, failures in growth of relevant cognitive skills and physical damage from prolonged use of systems with inappropriate or inadequate physical terminal design.

Building on recent findings from the work of ETSI Specialist Task Force 201, this paper confronts the myth that children are 'Masters of Technology', uncovering various misconceptions associated with children and ICT use and replacing them with empirical findings and specific concerns recently expressed in public debate. The paper provides an overview of accessibility issues as they apply to mobile telephones and services and general Internet access. Major accessibility and use issues that are of particular relevance (but not necessarily unique) to children under 12 are covered in relation to five parameters: (1) the location and context of use, (2) the physical qualities of required interaction, (3) the operating characteristics of the system the child interacts with, (4) the characteristics and demands made at the service level and, finally, (5) service content. Finally, a set of recommendations is presented.

*The paper was not available in time for printing. It will be distributed during the Symposium.*