

**Human Factors (HF);  
Guidelines on the provision of ICT services  
to young children**

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## Foreword

This ETSI Guide (EG) has been produced by ETSI Technical Committee Human Factors (HF), and is now submitted for the ETSI standards Membership Approval Procedure.

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## Introduction

Research has shown that children, including those aged 12 and under, have unprecedented levels of access to, and even ownership of, modern technologies. The EuroBarometer study in 2007 [i.1] found, for example, that 75 % of 9-10 year-olds have a mobile phone. This rises to 90 % for the 12s-14s, and both these groups are regularly accessing the Internet and using the full range of applications that the technology offers (e.g. instant chat applications). The present document forms part of a growing body of work that offers a strong empirical basis for the development of a more child centred set of principles and values that support the ICT industry in improving both services and safeguards for young children (under the age of 12). The obvious benefit to young child users of safeguards provided by service providers is helping to mitigate the potential risks facing young child users, potential risks that can take the form of content, contact or commercialism.

Children use ICT and the Internet in their everyday lives and in a variety of different contexts. Many children lead media saturated lives. There is a growing body of literature which examines current key debates on children, childhood and new media technologies. Our knowledge and understanding of this topic area is increasing and gathering greater attention as service and content providers develop new products, services and content in line with the growing use of ICT in the classroom and home as a tool for learning and day to day social activities. The European Information Society agenda and public policy developments to promote inclusivity in online access, coupled with the rapid diffusion and interoperability of technologies in children's everyday lives, have facilitated greater opportunities for children's online activities. More and more children are going online as accessibility increases and according to Eurobarometer Survey (May 2006) [i.1] a third of 6-7 year olds have used the Internet rising to 1 in 2 of 8-9 year olds and to more than 4 in 5 teenagers aged 12 onwards. Increasingly children have access to the Internet from their bedrooms and are increasingly likely to have not only fixed Internet access but mobile as well.

Many of the main debates, however, have a somewhat contradictory nature and it is important to consider these issues from a variety of perspectives and remember that this is a multi-faceted topic area. Many paradoxes exist ranging from the very positive and highly optimistic views, dominated by notions of the future, currently reflected in the many Governmental policies on ICT in children's education and the role ICT plays in empowering children especially those with disabilities towards greater participation across Europe, and, conversely, the negative, very pessimistic viewpoint often voiced in the public media that technology is putting children at risk and destroying childhood itself.

The age at which children are first using ICTs is falling and there is an increasing recognition that children have become consumers from a very early age (in terms of using as opposed to paying for the service). ICT plays a crucial role in many different areas of children's everyday lives including education and the growing demand for ICT services in schools, children's social and leisure activities and the recent transformations in children's healthcare [i.2] and social care for children with disabilities. With the increasing democratization of the family, children have a far greater influence over how significant sums of money from parents, carers and educators are spent on ICT products and services and children are now considered to be economically active.

Whilst the participation of children in the European information society is now well established, the providers of services that are used by children under 12 face specific, yet varied and changing challenges in meeting their needs and the rights and needs of children under 12 should, therefore, be given additional consideration, where relevant, by service and content providers including special consideration for children with disabilities. Much of the previous research in this area has focused on teenagers but, as already established [i.1], the age at which children are using ICTs is decreasing yet young children remain largely ignored in research. There has been little previous work in this area which gives consideration to children under the age of 12.

The present document looks at ICT services provision, from the viewpoint of promoting children's participation and simultaneously advancing the safeguarding of young children in a systematic and integrated manner. The recommendations are underpinned by the United Nations Convention of the Rights of the Child (UNCRC) [i.3] and by the high level principles gained from adopting an integrated approach to safeguarding children.

The guidelines have been created in the context of other excellent related industry-led initiatives. Quality in service delivery is a continuous process, and these guidelines propose principles to be considered by service and content providers wishing to create maintain and develop services which offer the best experience for children and their families.

Parts of the ICT industry have already made significant contributions to safeguarding children through self-regulation and developing new policies. For example, in 2007 the GSM Association created a European Framework for Safer Mobile Use by Younger Teenagers and Children [i.4] and in 2008 they launched a Mobile Alliance Against Child Sexual Abuse Content [i.6]. Also in 2008 internet service providers, mobile operators and social networking providers launched TeachToday [i.5] a European resource to support teachers to equip and empower young people to better understand ICT and use it responsibly. The present document acknowledges that priorities associated with aspects of safeguarding children are politically and socially constructed and culturally specific, the safeguarding of children using ICT products and services requires a holistic and integrated approach. The mounting legislation, guidance and regulatory frameworks in this area, as well as differing social and cultural contexts, have resulted in differing legal frameworks across Europe which require detailed understanding.

The intention of the guide is to provide high level principles regarding some of the issues relating to safeguarding young children. Effective safeguarding of children in the ICT environment requires action by a wide range of stakeholders, including standards developers, manufacturers, designers, service and content providers, policy developers, national administrations, parents/carers, child protection NGOs, CEOP and educators and, indeed children themselves. Safeguarding is an ongoing process not a single event and all stakeholders have a role to play in the safeguarding of young children in the European Information society. The details of how these recommendations are implemented in practice are for industry to lead. The recommendations outline safeguarding actions which may be considered by industry on a voluntary basis, in accordance with its commercial needs. However, any safeguards provided by service providers will have the benefit of helping young children as they take their first or early steps online. This is all the more important in the context that many parents and carers, children's closest form of support, are challenged by new technology and are not sure of their ability to "parent" in this space. In order to build on the strengths of what has already been established and developed within industry as a whole, a coordinated approach needs to be adopted. This will provide better safeguards for young children and allow the industry and others to share best practice.

The present document examines how service and content providers may consider adopting a more child centred approach and puts forward a number of principles and values which may facilitate such enhancements. It stresses the significance of understanding and promoting the rights of the child and argues that putting children at the centre of things supports improved quality in service provision for them. Effective collaboration is essential in adopting a joined up approach to safeguarding children and promoting children's well-being, and in the context of rapid and sometimes unexpected developments in information technologies and their use, improvement should be continuous. Finally it is critical that parents and children become aware of the potential risks of using ICT services, but also the actions that have been taken by industry to address them. The present document provides advice on a cross-industry basis, covering fixed and mobile services, ISPs and on-line service and content providers. Of necessity this broad scope means that the recommendations take the form of high-level common themes which may be interpreted and adopted in different ways and applied and modified to fit different sectors and markets as appropriate. These generic high-level principles can be adapted by industry to their environments as a basis for specific developments.

The document takes as a starting point the UN charter on the rights of children and comprises of a range of proactive responses of industry to safeguarding children, including non-technical approaches to issues for adopting a more child centred approach in relation to ICT products and services. The documents acknowledges that the issues may be different depending upon whether services were designed with children in mind, or whether children are using services that were not originally intended for use by children and includes the issue of services being misused in a way that harms children, including misuse by children themselves.

# 1 Scope

The present document provides guidelines for service and content providers who are deploying and provisioning ICT services that are being used, although not necessarily purchased, by young children less than 12 years of age.

ETSI Guides provide recommendations that may be adopted by industry stakeholders on a voluntary basis, in accordance with their commercial needs and these guidelines are without prejudice to existing EU legal and regulatory framework and do not advocate any changes to these frameworks.

# 2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
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  - for informative references.

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For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

## 2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

Not applicable.

## 2.2 Informative references

The following referenced documents are not essential to the use of the ETSI deliverable but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

[i.1] Eurobarometer May (2006).

NOTE: Available at: [http://europa.eu.int/information\\_society/activities/sip/eurobarometer/index\\_en.htm](http://europa.eu.int/information_society/activities/sip/eurobarometer/index_en.htm)

[i.2] ICT for Health and i2010: "Transforming the European health care Landscape - Towards a strategy for ICT for Health", European Commission Information Society and Media.

NOTE: Available at: [http://www.ehealthurope.net/img/document\\_library0282/ICT\\_for\\_Health\\_i2010.pdf](http://www.ehealthurope.net/img/document_library0282/ICT_for_Health_i2010.pdf)

- [i.3] United Nations Convention on the Rights of the Child (UNCRC).
- NOTE: Available at: [http://www.unicef.org.uk/publications/pub\\_detail.asp?pub\\_id=133](http://www.unicef.org.uk/publications/pub_detail.asp?pub_id=133).
- [i.4] European Framework for Safer Mobile Use by Younger Teenagers and Children.
- NOTE: Available at: [www.gsmworld.com/gsm europe/documents/eur.pdf](http://www.gsmworld.com/gsm europe/documents/eur.pdf).
- [i.5] TeachToday: "making sense of technology".
- NOTE: Available at: [www.teachtoday.eu](http://www.teachtoday.eu).
- [i.6] Mobile Alliance Against Child Sexual Abuse Content.
- NOTE: Available at: [http://www.gsmworld.com/using/public\\_policy/mobile\\_alliance.shtml](http://www.gsmworld.com/using/public_policy/mobile_alliance.shtml).
- [i.7] Parton, N (2006) Safeguarding Childhood Basingstoke: Palgrave.
- [i.8] Utting, Sir William (1997) People, Like Us: The report of the review of safeguards for children living away from home HMSO: London.
- [i.9] S. Livingstone and M. Bober (2004): "UK Children Go Online Surveying the experiences of young people and their parents".
- NOTE: Available at: [http://www.lse.ac.uk/collections/children-go-online/UKCGO\\_Final\\_report.pdf](http://www.lse.ac.uk/collections/children-go-online/UKCGO_Final_report.pdf).
- [i.10] Prensky, M. (2001): "Digital Natives, Digital Immigrants Part I" in On the Horizon Vol. 9 No. 5 pp. 1-6.
- [i.11] ETSI EG 202 116 V1.2.1 (2002-09): "Human Factors (HF); Guidelines for ICT products and services; "Design for All"".
- [i.12] Good practice guidance for the providers of services of social networking and other user interactive services 2008: - The Home Office.
- NOTE: Available at: <http://police.homeoffice.gov.uk/publications/operational-policing/social-networking-guidance>.
- [i.13] Byron, T. (2008): "Safer Children in a Digital World The Report of the Byron Review".
- NOTE: Available at: <http://www.dfes.gov.uk/byronreview>.

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

**guidelines:** high level principles for recommendations to the ICT industry

**ICT industry:** industry that encompasses hardware and software developers, manufacturers, service and content providers and content producers

### 3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CEOP	Child Exploitation and Online Protection (centre)
EU	European Union
GSM	Global System Mobile
GSMA	GSM Association (global trade association of mobile phone operators)
HF	Human Factors



## 4 The European Context

### 4.1 The Contextual framework

In order to meet the needs of children, families and stakeholders the guide takes account of the practical approaches of European markets and is part of a more comprehensive overall structure which guides aspects of service provision in more detail and to specific sectors of the industry which is characterized by convergence of platforms, services and markets, driven by rapid technological change. The ICT industry is not homogenous. It has a complex and constantly evolving value chain and its products, services and structures are always changing. These guidelines are intended to establish top-level principles about how ICT services can facilitate children's participation whilst simultaneously safeguarding their wellbeing. The guidelines are intended to complement and build upon existing self-regulatory and other actions to safeguard children in the European information society.

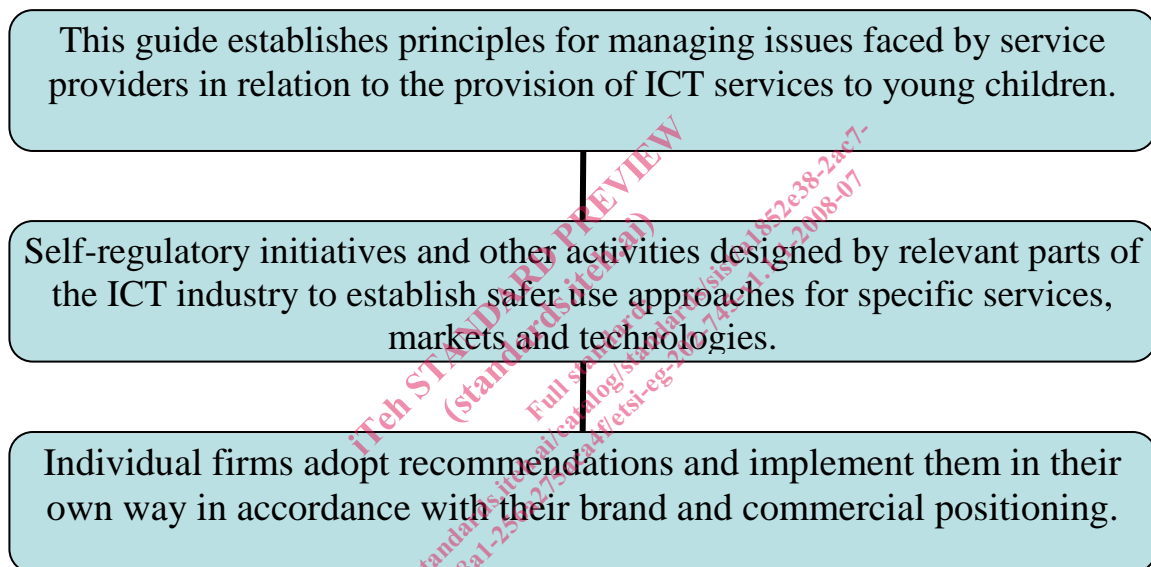


Figure 1: The contextual framework of the guide

### 4.2 United Nations Convention on the Rights of the Child

Because of the variation in the specific legal frameworks across European countries which may or may not be relevant to service and content providers, the document is underpinned by the principles set out in the UNCRC [i.3]. The first international instrument to incorporate the full range of human rights—civil, cultural, economic, political and social rights, the UNCRC [i.3] recognizes that children need a special additional care and protection that adults do not. It provides a common framework for legislation relating to children throughout Europe because in agreeing to undertake the obligations of the Convention (by ratifying or acceding to it), national governments have committed themselves to protecting and ensuring children's rights. The UNCRC, therefore, provides an ideal common framework of principles and values for the purposes of the present document. All the European countries have ratified the Convention and as such are obliged to develop and undertake actions and policies in the light of the best interests of the child.

The four core principles of the Convention are:

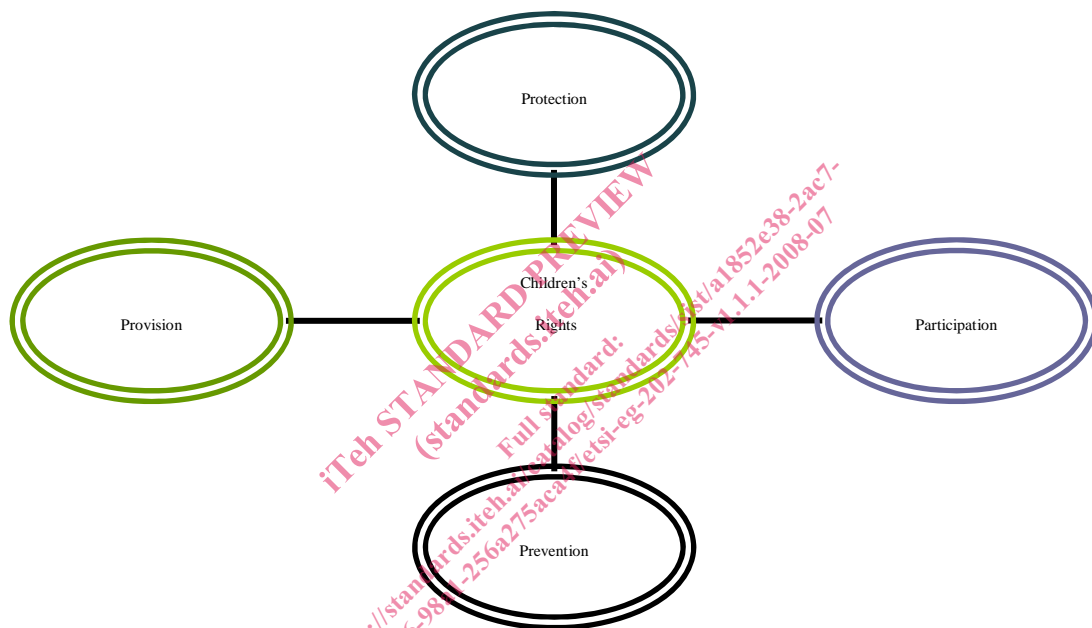
- non-discrimination;
- devotion to the best interests of the child;
- the right to life, survival and development; and
- respect for the views of the child.



Whilst the participation of children in the European information society is now well established, the providers of services that are used by children under 12 face specific yet varied and changing challenges in meeting their needs and the rights and needs of children under 12 should, therefore, be given additional consideration, where relevant, by service and content providers. Much of the previous research in this area has focused on teenagers but, as already established [i.1], the age at which children are using ICTs is decreasing yet this remains largely ignored in research. However, the globalization of children's rights as enshrined in the UNCRC and changes within the new social studies of childhood paradigm viewing children as "experts in their own lives", has had an impact on all aspects of children's lives, from their relationship with their parents to their participation in school and other social institutions. This conceptual shift emphasizes children's position as "social actors", as creative and inventive users of the world around them, and encourages empirical explorations of children's competency and agency in a range of diverse settings.

The increasingly recognized influence of children's rights, as enshrined in the UNCRC [i.3], is reflected in both European and national policies and legal frameworks.

In particular any service provided for children should be based on the principle of protecting the rights and the best interests of the child. How rights are understood will have an impact on how they are supported and a useful conceptual framework based on provision, prevention, protection and participation is provided.



**Figure 2: Children's rights regarding ICT services**

- **Provision** - children have rights to access appropriate services yet glaring inequalities remain based on traditional divisions along the lines of gender; social class; socio-economic background; disability and geographic location. Consideration by service and content providers of how to ameliorate digital divides and further promote inclusion in the future will be fundamental to achieving provision for children, including children with disabilities, of access to appropriate services and it may be that new services which take account of promoting inclusion could provide a key to achieving this.
- **Prevention** - children have the right to the prevention of harm. This can be achieved both through technologies that can reduce risk and comprehensive educational strategies. Children need to be empowered to manage risk and awareness needs to be raised about the best strategies for preventing harm and promoting children's well-being. Children also need to be able to seek help and report issues in ways that are appropriate for them.
- **Participation** - children have a right to be consulted in all matters that affect them (UNCRC article 12). Children are becoming a large part of the European market for ICT products and services and their views and experiences need to be understood and taken seriously by product developers and service and content providers. In order to foster children's positive participation, the acceptable basis of their participation should be made clear and accessible to children.