

## Human Factors (HF); Public Internet Access Points (PIAPs)

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## Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Human Factors (HF).

Intended readers of the present document are:

- PIAP Operators;
- terminal manufacturers;
- assistive device manufacturers;
- service providers;
- software developers;
- regulatory authorities;
- standards developers.

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## Introduction

A Public Internet Access Point (PIAP) is a public venue where people can use computers with Internet access and other technologies that help them to collect information and to communicate with other people, at the same time as they develop and maintain digital skills. For economic, availability and cultural reasons, many people will not have access to their own facilities for accessing e-Government, e-Learning, e-Health and e-Business services. For these people, and for any person currently remote from their own means of access, Public Internet Access Points (PIAPs) will be one of the few methods that allow people to make use of these, and other, services. A major motivation for public provision of PIAPs is the use of technology for social and community development, which reduces digital exclusion, creates contacts, promotes health related topics and creates economic opportunities.

The ability of all users to make effective use of PIAPs will be one of the most important factors that determines how successful PIAPs will be in extending e-Inclusion to ensure that the highest number of users are able to use, and do make use of, ICT services. Whilst there is already widespread provision throughout Europe of PIAPs, most of them do not offer ease of access to people who have disabilities and older users. The wide provision of PIAPs cannot be properly effective unless they are readily accessible to all people, including elderly and people who have disabilities.

Studies on the usage and perception of PIAPs [i.21], [i.23] have identified their potential usefulness. They have also identified some barriers to the use of PIAPs. Lack of awareness of the benefits of using the Internet to access services has been identified as one of the barriers. The means to address this problem lie outside the scope of standards and relate to initiatives such as increasing public awareness of the benefits of Internet use and studies to determine that the services being offered are relevant to the needs of the people using PIAPs. However, there are a number of areas, covered in the present document, where standards and guidelines may be the most effective way of enhancing the usage and usefulness of PIAPs. One of these studies of PIAP usage and perception [i.23] made a number of statements that clearly indicated that guidance, similar to that in the present document, is required.



- Environment:
  - "Any future programme should set out minimum requirements for the location and general environment of the (Public Internet) access point including issues of space, visibility and accessibility."
  - "The Executive should develop a good practice guide to provide hosts with advice on where to locate their (Public Internet) access points and how best to set it up."
- Support:
  - "The Executive should consider having a minimum requirement for some basic support for users."
- Getting started:
  - "The Executive should consider using software which provides a quicker and more straightforward start-up process. Many users and hosts experience problems in trying to log onto the service."

The present document provides technical requirements for how PIAPs can be provided in an effective way by following a "Design for All" approach (see [2]) that ensures that they will be accessible to people irrespective of age, disability, language, or culture (see clause 5.2).

The present document establishes and sets out guidance that should be followed to make PIAPs more readily accessible to all users. Unless such guidance is followed, many citizens could be excluded from the opportunities to effectively use PIAPs because of factors such as disability, age or cultural background. This exclusion could come from people believing that there would be no way that they could make use of a PIAP, and never trying to use one, or from people attempting to use a PIAP and suffering the embarrassment and frustration in not being able to use it effectively.

A key aim of the guidance provided in the present document is to ensure that the benefits from existing and future investment in PIAPs are able to be offered to the widest range of people making use of the widest range of services. The achievement of this aim should be significantly improved by the guidance about the design, installation and usage of PIAPs and of the key services accessed from them, that is described in the present document. The social benefits claims in the objectives of eEurope 2005 [i.18] can only be fully realised if the recommendations provided in the present document are implemented.

The present document provides:

- an analysis of which existing standards and guidelines on the design of public terminals and their operating procedures apply to PIAPs. In particular ETSI and ITU-T standards, recommendations and guidelines on public payphones and CEN standards related to public banking terminals are referenced;
- specific new normative requirements and guidelines that address accessible usage of PIAPs have been made as well as proposals about whether updates to existing standardization documents are appropriate or whether new documents should be produced. The new guidelines reflect a "Design for All" approach (see [i.2]) rather than merely identifying new disability specific guidelines;
- proposals for new or revised European and international guidelines and standards (e.g. for smart cards, user identification (UCI), user profile management, handling of language and cultural differences) that will enhance the accessible availability of services from PIAPs;
- proposals on how PIAP design can be enhanced through the use of guidelines, recommendations and standards to ensure that these PIAPs are easily accessible to the maximum range of potential users.

---

# 1 Scope

The present document will establish and set out guidance that should be followed by organizations that design or operate PIAPs. A broad definition of PIAPs has been adopted. This definition includes general purpose desktop computers on a desk, Internet/Information kiosks and public hotspots.

A "Design for All" approach has been followed to ensure that PIAPs will be more readily accessible to all people including elderly or users with disabilities and users from a range of cultural backgrounds.

The present document identifies approaches to enhancing eInclusion in the provision and use of PIAPs. The present document:

- addresses issues that have arisen from previous studies and reports on the use of PIAPs;
- identifies existing standards, recommendations and guidelines (especially from ETSI, the ITU-T and CEN) that provide useful guidance to reduce barriers to the use of PIAPs;
- proposes new normative requirements, guidelines as well as identifying the need for updates to existing standards, recommendations and guidelines to support eInclusion for PIAPs;
- identifies the need for and content of new standards, specifications and guidelines that need to be developed.

The primary focus of the present document is on issues related to PIAP customers rather than to the staff at the PIAP.

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# 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:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
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## 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.

- [1] WAI Guidelines: W3C Content Accessibility Guidelines (WCAG).

NOTE: Available at <http://www.w3.org/WAI/intro/wcag.php>.

[2] W3C User Agent Accessibility Guidelines (UAAG).

NOTE: Available at <http://www.w3.org/TR/UAAG10/>.

[3] W3C Recommendation (16 April 2002): "The Platform for Privacy Preferences 1.0 (P3P1.0) Specification".

NOTE: Available at <http://www.w3c.org/TR/P3P/>.

[4] "WPA™ deployment Guidelines for Public Access Wi-Fi® Networks", Wi-Fi Alliance, 2004.

NOTE: Available at [http://www.wi-fi.org/knowledge\\_center\\_overview.php?docid=4484](http://www.wi-fi.org/knowledge_center_overview.php?docid=4484).

[5] "Accessibility for the Disabled: A Design Manual for a Barrier Free Environment", United Nations (enable).

NOTE: Available at <http://www.un.org/esa/socdev/enable/designm/index.html>.

## 2.2 Informative references

The following referenced documents are not essential to the use of the present document 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] ETSI EG 202 421: "Human Factors (HF); Multicultural and language aspects of multimedia communications".

[i.2] ETSI EG 202 116: "Human Factors (HF); Guidelines for ICT products and services; Design for All".

[i.3] ETSI EG 202 325: "Human Factors (HF); User Profile Management".

[i.4] ETSI EG 202 534: "Human Factors (HF); Guidelines for real-time person-to-person communication services".

[i.5] ETSI EG 202 417: "Human Factors (HF); User education guidelines for mobile terminals and services".

[i.6] ETSI ETR 167: "Human Factors (HF); User instructions for public telecommunications services; Design guidelines".

[i.7] ITU-T Recommendation E.138: "Human factors aspects of public telephones to improve their usability for older people".

NOTE: Available at <http://www.itu.int/pub/T-TUT-FSTP-2006-TACL/en>.

[i.8] ITU-T Technical paper: "FSTP-TACL Telecommunications Accessibility Checklist".

[i.9] ISO/IEC Guide 71:2001: "Guidelines for standards developers to address the needs of older persons and persons with disabilities".

[i.10] CEN Workshop agreement: "Guidelines to Standardizers of ICT products and services in the CEN ICT domain", CWA 14661, February 2003, ICS 11.080.01; 35.240.99.

[i.11] CEN/ISSS Workshop on Multilingual Extensions to European Keyboard Layouts (WS/MEEK).

NOTE: Available at <http://www.cen.eu/cenorm/sectors/sectors/iss/activity/ws+meeek.asp>.

[i.12] IEC 62079: "Preparation of instructions - Structuring, content and preparation - Application to consumer products".

[i.13] W3C Cascading Style Sheets Home Page.

NOTE: Available at <http://eu-by.org/Style/CSS/>.

- [i.14] "Industry Standard: Automated Teller Machines (ATMs)", Australian Bankers' Association. .
- NOTE: Available at <http://www.bankers.asn.au/Default.aspx?ArticleID=344>.
- [i.15] "Industry Standard: Electronic Funds Transfer at Point of Sale (EFTPOS)", Australian Bankers' Association.
- NOTE: Available at <http://www.bankers.asn.au/Default.aspx?ArticleID=344>.
- [i.16] "Information/Transaction Machines Accessibility Guidelines", Version 1.1, August 1998, Trace Center.
- NOTE: Available at [http://trace.wisc.edu/world/kiosks/itms/itmguide.htm#\\_Toc421187705](http://trace.wisc.edu/world/kiosks/itms/itmguide.htm#_Toc421187705).
- [i.17] Guidelines: Cards and Smart Media.
- NOTE: Available at [http://www.tiresias.org/guidelines/cards\\_and\\_smart\\_media.htm](http://www.tiresias.org/guidelines/cards_and_smart_media.htm).
- [i.18] Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions; eEurope 2005: An information society.
- NOTE: Available at [http://ec.europa.eu/information\\_society/eeurope/2002/news\\_library/documents/eeurope2005/eeurope2005\\_en.pdf](http://ec.europa.eu/information_society/eeurope/2002/news_library/documents/eeurope2005/eeurope2005_en.pdf).
- [i.19] Decision No 1855/2006/EC of The European Parliament and of The Council of 12 December 2006: establishing the Culture Programme (2007 to 2013).
- NOTE: Available at [http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l\\_372/l\\_37220061227en00010011.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_372/l_37220061227en00010011.pdf).
- [i.20] A new Framework Strategy for Multilingualism" [COM(2005) 596].
- [i.21] eGovernment: Reaching socially excluded groups.
- NOTE: Available at [www.idea.gov.uk/publications](http://www.idea.gov.uk/publications).
- [i.22] Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines.
- NOTE: Available at <http://www.access-board.gov/ada-aba/final.pdf>.
- [i.23] "Evaluation of the Public Internet Access Point Initiative, a key strand of the Executive's Digital Inclusion Strategy"; Scottish Executive Report.
- NOTE: Available at <http://www.scotland.gov.uk/library5/finance/epiapi-00.asp>.
- [i.24] "DfES Skills for Life Survey, 2003": UK Department for Education and Skills.
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## 3 Definitions, symbols and abbreviations

### 3.1 Definitions

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

**active profile, active user profile:** set of all active profile components related to a user

**assistive technology device:** device used by people with disabilities to prevent, compensate, relieve or neutralize any resultant handicap and which has the ability to interface to an ICT device

**authentication:** security mechanism allowing the verification of the provided identity

**biometrics:** technologies that measure and analyze human physical and behavioural characteristics for authentication purposes

**bluetooth:** short range wireless technology enabling secure transmissions of both voice and data

**chunking:** method of splitting content into short, easily scan able elements, especially for web audiences

**contact book:** entity that contains a number of records describing potential contacts of the user

**Design for All:** design of products to be usable by all people, to the greatest extent possible, without the need for specialized adaptation

**gross domestic product:** market value of all final goods and services produced within a country in a given period of time

**internet kiosk:** terminal that provides public Internet access

NOTE: The use of the word kiosk in the present document implies Internet kiosk unless otherwise stated.

**micropayment:** means for transferring very small amounts of money, in situations where collecting such small amounts of money with the usual payment systems is impractical, or very expensive

**modality:** path of communication between a human and a computer

EXAMPLE: Vision, hearing, touch.

**profile:** total set of user related information, preferences, rules and settings which affects the way in which a user experiences terminals, devices and services

NOTE: The use of the word profile in the present document implies user profile unless otherwise stated.

**profile storage agent:** entity that stores information about the profile data and the locations of data repositories of profile data related to users

**profile tool:** tool that enables a user to view and modify information in profiles