Hybrid TV services for work integration of people with disabilities

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Connected TV

• Connected TV / Hybrid TV / HBB
• Receivers able to play content coming from both a broadcast network and Internet
• Enormous opportunities to provide new multimedia content and services
Connected TV

- Broadcast channel
- Connected TV service
- Hybrid terminal
- Broadband channel
- IP Network
- Additional services and content server
- Broadcaster

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Connected TV

• Return channel
  – Broadband
  – Always-on
  – Real interactivity
  – Personalization (e.g., VoD)
Market models

- Two different market models have arisen:
  - A model controlled by the TV set manufacturer, characterized by proprietary specifications. "Walled gardens"
  - A model that allows the TV operator to keep the control
- A standard is needed to ensure interoperability between content and TV sets.
- Our project is based on HbbTV
HbbTV service: main menu in TVE

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HbbTV service: VoD in ARD
HbbTV service: Digital “teletext” in ARD

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How can we take advantage of these features to provide services for people with disabilities?
INLADIS project

- INLADIS project. Developed by the Indra-Fundación Adecco Chair in UPM
- Tools to make easier the work integration of people with disabilities
- Developed on HbbTV for Connected TV
INLADIS project

• Tools available on the Connected TV screen...
• ...and also on the PC screen
• And, of course, in an accessible way.
HbbTV
Norms referenced by HbbTV
Norms referenced by HbbTV

- HbbTV is based on existing standards aiming an easier and faster deployment.
  - CE-HTML: XHTML, CSS, JavaScript: HbbTV applications are interpreted by an embedded web browser.
  - DOM – Document Object Model (W3C)
Norms referenced by HbbTV

– OIPF (Open IPTV Forum)
  • DAE – Declarative Application Environment
  • Media formats: formats for the AV broadband content
  • Protocols

– DVB: application carriage and signalling
  • DSM-CC for the application content in the broadcast channel
  • application_signalling_descriptor and AIT: link to the broadcaster Internet portal
INLADIS tools

• An attempt to take advantage of these features to provide accessible services for the work integration of people with disabilities.

• A set of four tools:
  – T-learning
  – Job offers
  – Forum
  – Generic information
Bienvenidos al portal de INLADIS

Teleformación
Encuentra empleo.
Accede a cursos online.

Información
¿Cómo buscar empleo?
Acceso a candidatos.

Job-offers
Forum
Information
T-learning

• Multimedia courses (video, image and text)
• The aim was not to prepare the courses, but provide a web interface to create them
• Content divided into chapters and pages
Job offers

• Actual offers provided in real time by Fundación Adecco
• Disability is a requirement for these jobs
• Offer search based on two criteria: geographical region and industrial sector
# Job offers

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<td>23-10-2013</td>
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<td>Comercial / Ventas / Telemarketing</td>
<td>San Cristóbal de la Laguna</td>
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<td>23-10-2013</td>
<td>Auxiliar de limpieza</td>
<td>Otros</td>
<td>Santa Cruz de Tenerife</td>
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</tbody>
</table>
Forum

- Suggestion of Fundación Adecco
- Meeting-point for people with disabilities and trained in ICT
- As a traditional Internet forum
- More suitable for interaction on the PC screen, but allows self-profiling of the people
Generic information

• Generic, static information about work integration of people with disabilities
• For employers and employees
• E.g.: how to obtain a disability certificate, or what advantages if contracting a person with disabilities
Accessibility

• Of course, accessibility was a *sine-qua-non* condition for INLADIS

• Different access services according to the disability

• Text to speech in all the screen, including dynamic content (except the forum)

• Improved graphical interface for people with a visual impairment

• Video features can be used to provide sign language
Accessibility

• Additional information about the current screen
• Alternative navigation mechanisms: colour buttons or number buttons
• Personalized configuration of the accessibility options
On-going and future work

- Fundación Adecco is going to provide real users for a qualitative validation test
- Several TV broadcasters are interested for a real exploitation, but they ask for a more audio-visual interface
HBB4ALL

- Hybrid Broadcast Broadband For All
- Grant agreement: 621014
- CIP Pilot
- Competitiveness and Innovation Framework Programme
- Deployment of pilots of access services based on HbbTV.
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HBB4ALL
Conclusions

• HbbTV has a tremendous potential for providing services
• It is very well suited for accessibility services
• It is a standard!
• Requires interaction with the service provider
• Concept of public service!
• Connected TV penetration in North America and Western Europe will go over 50% by 2017 (ABI Research)
• Entities (such as F. Adecco) in direct contact with specific groups may act as enablers
Thank you very much for your attention!