

Joint ITU/EBU Workshop on “How Can We Reach the Media Have-Nots of the Developed and Developing Worlds?”

(Nairobi, Kenya, 28 September 2011)

ITU-T IPTV for Accessibility -- IPTV as an Inclusive Technology--

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Topics

- IPTV as a bridge for Digital Divide
- Accessibility vs. Vulnerability
- Examples of Accessible UI on IPTV
- Conclusion

IPTV as a bridge for Digital Divide

- **Human Interface is the Key for Accessibility**
- **Human Interface Persists**
 - **E.g: Keyboard**
- **TV as a Universal Human Interface that helps people acceptable to Information and Opportunity**

Human Interface Persists

- Typewriter Keyboard is the ancestor of the present-day Windows PC and Blackberry
- For a new technology to be accepted, Human Interface should be modeled after accepted models
- Human-friendly interface is necessary for Acceptable device



TV set as Universal Interface

- Since its introduction, familiar to both Young and Old
- Accessible to a wide range of population, without special training
- It is the universal user interface for various services



IPTV as Accessible UI for all

- **IPTV, with full bi-directionality and the UI of a TV, can become a good vehicle for Accessibility**
- **But any “IPTV” cannot be as dependable**

Accessibility vs. Vulnerability

- As things become more accessible, people become more vulnerable
- Security and control becomes an important issue
- This is true especially for the elderly and people with difficulties

Accessibility vs. Vulnerability

- Consumer frauds often target the elderly or disabled

http://www.chicagobusinesslitigationlawyerblog.com/2010/01/consumer_fraud_increasingly_targeting_the_elderly_and_disabled.html

- Accessible consumer devices, such as connected TV, can make certain classes of people more vulnerable

Danger of Internet-based On-line service

- **April 2011, Sony's PlayStation Network was attacked by computer hackers. Sony Online Entertainment was also breached**
- the number of hacked accounts having now been increased to 101.6 million.
- The hacked personal data included customer names, addresses, e-mail addresses, gender, birth dates, phone numbers, log-in names, and hashed passwords.
- Cost to Sony is estimated up to **\$32 billion** in terms of total costs involved in dealing with the consequences of losing control of customer data

Managed IPTV for Accessible Services

- **Importance of Managed Service**
- **Security = must have**
- **Interactivity is the key**



ITU-T IPTV Standards



**Examples of Accessible UI on IPTV
-- IPTV as an Inclusive Technology--**

IPTV Interactive Shopping

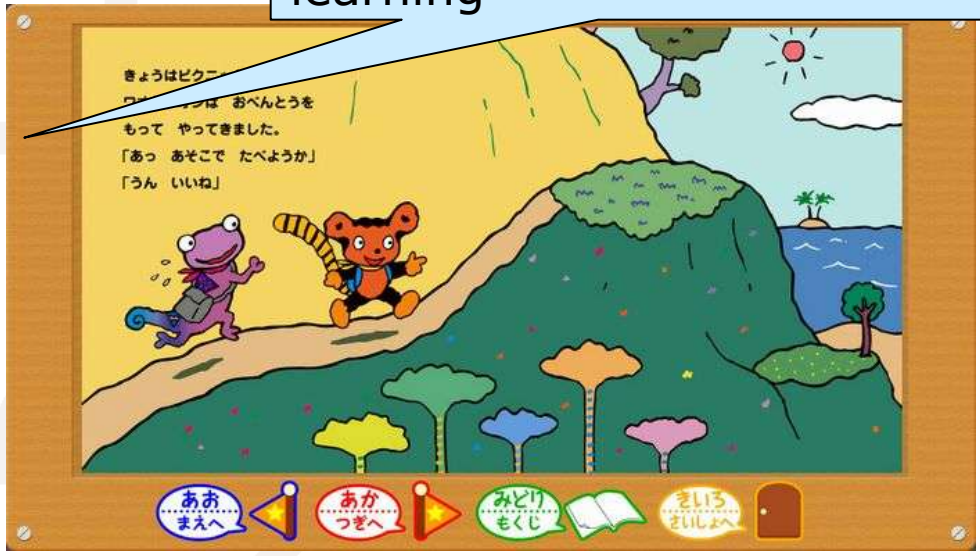
- **Japanet Takata**, 3rd largest TV shopping channel in Japan, has an interactive shopping channel on Hikari TV Platform



Enhanced e-book on IPTV

- Many publications are already being made with Digital technology.
- Automatically converting data made by DTP (Desktop Publishing) Software can make "Enhanced e-book" on IPTV

LIME content from a picture book:
-> Easy way to make an interactive content for e-learning

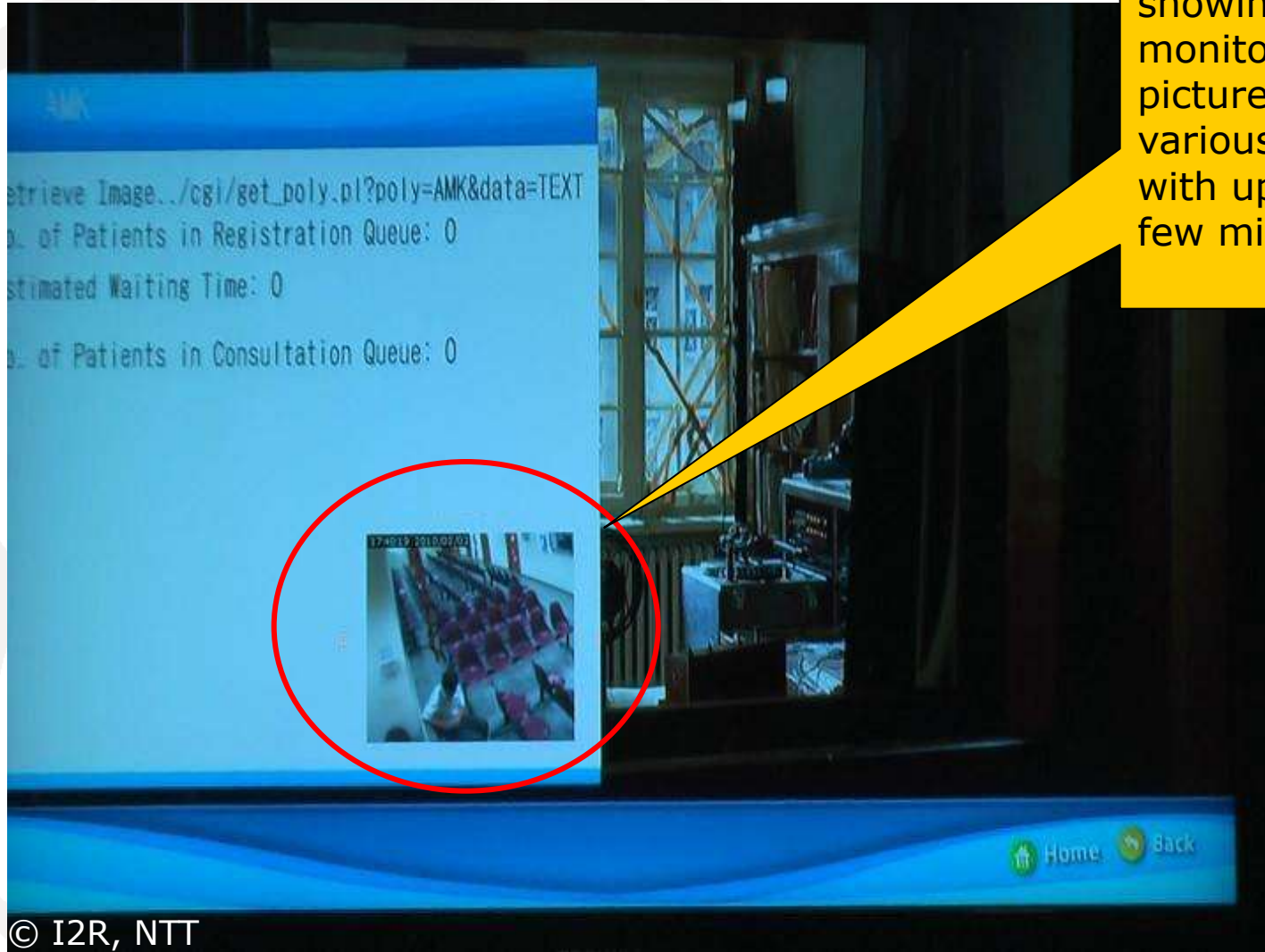


Disaster Report on IPTV



Clinics Watch:Monitor App on LIME

Widget showing the monitored picture of various Clinics, with updates a few minutes



IPTV with a camera

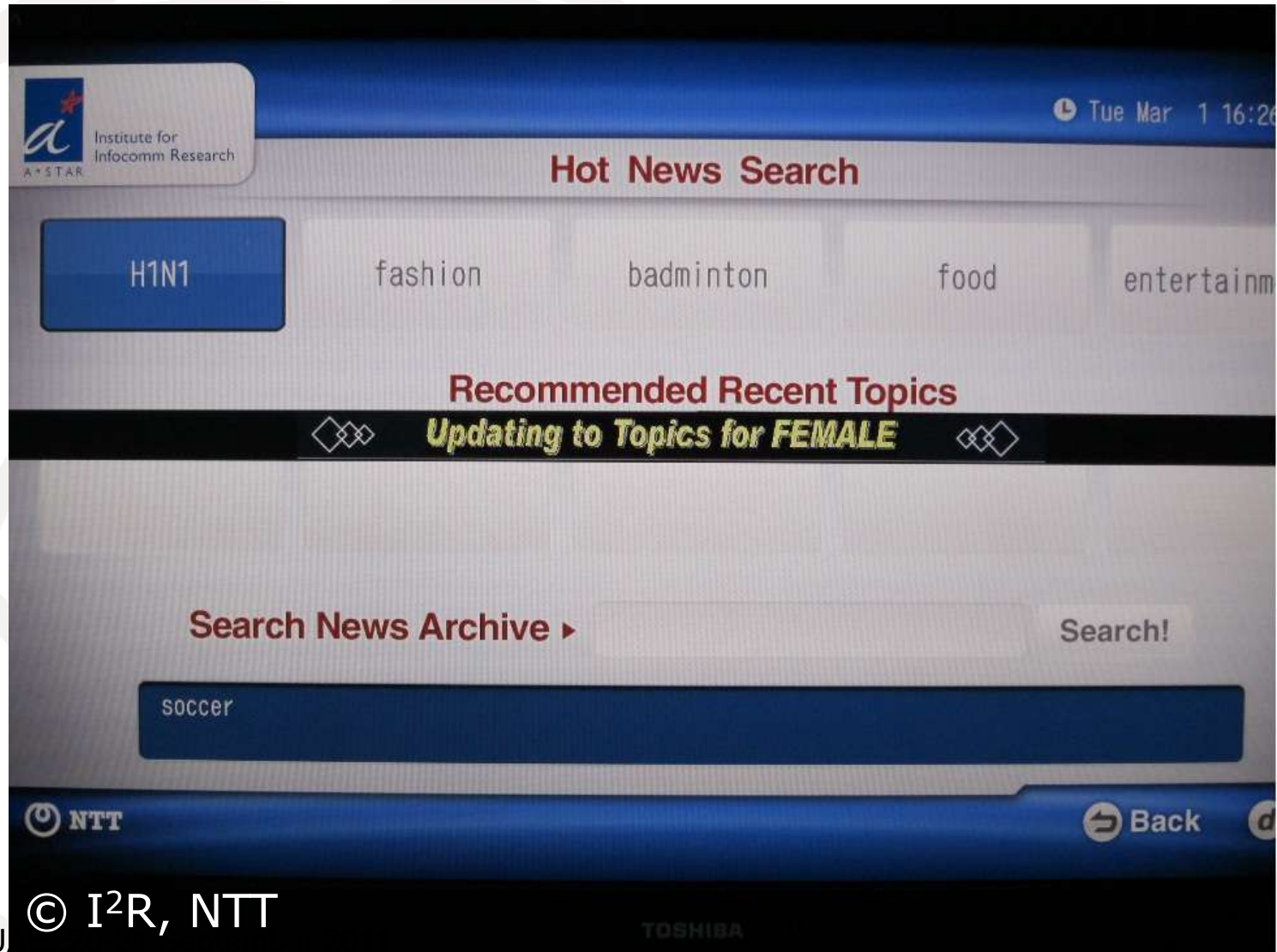
- IPTV with a help of external devices such as camera, weight scale, etc., can provide a wide range of services with Accessible UI



Person Recognition on IPTV



Recommendation using Person Detection



IPTV for E-health

IPTV widget

Consolidated reports

Server

Phone working as gateway

Normal programme



Blood pressure meter

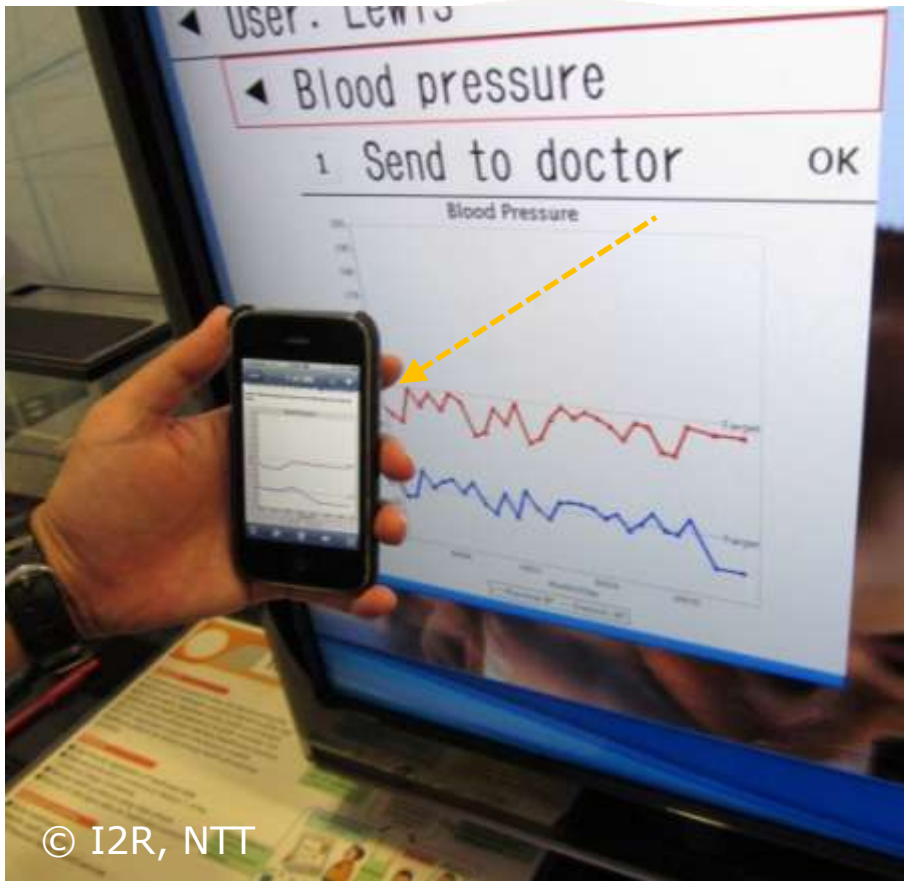
Pedometer

Scale

© I2R, NTT

Widget implemented with LIME (ITU-T H.762) for e-health information collected from the user site, consolidated in the server backend and displayed on users' IPTV terminal device as a widget.

Accessible E-Health



© I2R, NTT

LIME app does:

- Obtain health data and shows it on TV
- Allows the user to send data to the doctor via e-mail
- TV screen displays reply from the doctor with his professional advice



■ Such an application is extremely useful for patients with chronic ailments, such as diabetes.

Remote Power Control on IPTV (1)



© I²R, NTT

Dubai, UAE, 20-21 September 2011

Remote Power Control on IPTV (2)



Dubai, UAE, 20-21 September 2011

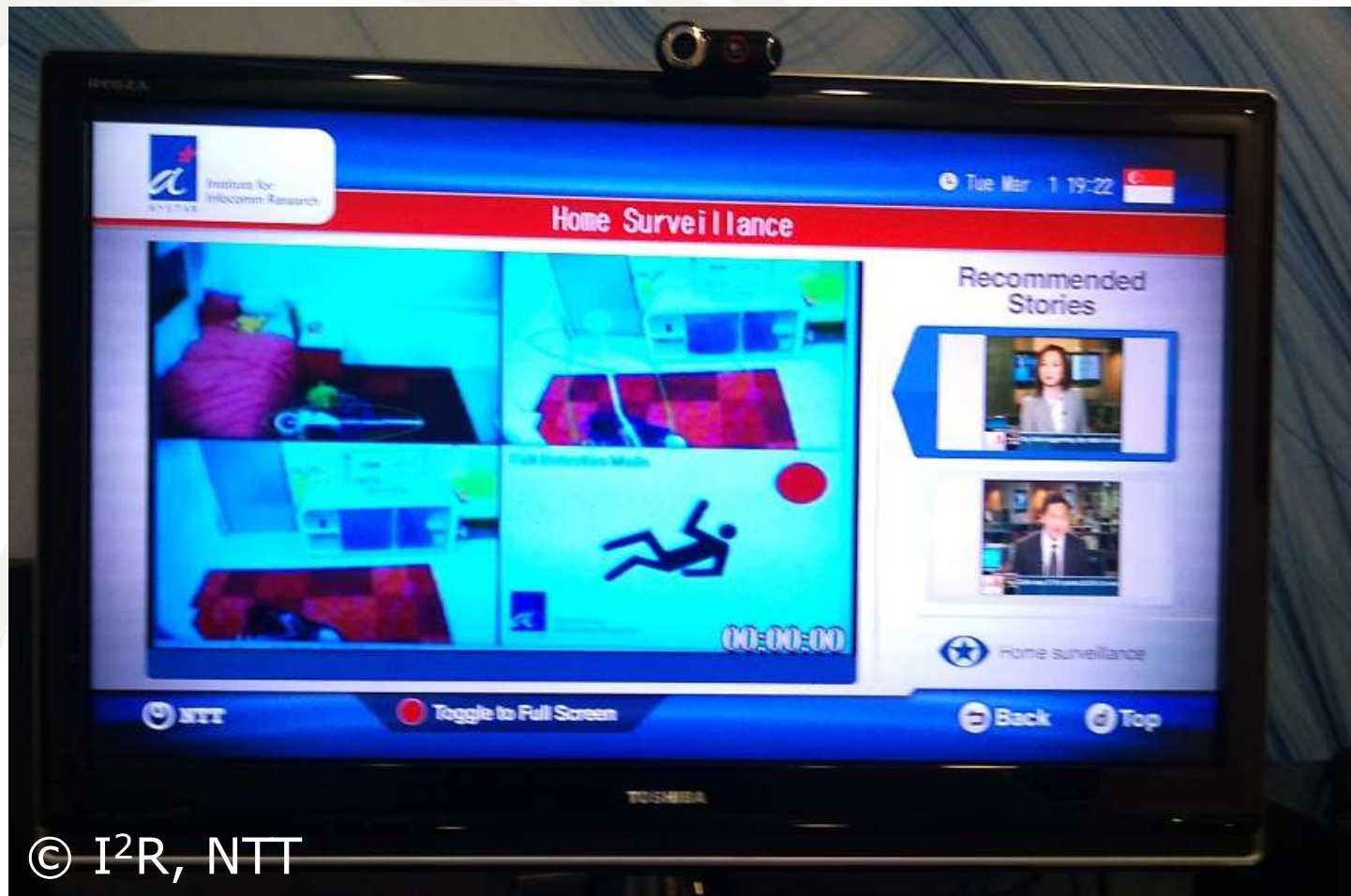
Surveillance on IPTV -- fall-detection --



Dub

© I²R, NTT

Surveillance on IPTV -- fall-detection --



Conclusion

- IPTV can be a UI that bridges digital divide
- Standardized, Managed IPTV is important for Accessible UI
- There are already many ITU-T IPTV Applications and Use cases that provide Accessible UI to individuals.
- ITU-T's IPTV and its work on Media Accessibility is the key for reaching the Media Have-Nots of the Developed and Developing Worlds