International Symposium on Diffusion of Telecommunication Relay Services and Information Accessibility

Telecommunications Relay Service

Andrea J. Saks: Chairman

ITU-T Joint Coordination Activity on Accessibility and Human Factors (ITU-T JCA-AHF)

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International Symposium on Diffusion of Telecommunication Relay Services and Information Accessibility

Part 1: "TRS" in the USA, the Beginning and why we need Relay Services

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The Beginning

Three Deaf Men Changed the World

Robert Weitbrecht
Andrew Saks
James C Marsters

Liberated the Telephone and that enabled deaf people to have a political voice that is now heard around the world!
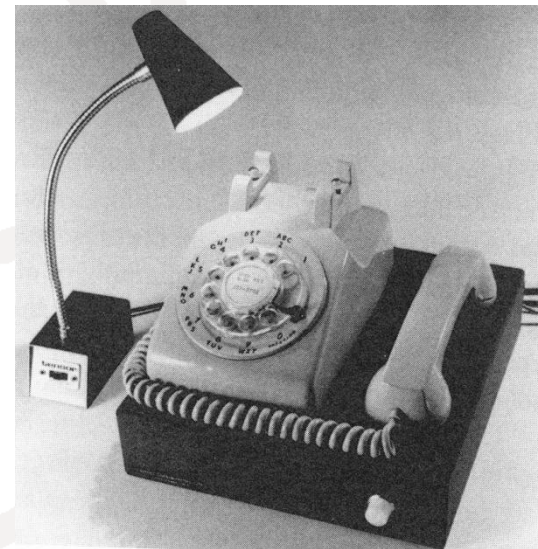
A Historical View of events

- In the 1960's they and their tiny company, Applied Communications Corporation (APCOM) created the first successful deaf telephone network with a modem and a surplus TTY.

Surplus model 15

Phonetype acoustic coupler

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Overview

- **A Quick Historical View of events**
  - 1960's the first USA Deaf Telephone Network starts with 5 stations, one with Grandma!
  - For the Deaf by the Deaf working together reconditioning teleprinters/telex machines.
  - TDI: Teletypewriters for the Deaf Inc. allowed to receive surplus telex machines.
  - Compatibility without Standards so far so good as only in the USA.
  - Beginning of 1973: The British Post Office gives permission for 5 Stations**!**

Overview

The beginning of Relay Services

- The first idea with a normal answering service using two telephones and two textphones (TTY).

- Result? Andrew Saks ordering room service in a Hotel via TTY. Breakfast is served in New York but ordered from a California answering service.

- In the USA, Paul Taylor starts the **First Relay Service,** enabling many deaf people to subscribe and "talk" to hearing people in the early 70's.

- All relay services have human beings as the interface. They are called CA's, Communication Assistants or Relay Service Operators.

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Types of Relay Services

- Text Relay Service using a typing device, with or without VCO (voice carry over) and often called "TRS" as the T stood for TEXT.

- Video Relay Service for sign language with facial expressions and some lip reading.

- CapTel/Web CapTel Relay: the user with his own voice, speaking directly (VCO) to whom he calling but receiving reply in text so no need to type. This is transparent!

- Speech to Speech Relay for those who may have hearing but speak with difficulty.

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For those wish to use their Voice

■ Captel Relay device for speaking and receiving text for people who wish to speak directly to whom they are calling. It is a transparent Process.

Who needs Relay Services?

- Deaf persons and Hard of Hearing Persons

  1. People who use sign language with or without speech and there are as many sign languages as countries on the planet if not more.

  2. Some deaf people do not sign or who are in a country where they do not know the sign.

  3. People who are deafened later life either medically or through age and who mostly likely do not sign and most can speak.

  4. People who have severe hearing impairment but can speak and do not sign.

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Who needs Relay Services?

- Deaf Blind People
  1. There are no two people alike.
  2. It is not total darkness and total silence.
  3. It is possible to use Text Relay Services and Video Relay services with assistive technology.
  4. Famous deaf/blind Helen Keller could speak.

- People with Voice impairments
  1. Specially trained communication assistants or relay operators who listen and can understand distorted voices and speak for people who wouldn't otherwise be understood.

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Embracing total conversation

- A deaf-blind woman uses multimedia communication (ITU-T F.703 service description):
  - She uses sign-language
  - She receives text
- Also for emergency services (Outreach 112)

Voice, video, text relay

refreshable Braille device

10
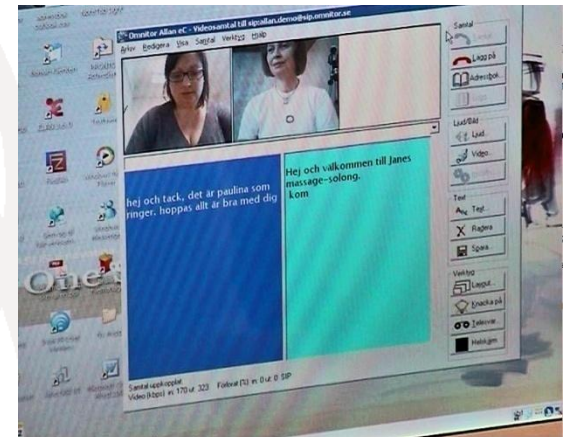
Would you trust this child to run your life, do your banking ?

- I am the tiny girl with dark hair!

The first Deaf Telephone and Relay Service

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Why People need relay Services

- Relay Services connect people to the hearing world in real time.

- Establishing independence & not having to rely on children, family, friends or strangers.

- A personal private phone call with a doctor, lawyer or their child's teacher via a relay.

- Everyone answers the phone in real time.

- Email, instant messaging and SMS not real time and not reliable for real time tasks.

- Jobs and Education changes with Relay.

- Relay Services connect people to Real Life!

What is next to Discuss in Part 2

Future Global inclusion

- Standards: Every relay service should be international like the hearing phone.
- How we presently Access relay services
- International numbering for access.
- Who should pay and equivalent service under article 9 of the UNCRPD.
- ITU's involvement and inclusive Policy.

Contact

Andrea J. Saks

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Thank You

An Overview of Video Relay Services in Europe

Jeff McWhinney

Acknowledgments

- European Union of the Deaf
- CRTC's report from Mission Consulting
- OfCOM (UK Telecom Regulators) papers

Video Relay Services. Why?

Video Relay Services

- Both callers speak/sign at normal speeds

- Both callers use their preferred language

- Human factors easier to identify and respond to

Text Relay Services

- Callers communicate at the fastest typing speed (4-5x slower than speech)

- Must have fluency in their country's written language

- Typed output make it harder to grasp human factors

Types of Video Interpreting

Video Relay Services

SignVideo Video Relay Service

1. BSL user signs to the interpreter
2. Interpreter speaks to the telephone user
4. Interpreter signs the response
3. Telephone user responds

Video Remote Interpreting

SignVideo Remote Interpreting

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The Technology utilised in VRS

- Internet connection

- Fixed Broadband & videophones/webcams

- Mobile (3G/4G) Broadband & video calling Apps

- Specialist Video Contact Centre & Platform standards

European countries with VRS

Covered in detail today

- Sweden (S) 1996

- Germany (D) 2005

- Great Britain (GB) 2004

- Switzerland (CH) 2011

- France (F) 2009

VRS also available in:

- Norway
- Spain
- Portugal
- Ireland
- Hungary
- Iceland
- Poland
- Belgium
- Holland
- Finland
- Australia
- New Zealand
- And of course, The United States!

Number of national VRS providers

- S – 1 provider – Bildtolk

- D – 3 providers – TESS, Viable & TeleSign

- GB – 2 providers – SignVideo & Deaf Network UK

- CH – 1 provider – ProCom

- F – 3 providers – Elision, Tadeo & Viable

Deaf sign language users per qualified sign language interpreter ratio
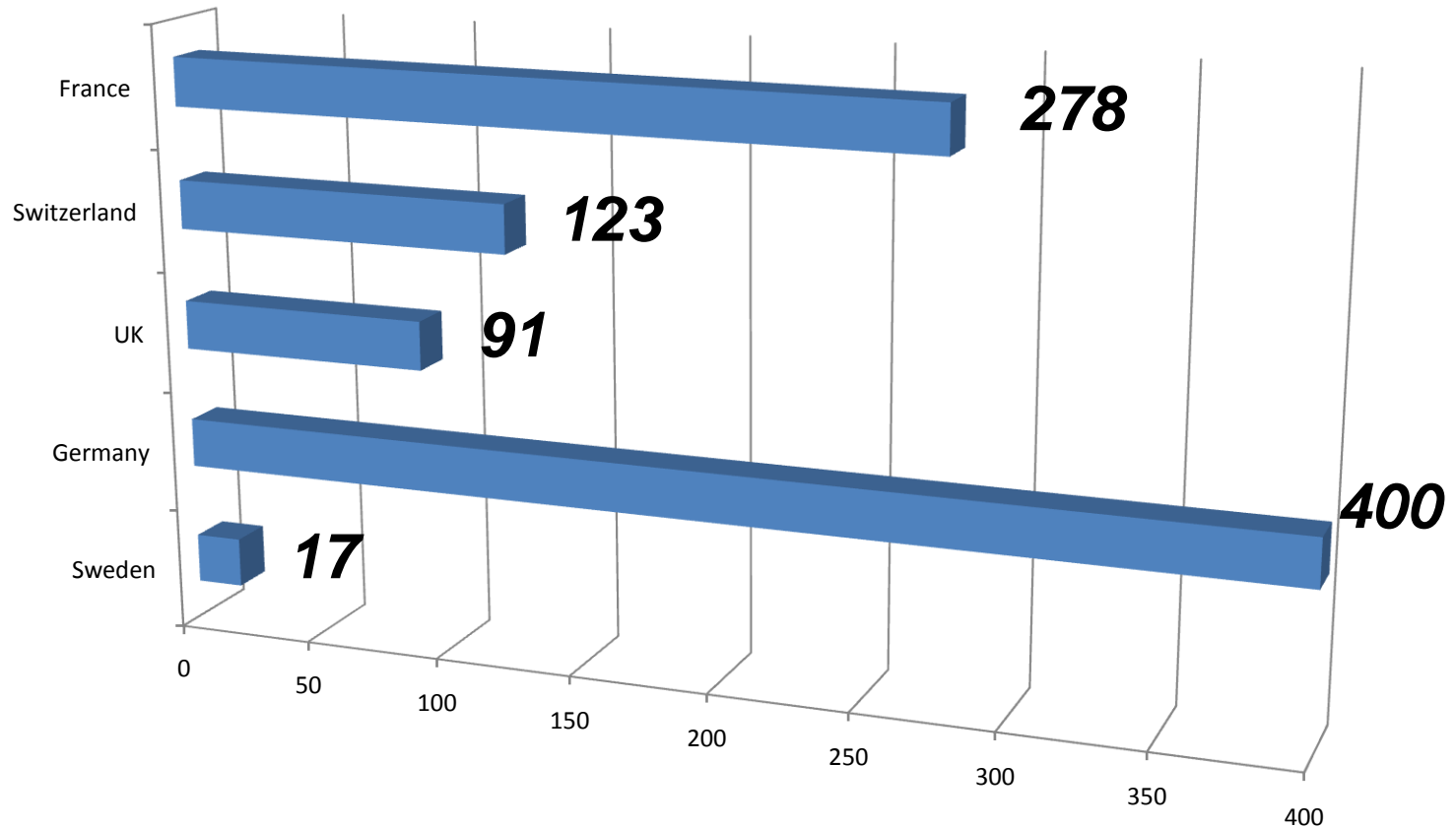
Opening hours (& days)

	Mon-Fri		Weekends	
	Open	Close	Open	Close
Sweden	08:00	21:00	10:00	16:00
Germany	08:00	19:00	09:00	13:00
UK	08:00	18:00		
Switzerland	09:00	17:00		
France	07:00	19:00	09:00	12:00

The Legal framework facilitating VRS

- S – Telecommunications Act, Rehabilitation Act, Universal Services - National Telecom and Postal Agency

- D – Telecommunications Act, Universal Services - Deutsche Telekom, Bundesnetzagenteur

- GB – Equality Act – No regulators appointed

- CH – No specific legislation – supported by Eidg. Büro für die Gleichstellung von Menschen mit Behinderungen

- F – Telecommunications Act, Universal Services (now suspended)

Social Impacts and benefits (UK)

- Deaf self-employment increased by over 900%

- Deaf value and contribution increased in society: number of calls initiated by hearing people increased by over 600%

- Reduction in barriers to employment

- Deaf person value as an employee increased

- Skill set of sign language interpreters enhanced

Thank you for listening

Jeff McWhinney

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Telecommunications Relay Service(TRS)
in Korea to guarantee the hearing·speech handicapped people's rights of access to telecommunications

2013. 11. 23

WOAN-SIK, CHOI / Director
Digital Inclusion Planning Dept.
National Information Society Agency

NIA
NATIONAL INFORMATION SOCIETY AGENCY

Table of contents

1 Present status of National Information Society Agency (NIA)

2 Outline of Telecommunications Relay Service (TRS)

3 Present status of Telecommunications Relay Service (TRS)

Purpose of establishment

▶ Developing policies related to national information society, expanding services, protection of privacy, creating healthy information culture, and resolving digital divide to form creative foundation of intelligent information society and contribute to realizing people's happiness (Article 2 of the Articles of Association)

Ground of establishment

▶ Article 14 of Basic Law of National Informatization

History

▶ January 1987 Established National Computerization Agency (NCA)

▶ January 2003 Established Korea Agency of Digital Opportunity (KADO)

▶ October 2006 Changed the name from National Computerization to National Information Society Agency

▶ May 2009 Integrated and launched as National Information Society Agency (NIA)

Progress

- Study on the scheme of introducing Telecommunications Relay Service for hearing or speech impaired people to use phones (Nov. 2004)

- System establishment of Telecommunications Relay Service and test operation (Started test operation: Nov. 2005)

- Expanded operation of telecommunications relay service on NateOn (Nov. 2006)

- System established for Telecommunications Relay Service on mobile phones (3G, SMS) and integrated operation of telephone number (1599-0042) (July 2009)

- Expanded service of telecommunications relay service for 24 hours on 365 days (Nov. 2010)

- Test supply of telecommunications relay service on free apps for smart phones (My People, Tango, and Face Time) (Dec. 2011)

Service types

Text Relay Service

Input contents of a call into text and a mediator sends the contents to a recipient and the voice contents from recipient is sent back to the handicapped by the mediator again.
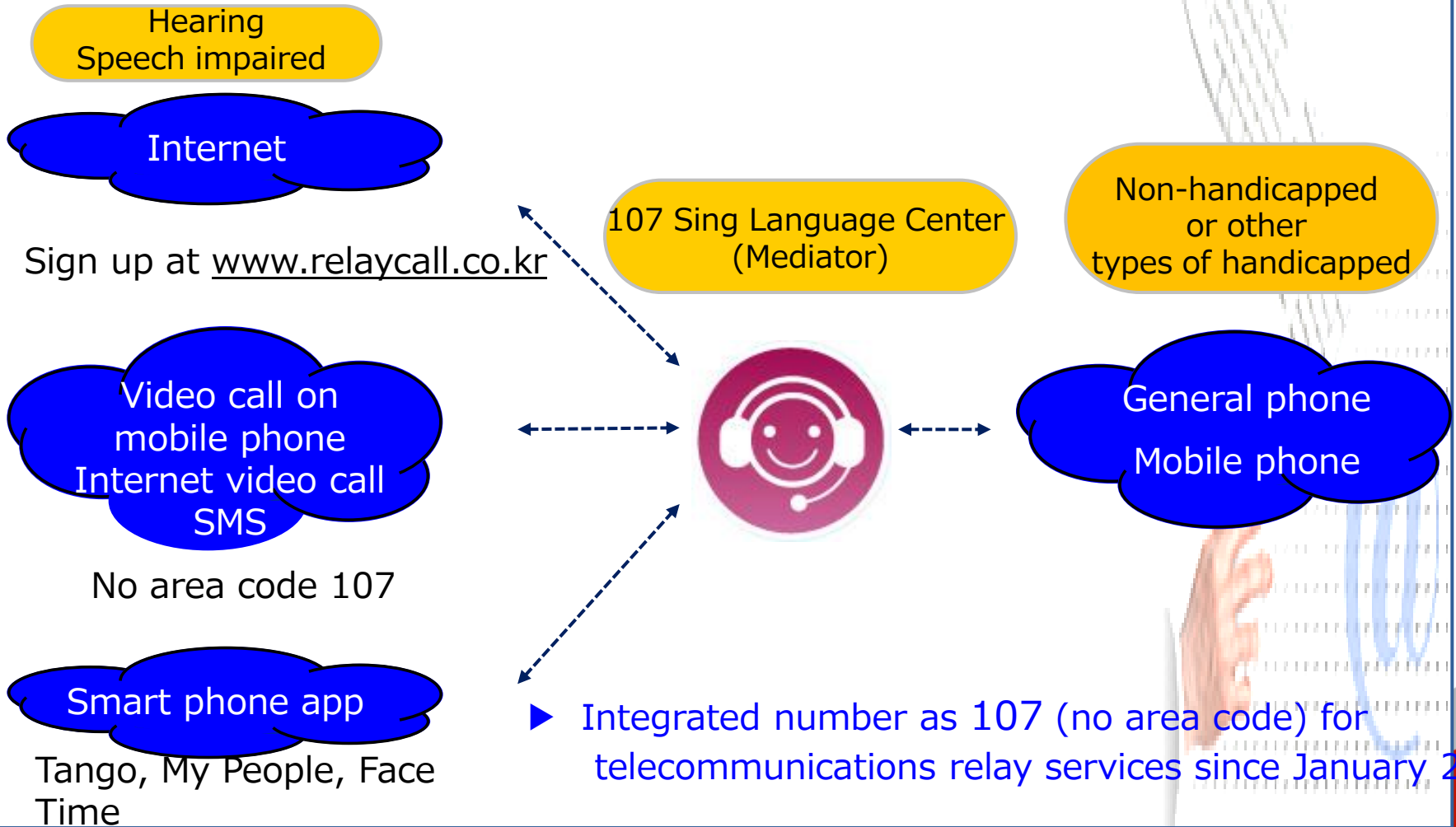
Video Relay Service

A mediator sends the contents of call with sign language on video and the mediator sends the contents to a recipient with voice, and the recipient's story is again sent back with sign language by the mediator

Speech-to-Speech Relay

▶ Voice Carry Over: For those who can't hear but can speak

▶ Hearing Carry Over: For those who can hear but can't speak

How to access

Hearing
Speech impaired

Internet

Sign up at www.relaycall.co.kr

107 Sing Language Center
(Mediator)

Non-handicapped
or other
types of handicapped

Video call on
mobile phone
Internet video call
SMS

No area code 107

General phone

Mobile phone

Smart phone app

Tango, My People, Face Time

▶ Integrated number as 107 (no area code) for
telecommunications relay services since January 201

Operation status by year

Category	2005 (Nov-Dec)	2006	2007	2008	2009	2010	2011	2012	2013 (Jan-Aug)
No. of mediator	3	5	14	29	29	26	29	30	30
No. of service (day)	43	241	295	335	365	365	365	366	243
No. of mediation (case)	2,021	33,371	108,315	191,808	307,097	386,354	505,478	527,001	401,699
Service offer hours	5 days a week (Mon-Fri) 9 hours per day (10:00-19:00)	5 days a week (Mon-Fri) 12 hours per day (09:00-21:00)	6 days a week (Mon-Sat) 12 hours per day (09:00-21:00)	7 days a week (Mon-Sun) 13 hours per day (09::00-22:00)		Open all year 24 hours a day, 365 days (November 2011)			
Text : Video	73 : 27	81 : 19	66 : 34	58 : 42	55 : 45	59:41	63:37	65:35	67:33

Major services in use

Shopping (59.1%) > Job searching and work (16.6%) > Call family (7.2%)> Government offices (6.8%) > Financ

Facilities and staff at Sign Language Center

🔵 Present status of facilities and devices

▶ Facilities: relay service room 1 (165㎡/about 50pyeong), training room 1(83㎡/about 25), lounge, etc.

▶ Devices

• PC Pentium 32 unites, LCD TV 2 units, headset 30 units, web camera 31 units

• Internet video phone 4 units, mobile phone 5 units

• IP-PBX(switchboard) 1 unit, Web Server 2 units, DB Server 2 units, etc.

🔵 Staff

▶ 30 sign language interpreters and text mediators provide telecommunications relay service for 24 hours for 365 days

▶ Weekdays staff work 5 days a week and 8 hours a day as flexible working hours

▶ Four night staff members work every other day with a partner as a team (From 19:00-9:00 the next day)

Thank you

Thai Telecommunication Relay Service

Presentation at 2013 Japan Symposium

Date: November 23, 2013

By

Somyos Sundaravibhat
TTRS Director
and
Withayoot Jay Bunnag
TTRS Advisory Committee

About NBTC, TTRS, AND NGOs

- National Broadcasting and Telecommunication Commission (NBTC) was established in 2010 as a broadcast and telecoms regulatory body in Thailand.

- NBTC forms the Universal Service Obligations (USO) Division which relies funding of 3.75% from revenue of telecommunication corporation to promote and develop telecommunication for remote areas and disadvantaged people.

- NBTC spent 1.5% from USO fund for TRS.

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About TTRS, NBTC, AND NGOs

- TTRS established in 2011
- TTRS is not for the profit organization, working under Universal Foundation for People with Disabilities.
- TTRS is annually supported and funded 2 Million USD by NBTC.
- TTRS has to provide the commission with proposal every 5 years for the plan and expenditure according to 5 year USO Plan.

Current statistical data of Thai Pwds

- Up today, there are 1,356,003 persons with disabilities that registered in pwd registry of National Office for Empowerment of Persons with Disabilities (NEP)*

- There are 217,968 persons with hearing loss (deaf)

- Deaf populations is second largest within disabilities group (16%) behind physical handicapped (46%)*

*Source: National Office for Empowerment of Persons with Disabilities (updated on March, 2013)

Current statistical data of Thai PWDs
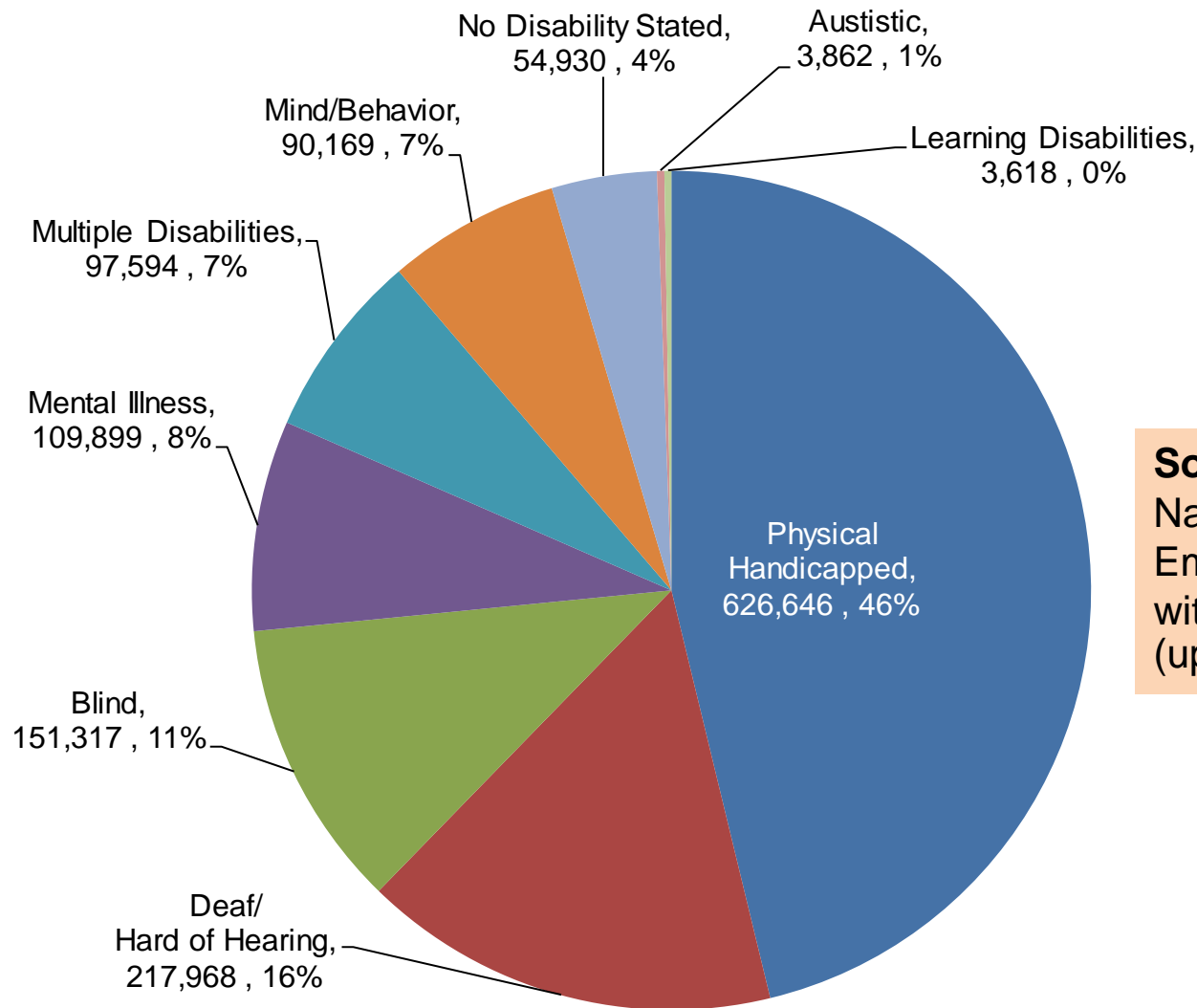
Source: National Office for Empowerment of Persons with Disabilities (updated on March, 2013

- No Disability Stated, 54,930 , 4%
- Austistic, 3,862 , 1%
- Mind/Behavior, 90,169 , 7%
- Learning Disabilities, 3,618 , 0%
- Multiple Disabilities, 97,594 , 7%
- Mental Illness, 109,899 , 8%
- Physical Handicapped, 626,646 , 46%
- Blind, 151,317 , 11%
- Deaf/ Hard of Hearing, 217,968 , 16%

Services of TTRS

6 services of TTRS

| SMS/MMS Relay service | IP Text relay Service | Video relay Service | VRS via Mobile app | VRS via Kiosk | Emergency relay service |

New service of TTRS

Speech enhancement service for persons with laryngectomy

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Activities of TTRS

- **Services**
  - Service Level Agreement set to:
    - Success of picked up calls must be equal or greater than 85% of times
    - Success of responded times must be equal or quicker than 20 seconds per call
- **Problems encounter:**
  - One of most frequent problems: quality of video due to poor internet speed at user's point
  - Installation kiosk at schools for the deaf, had to put separated ADSL line to prevent low internet speed at schools

Improvement

– New interpreter agents are given training workshop sessions with other organizations especially NEP and Ratchasuda College and Suan Dusit University

– Once a year, held a meeting with selected one hundred frequent called users to share feedbacks

- **Language Access**
  - Thai to Thai Sign Language, Thai Sign Language to Thai
  - Thai Sign Language is natural and first language of deaf people
  - Thai text conversation help hard of hearing people who do not know sign language

Method and Good Impact

- **Recognition**
  - Gain respect for deaf people
- **Understanding**
  - Family of deaf children understand what children need
- **Independence**
  - Deaf users can contact anyone, anywhere

# Method and Good Impact

- **Collaboration**
  - Create partnership with local deaf organizations, government offices for person with disabilities, public place such as police station, hospital, schools to create access for deaf people
- **Innovation**
  - Constant creation for better quality of service such as relay through mobile phone, operator room setting, sign language interpreting on WebTV

Service Result

The result of TTRS services in 2012-August 2013
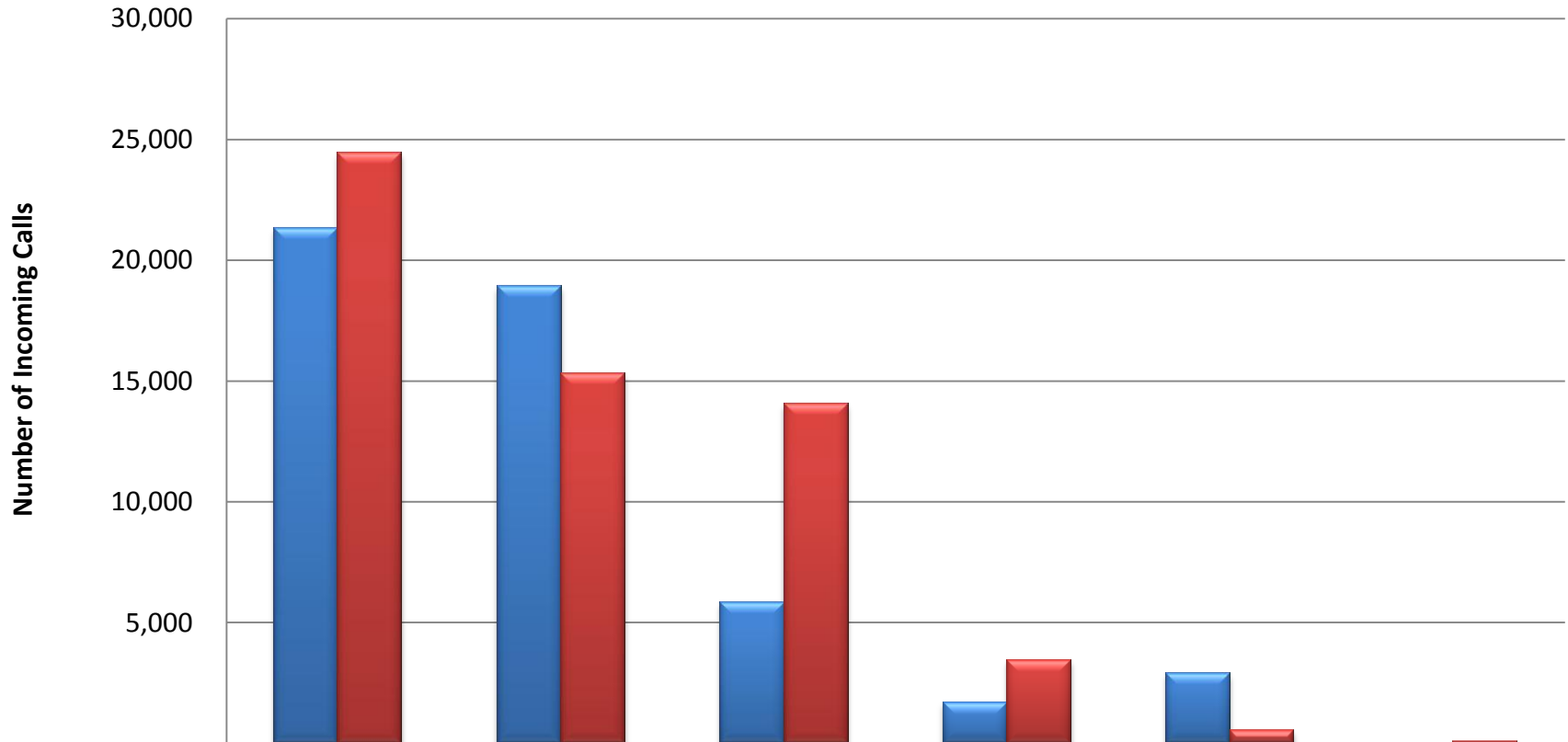
	Kiosk	VRS	SMS	IP Text Relay	Emergency VRS	MMS
■ Jan-Dec 2012	21,331	18,917	5,826	1,714	2,888	
■ Jan-Aug 2013	24,444	15,299	14,043	3,449	545	106

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Challenge

- **Speed**
  - Lack internet coverage around Thailand
  - Currently on 3G, Newly introduced 4G, faulty in some spots
- **Interpreting**
  - Small number of interpreters thus long queue at during highest number of calls
- **Interpreters**
  - Quality of interpreting, more experience and training needed
- **Technology**
  - Require use of better telecommunication technology means more money for deaf users to buy, many deaf do not make enough money
- **Funding**
  - Require large amount of money to improve technology infrastructure and service

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Future Plan

- Improve Emergency Relay Service

- New kiosk with two cameras and ID check

- Video phone to be installed in all deaf clubs (77 clubs) in 77 provinces.

- Deaf individual can purchase video phone for personal use

- Relay through mobile phone/tablet

- QR Code

THANK YOU

TTRS Thailand

www.ttrs.or.th

Current Trends and Future Challenges for Telecommunication Relay Service in Japan

Masayuki INOUE

Tsukuba University of Technology

Masayuki INOUE

- lost hearing at the age of one due to fever
- Associate Professor at Tsukuba University of Technology, Japan
  - research interest:
    information communication technology(ICT) especially telecommunication network accessibility from the viewpoint of deaf and hard-of-hearing people

Current trends for TRS in Japan

- Diffusion of facsimile as telecommunication method for deaf and hard-of-hearing in Japan(in 1980s)
- facsimile relay service within public sign language interpreter service in a few areas

- JiritsuCom, Inc. :
experimental TRS service(6 months from Dec. 2000)
  →Dec. 2002:Full TRS service operation started
    - text relay service using WWW chat etc.
    - 3,000 yen per year for personal user
    - 365 days, from 9:00 am to 9:00 pm
    - call from deaf/hard-of-hearing users supported
  – Mar. 2004: stopped due to unprofitability

※photo : Courtesy of JiritsuCom, Inc.

- Several companies provided TRS service---almost all the companies stopped service due to unprofitability within a few years...

- Now, several companies is providing TRS service
  - Ex. :PLUSVoice Co.,LTD(from 2004-）:
    365 days, from 8:00 am to 8:00 pm
    only support call from deaf/hard-of-hearing users
    300 yen per call etc.
    supports video-chat, text-chat, fax, e-mail etc.

Trial of TRS service
by Nippon Foundation

- from Sep. 2013～Mar. 2014
- TRS service: Free of charge
- provides text relay and video relay
- commissioned service provider:
3 companies & 3 organization, total 6 providers
  - all providers do not support "24 hours, 365 days"
  - only support call from deaf/hard-of-hearing users

Challenges for the future of TRS in Japan

- the largest problem…
  - Who shall be responsible for operating TRS service?
  - Who shall pay for cost of TRS service?

- towards TRS service completely equivalent to public telephone service
  - 24 hours, 365 days
  - support for two-way communication
  - support for access to emergency call service
  - suport for various type of TRS such as VCO, HCO, etc.

- misc：
  - quality of service such as confidentiality, accuracy of conversion etc.

  - promotion of TRS service to the public

Lastly…

– by Eiko MIZUNO："To improve services for hearing-impaired being difficult to communicate by telephone"
from Life Design Report, Oct. 2013, Dai-ichi LIFE Research Inst.

Inconvenience felt by hearing-impaired in reservation and application for service	%

(x-axis: 20, 40, 60, 80 %)

- obliged to go to shop/service station because of impossibility to phone — 69.4
- Delayed or no response to FAX — 42.4
- couldn't get fax number — 41.7
- annoyed by the request to give phone number during using WWW service — 41.7
- obliged to ask someone for phone — 38.2
- difficult to visit shop/service station during opening hour — 37.5
- couldn't get e-mail address — 36.1
- Delayed or no response to e-mail — 34.0

existence of need for TRS!

（n=144）

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Telephone:

- 1886: invented by Alexander Graham Bell
- 1887: imported to Japan

  …

- Now(2013), teleplone service is not yet fully accessible for hearing-impaired in Japan
- We, deaf and hard-of-hearing people, can no longer wait for "A phone of our own"(=TRS)!

Thank you!

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Tokyo, Japan, 23 November 2013

International Symposium on Diffusion of Telecommunication Relay Services and Information Accessibility

Part 2: The ITU-T and Accessibility: The need to make Relay Services International and Transparent

Andrea J. Saks: Chairman

ITU-T Joint Coordination Activity on Accessibility and Human Factors (ITU-T JCA-AHF)

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What is next to Discuss in Part 2

Future Global inclusion

- Standards: Every relay service should be international like the hearing phone.

- How we presently Access relay services

- International numbering for access.

- Who should pay and equivalent service under article 9 of the UNCRPD.

- ITU's involvement and inclusive Policy.

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Why promote and create accessible ICTs, Assistive Technology and International Relay Services?

- It is a human right recognized in the UN Convention on the Rights of Persons with Disabilities (UNCRPD):Enshrined in Article 9

    - **Article 9 of the UNCRPD defines ICT accessibility as an integral part of accessibility rights on par with transportation and the physical environment.**
    - **Article 9 concerns all ICT products and ICT based applications and services, with a far-reaching implication for industry, governments and civil society**

- All of us who age will have age-related disabilities, We all (100%) can benefit from more accessible devices and services. We will need relay services.

Malcolm Johnson ITU-T Director of the TSB

- Malcolm Johnson Accessibility Advocate Reorganized the ITU-T to include persons with Disabilities so they could participate in Standards at ITU
  - WTSA 12 Res.70 Rev Dubai
  - PP 10 Res. 175
  - Fellowships
  - Sign language/Captioning
  - Focus Groups
  - Remote participation

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We Need Persons with Disabilities to play a part in society

- **Relay Services need strong non-proprietary International Standards for transparent international access**

- **Simple international numbering for usage globally so that any person with disabilities can access them anywhere in the world**

  - All countries and relay services providers are invited participate in the work of Q26/ SG16
  - Mobile phones and pads should be included
  - There needs to be easy access to relay services with simple short numbers Q4/ SG/2
  - Interoperability and access, Global connectivity in all countries to enable all to be a part of society.

Who pays for Relay Services In the USA

- STATE TRS AND CAPTEL is still funded by the Levy which is a charge that ordinary consumers pay on their phone bill and is approximately $1.50

- INTER-STATE TRS AND CAPTEL, IP TEXT,IPCTS, STS AND VRS is funded by the TRS FUND administered for the FCC by ROULKE, LOUBE AND SALTZER. The fund is made up from contributions from the Telecommunications companies.

- FEDERAL RELAY:TRS,CAPTEL,VRS etc. is funded by the Federal Government.

- The consumer of relay does not pay anymore than a normal phone call to use the relay.

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Who pays for the equipment

- Some USA States have programs to provide equipment free to users
- Some Relay companies and Telecommunications companies provide free or subsidized discounts for equipment when the person subscribes to their relay Service.
- Some companies provide Apps for mobile phones for their relay services.

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How we presently Access relay services in the USA

- With too many numbers. It used to be just 3 numbers. 711 in the early days.

- Deaf people have to register to get their own ten digit number in the USA.

- There was a problem that different relays services could not contact other relay services. That is not the case now. People with different disabilities can contact others.

- Emergency services are the same for all. 911 handles all communications directly.

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New Standards Need Persons with Disabilities to participate

- Engineers and standard writers need Disability scenarios from the very people who require the accessibility features to write good Standards

  - New Standards need industry assistance implementation for globalization and PWD's

  - Persons with disabilities now participate in person or remotely with captioning and sign language in the ITU standards processes.

  - ITU-T in Q26/16 is working on two technical papers for relay services with the participation of PWDs

USA: The first Deaf Telephone Network

- The Deaf created and made their system work themselves long before relay services started
- Photo: Sally A. Taylor wife of Paul Taylor founder of relay services pictured below

- Reconditioning teleprinters/telex machines donated to TDI Inc.
- It was by the Deaf for the Deaf working together with Western Union Volunteers and the Telephone Pioneers of America

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First TTY Transatlantic Call: 1975 when we had compatibility

- Due to anti-trust regulation, data was not allowed across the transatlantic voice network. FCC waived the rule for this call for one day only.

- What it meant to USA and UK Deaf people could "talk" (text) over the trans-Atlantic-voice telephone network, using data or i.e. text long before email or SMS.

- Faxing across the transatlantic network was now legal because of the Deaf, by proving that data was personal communication.

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The Progress in the UK Deaf People did it Themselves

- The Breakthrough Trust (a deaf and hearing non-profit group) joins forces with APCOM

- GPO gives 5 Creed Teleprinters to Breakthrough

- January 1973 GPO gives permission for 5 experimental Stations to start

- ASCII 8 bits versus BAUDOT 5 bits begins to raise its head late 1970's and early 1980's but no standards existed yet and no relay service in the UK

- Later the RNID broke the interoperability deciding with the BT that new was better and went with Telecom Gold and a CCITT V21 300 baud modem

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The beginning at ITU: 1991

- Gary Fereno, US State Department & AJS

Father of V.18, Dick Brandt

- He wrote most of ITU.T V.18
- Saved Baudot protocol from being deleted from V.18
- 1st rapporteur for the Disability question in ITU-T
- Recipient of the TDI Robert Weitbrecht award
- Invited AJS to ITU to help in 1991

Gunnar Hellstrom
F.703 Total Conversation author

- What is Total Conversation?

- Real Time Text, Video and Voice

- Disability Rapporteur after Dick Brandt

  - Improved V.18
  - Author of the Accessibility Checklist

- Relay Services

  - Implemented Total Conversation in relays and in Emergency Services in the EU Reach 112 project.

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ITU makes IPTV accessible

- Focus Group on IPTV
  Established 2006-04; Completed 2008-01

  - Accessibility features mainstreamed Standard **(ITU-T Y.1901)**

- Subtitles/Audio description

- Real time captioning

- Recording accessibility features for playback

- Audio feedback for the remote control and EPG

ITU-T Focus Group on Audiovisual Media Accessibility 2011

- The work continues and everyone can participate on Focus Groups.
- Proposed by ITU-T Study Group 16: the lead Study Group on Accessibility.
- It is a joint effort of ITU-T, ITU-R and the European Broadcasting Union (EBU)
- Focus Group finished in October 2013
- Now the work is being divided between ITUQ26/16 and SG 6 of ITU-R

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Without International Standards there cannot be Accessibility for Persons with Disabilities

- Without the involvement of Persons with Disabilities in the standardization process, it will be more difficult to create good Relay Services that actually work.

- Without **Universal Design** being used from the very beginning of the standard writing process, implementation becomes expensive with retro refitting.

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Final Message

- Accessibility difficulty is expressed everyday with new barriers that are being created by new technology especially those with proprietary standards.

- If Industry, all Standards Organizations and regulators will work together, then it is possible to have globalized Accessible ICTs, Telecommunications, and Relays with International Standardization.

- Relays need Gateways or Session Border Controllers to be updated to have international interoperability.

- People need relays to have full lives for work, family, friends, education and to contribute back to society.

Contact

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A Video without "words" by CSD

- A vision by CSD of what Deaf people and everyone wants in reality

- Founded in 1975, Communication Service for the Deaf, Inc. (CSD) is a private, nonprofit organization dedicated to creating and providing technologies and services that benefit deaf and hard of hearing individuals. CSD helps break through barriers created by lack of communication access in order to generate opportunities for people who are deaf and hard of hearing. We understand the importance of effective communication, and we appreciate the value of a qualified interpreter. With staff that knows the needs of the deaf and hard of hearing firsthand, CSD has been a leading human services and technology innovator from the very beginning, providing tools that contribute to a positive and fully integrated life.

Thank you

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