

January 23, 2014

VIA ELECTRONIC FILING

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: Ex Parte communication to the Technology Transitions Policy Task Force on Accessibility to communications for persons with disabilities during the TDM to IP transition.

GN Docket No. 13-5 and WC Docket 12-353

Dear Ms. Dortch:

From RERC Telecommunications Access / Gunnar Hellström Omnitor.

The RERC Telecommunications Access want to attract the attention of the Technology Transitions Policy Task Force to some important considerations for the access to communications for persons with disabilities when the IP transition is made.

IP technology has a very good potential to bring good functionality and improved access to communication for persons with disabilities. But there is a clear need to encourage deployment of harmonized solutions with good functionality and interoperability to enable the move to IP for some users with disabilities.

The FCC can have an important role in these encouraging activities. Without such activities, there is an evident risk that a large number of persons with disabilities will get reduced opportunities to use electronic communication, and be locked out from the communication society.

A lot of work has already been done to explain the situation and propose solutions. It is therefore not needed to make lengthy explanations here. Instead we want to highlight some important situations and refer to recently published documents for further details.

Who have not yet moved to IP communications?

Many users with disabilities have already seen the great benefit of the IP based communication and were early movers to IP based communications. One such group are the users of Sign Language for whom the opportunities of using sign language in video communication has implied a dramatic improvement in communication access. With the availability of video relay services manned with sign language interpreters, it has become easy to have communication also between voice phone users and sign language users. These users had no good access in PSTN. Use of video for these

purposes started in digital networks around 1996 and is steadily growing and improving.

Another group who have access both over PSTN and IP are the users of Captioned Telephone Services, who need captions to support voice communication because of a hearing loss. This service is aiming at communication between hearing voice telephone users and deaf or hard-of-hearing users who are not primarily sign language users.

But a group who are left behind and not provided with widespread IP-based alternatives in USA are text users who want to combine text and voice in direct communication with others. These users are using the TTY:s made for PSTN only. The TTY:s feature good flow of conversational text between a caller and a callee, so that the receiver can read the text while it is being typed, without the delays in waiting for completed messages that dominate text communication in IP.

It is also easy to alternate between talking and reading or between typing and listening with the TTY technology in the PSTN. There are users who experience that this combination of real-time text and voice provides a convenient way of communication, and they find no wide spread corresponding service in IP.

When IP is spreading, there is a high risk that the quality of TTY calls will degrade when their path will pass over IP segments. TTY is using a slow FSK modem technology that is extremely sensitive to jitter, packet loss, audio error concealment, misbehaving echo cancelers, and distorting audio coding that are common in audio IP transmission.

If users had a corresponding or functionally better alternative to move to in IP, when IP becomes available in their location, this would be reduced to a minor problem of acquiring and learning new technology. But since there is no widespread corresponding technology it seems urgent to take efforts to cover this gap.

The gap can be covered by encouraging the deployment of means to communicate in IP that will fill the place of the TTY and at the same time use the opportunity of the IP technology to improve the functionality of real-time text and voice communication for the users who need this form of communication.

This step has been taken before by other countries. One example is Sweden, where the deployment of IP based textphones for real-time text and voice communication is supported by society, and harmonized by public procurement requirements and by the public text relay service applying the standards available for IP based real-time text and voice communication. As a further act of harmonization, the IP based textphones use the same communication standards as the Total Conversation terminals providing video, real-time text and voice communication. By that harmonization, the Total Conversation users can have calls directly with the IP textphone users, and the Total Conversation users can use the IP text relay services when that feels suitable. This harmonization helps a lot to not fragment the users with disabilities in even smaller minorities. The public procurement requirements in Sweden also require the providers of IP based textphones to provide interoperability through gateway mechanisms with the PSTN based textphones (corresponding to TTYs in USA, but using other modem standards). By that the move from PSTN to IP is seamless and provides an access improvement for the users who make the move.

The market forces are not strong enough to create this level of harmonization and the policy goals for access for people with disabilities call for society support to create this level of harmonization.

One important factor for making a harmonized service in IP for real-time text and voice combined is the need to be able to call 9-1-1. 9-1-1 can not be expected to provide access for a large number of different technologies, but must concentrate on a few and set expectations on communication service providers to provide the 9-1-1 calls in one of the few formats the 9-1-1 services support. By making the IP based real-time text and voice services directly interoperable with the NG9-1-1 standards, this need can be used to achieve the harmonization needed also for user-to-user communication.

There are standards, there are products, there are specifications for this kind of service and devices, needed as a replacement of and enhancement over the TTYs when moving to IP.

We would like to see the The Technology Transitions Policy Task Force pick up and continue the recommended work with the TTY transition as described in the EAAC TTY Transition report to the FCC from 3-11-13, encouraging involved organizations to create and deploy communication tools and services fulfilling the needs of users requiring combined text and voice conversational communication as well as users of pure conversational text.

The EAAC TTY Transition report is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-319386A1.doc in word format,

And at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-319386A1.pdf in pdf format.

Further reports from the EAAC providing background information and further details are available from

<http://www.fcc.gov/encyclopedia/emergency-access-advisory-committee-eaac>

Further considerations and recommendations can be found in the following document by RERC-TA.

“Proposal R1 – Revised.” Ex Parte Filing by the RERC-TA. GN Docket 13-5, December 6, 2013

<http://apps.fcc.gov/ecfs/document/view?id=7520960695>

This comment was supported with funding from the National Institute on Disability and Rehabilitation Research (NIDRR), U.S. Department of Education, under grant number H133E090001. The opinions herein are those of the authors and not necessarily those of the funding agency.

Respectfully submitted

Gunnar Hellström
Senior advisor

Omnitor
Investigator in RERC TA.
e-mail: gunnar.hellstrom@omnitor.se

cc
The Technology Transitions Policy Task Force
Ruth Milkman, Chief of Staff to Chairman Wheeler
Philip Verveer, Senior Counselor
Gigi Sohn, Special Counsel for External Affairs
Diane Cornell, Special Counsel
Renee Gregory, Legal Advisor on Engineering and Technology, Wireless, and
Incentive Auctions
Maria Kirby, Legal Advisor on Media, Consumer and Governmental Affairs, and
Enforcement
Karen Peltz Strauss, Consumer and Governmental Affairs
Gregory Hlibok, Disability Rights Office

TechTaskForce@fcc.gov,
ruth.milkman@fcc.gov,
philip.verveer@fcc.gov,
gigi.sohn@fcc.gov,
diane.cornell@fcc.gov,
renee.gregory@fcc.gov,
maria.kirby@fcc.gov,
Karen Peltz Strauss <Karen.Strauss@fcc.gov>,
Gregory Hlibok <Gregory.Hlibok@fcc.gov>,