Note: The presentation is available in PowerPoint format at

http://tap.gallaudet.edu/CTSSurvey/docs/FCCPresentation-April2013.pptx

For a web page linking to it, see
http://tap.gallaudet.edu/CTSSurvey/results.asp
Captioned Telephone Service

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Part I – Summary of IP-CTS growth

Summarizes main points of RERC-TA filing in NPRM
IP-CTS Growth 2009-2012

IP CTS growth in minutes/month - actual vs projected

R² = 0.9797
IP-CTS Projection Errors

Projection error in % - projected minutes vs actual

If a linear model were a good fit:
Example linear projection error in %

This mismatch – present since the inception of IP-CTS – indicates that the wrong projection model was used
This slope is flat and does not appear to reflect any data.

This slope is a better fit for 2010 data, rather than 2011.
Summary of IP CTS Growth Analysis

• Based on publicly available data:
  – The wrong growth projection model has been used since the inception of the service.
  – Any apparent uptick in IP-CTS growth needs to be evaluated against the correct growth model, not a linear one.
  – Even if a linear model were correct, the forecast slopes in 2011 and 2012 are too low and would have underestimated the size of TRS reimbursements.
  – More frequent projections than every 12 months are needed.
Part II – Survey Results

Expands on RERC-TA ex parte filing of initial survey analysis
Main Survey Findings

Consumers rely on and, in many cases, require captions in order to achieve successful communication over the telephone

- Almost all special captioned telephone users (90%) reported that the captions on their telephone are either very important or important to having a successful conversation
- More than half of the special captioned telephone users (55%) stated that they would be unable to use the telephone at all without captions
Main Survey Findings

This survey of 2014 special captioned telephone users does not support either fraud or misuse as the source of growth in IP-CTS

• Differences in usage between recent CTS users and long-time CTS users appear to be small
• Only 8% of special captioned telephone users report sharing their equipment with hearing household members
• Only 6% of special captioned telephone users report that hearing household members do not always turn off the captions or do not know how to turn them off
Main Survey Findings

Further consumer education regarding the usage rules and funding for CTS may be helpful

• Additional emphasis of the rules is indicated among consumers who use captioned telephone services and members of their households when they receive their special captioned telephone equipment
• Education is also indicated to improve familiarity among consumers regarding the funding source for CTS
Captioned Telephone Service Survey

• Participation Criteria
  – An adult (18 years of age or older)
  – Anyone who is deaf, hard of hearing or a person with hearing loss

• Recruitment through consumer organizations
  – HLAA, NAD, TDI, ALDA, AGBell, AFB, etc.
  – Email, Facebook, Twitter, etc.

• Open February 22 – March 8 (2 weeks)

• 3000 completed responses
CTS Non-Users 28%

CTS Users 72%

Special Telephone 93%
No Special Telephone 7%

CTS User – Special Telephone (n=2014)
Uses CTS on a special telephone designed specifically for captioned telephone service using one or two phones lines or one phone line and an Internet connection
only or additionally on a mobile device, Internet phone or computer using the Internet and captioning software

CTS User – No Special Telephone (n=143)
Uses CTS on a mobile device using a mobile captioning application (app)
and/or on a Cisco Internet phone or computer using an Internet connection and captioning software or web page access
but no special captioned telephone
How long have you used captioned telephone service?

**CTS Users – special captioned telephone**
(n=2014)

- 6 months or less: 257
- more than 6 months to 1 year: 378
- more than 1 year to 18 months: 316
- more than 18 months to 2 years: 181
- more than 2 years: 882

**CTS Users – no special captioned telephone**
(n=143)

- 6 months or less: 76
- more than 6 months to 1 year: 11
- more than 1 year to 18 months: 15
- more than 18 months to 2 years: 18
- more than 2 years: 23
How did you find out about captioned telephone service?

CTS Users (special telephone)
Respondents could check all that apply (n=2014)

- Consumer organization: 40%
- Family and/or friends: 19%
- Print publications: 18%
- Equipment distributors: 18%
- Hearing health care provider: 16%
- Internet searches: 16%
- Government websites: 9%
- Social media: 4%
- Online stores: 3%
- Retail stores: 1%
- Other: 12%
Demographics

• Gender
• Age
• Number of people in household
• Employment
• Education
• Income
• Urban vs Rural Locale
• US Regional Classification (by state)
Gender of Respondents (n=3000)

Male: 37%
Female: 63%
Age of Respondents

- CTS Non-Users - (n=840)
- CTS Users (no special telephone) - (n=143)
- CTS Users (special telephone) - (n=2010)
Number of People in Household

- **CTS non-users**
  - 1 person: 25%
  - 2 - 4 people: 70%
  - 5 or more people: 5%

- **CTS users (no special telephone)**
  - 1 person: 35%
  - 2 - 4 people: 60%
  - 5 or more people: 5%

- **CTS users (special telephone)**
  - 1 person: 35%
  - 2 - 4 people: 60%
  - 5 or more people: 5%
Education (n=3000)

- Bachelor's degree: 25%
- Graduate or Professional degree: 34%
- Associate's degree: 8%
- Some college; no degree: 20%
- High school diploma: 11%
- Less than a high school diploma: 2%
Income (n=3000)

- $25,000 - $39,999 per year: 15%
- $40,000 - $59,999 per year: 14%
- $60,000 - $74,999 per year: 8%
- $75,000 - $99,999 per year: 7%
- more than $100,000 per year: 6%
- less than $24,999 per year: 21%
- I prefer not to provide this information: 29%
Urban vs Rural Locale based on population density (n=3000)

- 87% - Urban
- 29% - in a city or town with a population of at least 2,500 people, but less than 50,000 people
- 10% - in a city or metropolitan area with a population of 50,000 or more people
- 3% - in a place with fewer than 2,500 people that is located outside a city or town
- 10% - Rural

I don't know.

http://www.census.gov/geo/reference/urban-rural.html
Respondents by Geographic Area (n=3000)

- Northeast: 24%
- Midwest: 19%
- South: 29%
- West: 27%
- I prefer not to provide this information: 1%
Survey respondents who use a special captioned telephone are more likely to be older, retired and live alone than survey respondents who do not use a special captioned telephone.
CTS USERS
OF
SPECIAL TELEPHONES
(n=2014)
Which captioned telephone service do you use with this equipment? (n=2014)

- **CaptionCall** 26%
- **IP-CTS Equipment**
  - **CapTel** 54.1%
  - **CaptionCall** 45.5%
  - **Clarity Ensemble** 0.4%
- **analog-CTS equipment** 13%
- **I don't know** 7%
- **Other (please specify):** 11%
- **Sprint Relay** 15%
- **Other** 2%
- **I don't know** 30%
- **Purple Communications** 1%
- **Federal Relay** 1%
- **AT&T Relay** 8%
- **Hamilton Relay** 8%

Captioned Telephone Equipment (n=2014)

- **IP-CTS equipment** 78%
- **analog-CTS equipment** 13%
- **I don't know** 7%
- **Other** 2%

IP-CTS Equipment (n=1581)

- **CaptionCall** 45.5%
- **CapTel** 54.1%
- **Clarity Ensemble** 0.4%
How much did this captioned telephone equipment cost? (n=2014)
Do you use a special captioned telephone and service for personal use, work, or both? (n=2014)

- For personal use only: 78%
- For work only: 3%
- For both, personal use and work: 19%
On average, how often do you make and receive telephone calls? (n=2014)

- regardless of what telephone you use
- using your special captioned telephone, regardless of whether or not you use captions

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Regardless of Telephone</th>
<th>Using Special Captioned Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than once a week</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>once or twice a week</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>several (3-5) times a week</td>
<td>30%</td>
<td>25%</td>
</tr>
<tr>
<td>once or twice a day</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>several (3-5) times a day</td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>six or more times a day</td>
<td>25%</td>
<td>30%</td>
</tr>
</tbody>
</table>
Turning Captions On and Off

How often do you use your special captioned telephone with the captions turned on? (n=2014)

- For every call: 87%
- For 3/4 or more of my calls: 70%
- For about 1/2 of my calls: 50%
- For 1/4 or less of my calls: 30%
- Never: 10%

Incoming calls: Blue, Outgoing calls: Red

Do you know how to turn the captions on and off? (n=1616)

- Yes: 87%
- No: 13%
Five Reasons for Turning Captions Off

1) the CTS user understands their calling partner (n=77)

2) because of the type of call (n=29)

3) because of privacy concerns; the CTS users - and in one case family members - did not want a third party listening to the conversation (n=27)

4) because the captioning quality is so poor that captions are not useful (n=23)

5) other miscellaneous reasons that did not fit into the other categories (n=15)
**Others Using the Captioned Telephone**

Does anyone else use your captioned telephone besides you? (n=2014)

- Yes: 15%
- No: 50%
- Do not work and live alone: 35%

Who else uses your captioned telephone? (n=307)
- One or more persons who are deaf, hard of hearing or have hearing loss: 158
- One or more hearing persons (who do not have hearing loss): 164

Does the person (or people) without hearing loss, who uses your captioned telephone, turn the captions off or leave the captions on when using the phone? (n=164)

- Always turns off the captions: 34
- Sometimes turns off the captions: 42
- Never turns off the captions: 77
- I don't know: 11

Do they know how to turn the captions on and off? (n=77)

- Yes: 52%
- No: 35%
- I don't know: 13%
Sharing of Special Captioned Telephone (n=2014)

- 91.9% do not share with hearing person
- 1.7% share & captions are always turned off
- 0.5% share & don't know if captions are turned off
- 4.1% share & don't always turn off captions but know how
- 1.3% share & don't always turn off captions but don't know how
- 0.5% share & don't always turn off captions but don't know if they know how

Only 8% of special captioned telephone users report sharing their equipment with hearing household members.

Only 6% of special captioned telephone users report that hearing household members do not always turn off the captions or do not know how to turn them off.
When you received your special captioned telephone, were you informed of the rules for CTS use? (n=2014)

- Yes: 50%
- No: 14%
- I don't recall if I was given this information: 36%

Further consumer education regarding the usage rules and funding for CTS may be helpful.

Are you familiar with the following? The cost of every captioned telephone call is charged to either a state or federal fund, which allows people with hearing disabilities to place and receive captioned telephone calls at no extra charge to them. (n=2014)

- Yes: 71%
- No: 29%
Communication Satisfaction

Overall, how satisfied or dissatisfied are you communicating with the other person on the call when using captions? (n=2014)

In the same situation, how satisfied or dissatisfied do you think you would be communicating with the other person on the call if you were unable to use captions? (n=2014)
<table>
<thead>
<tr>
<th>Percentage</th>
<th>Problem Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>60%</td>
<td>there is too much of a delay between when the other person on the call talks and when the captions appear</td>
</tr>
<tr>
<td>41%</td>
<td>captioning quality varies from call to call</td>
</tr>
<tr>
<td>36%</td>
<td>there are too many errors in the captions</td>
</tr>
<tr>
<td>25%</td>
<td>it takes too long for the captions to begin once I place a call</td>
</tr>
<tr>
<td>4%</td>
<td>disruption in captioning during a call</td>
</tr>
<tr>
<td>4%</td>
<td>receiving captioned calls is too complicated</td>
</tr>
<tr>
<td>4%</td>
<td>turning the captions on and off takes too long</td>
</tr>
<tr>
<td>3%</td>
<td>turning the captions on and off is too complicated</td>
</tr>
<tr>
<td>1%</td>
<td>placing captioned calls is too complicated</td>
</tr>
<tr>
<td>1%</td>
<td>the captions are difficult for me to read because I have another disability</td>
</tr>
<tr>
<td>1%</td>
<td>the equipment is difficult for me to use because I have another disability</td>
</tr>
<tr>
<td>18%</td>
<td>&quot;other&quot;</td>
</tr>
<tr>
<td>14%</td>
<td>I am not experiencing any of these problems with my captioned telephone and service</td>
</tr>
</tbody>
</table>
Overall, how important are the captions on your telephone to having a successful conversation? (n=2014)

More than half of the special captioned telephone users (55%) stated that they would be unable to use the telephone at all without captions.

Almost all special captioned telephone users (90%) reported that the captions on their telephone are either very important or important to having a successful conversation.

- **Very Important (I could not use the telephone at all without captions.)**: 55%
- **Important**: 35%
- **Moderately Important**: 7%
- **Slightly Important**: 2%
- **Not at all Important (I do not need captions at all to have a successful telephone conversation.)**: 1%
ALL RESPONDENTS

(n=3000)
Have you ever received a hearing test from an audiologist or other hearing health care professional? (n=3000)

- Yes: 98%
- No: 1%
- I don't know: 1%

If you needed to give the results of your hearing test to someone as documentation, do you have a copy of your audiogram that you could easily provide on request? (n=2949)

- Yes: 66%
- No: 29%
- I don't know: 5%
Do you currently use a hearing device?

- **Yes**
  - CTS non-users (n=843): 81%
  - CTS users (no special telephone) (n=143): 86%
  - CTS users (special telephone) (n=2014): 94%

- **No**
  - CTS non-users (n=843): 19%
  - CTS users (no special telephone) (n=143): 14%
  - CTS users (special telephone) (n=2014): 6%
Which type(s) of hearing devices do you use?

- **Hearing aid**
  - CTS non-users (n=843): 84%
  - CTS users (no special telephone) (n=143): 79%
  - CTS users (special telephone) (n=2014): 80%

- **Cochlear implant**
  - CTS non-users (n=843): 21%
  - CTS users (no special telephone) (n=143): 37%
  - CTS users (special telephone) (n=2014): 32%

- **Other hearing device**
  - CTS non-users (n=843): 3%
  - CTS users (no special telephone) (n=143): 0%
  - CTS users (special telephone) (n=2014): 2%
Main Survey Findings

• Consumers rely on and, in many cases, require captions in order to achieve successful communication over the telephone

• This survey of 2014 special captioned telephone users does not support either fraud or misuse as the source of growth in IP-CTS

• Further consumer education regarding the usage rules and funding for CTS may be helpful
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