Overview of Telecom Options for People Who are Deaf or Hard of Hearing
21st Century Edition

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• Once upon a time, TTYs ruled the land
  – TTY use has declined dramatically, but is not quite gone yet

• IP and wireless communications have opened many new and better options
  – Note: TTYs do not work reliably on IP networks
  – Note: TTYs are still one of the few direct communication options for 9-1-1 calls
Overview

• Telecom among people who are deaf or hard of hearing today
  – Videophones and Video Relay Services
  – IP Captioned Telephone Services
  – IP Relay
  – Amplified phones
  – Hearing Aid Compatible phones
  – HD Voice
Videophones
I'm so glad you called. Are we still meeting for lunch tomorrow? Great, let's go to that new restaurant by the river. I can't wait to see you.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash notification</td>
<td>Flash the camera light when you receive notifications or incoming calls, or when alarms sound.</td>
</tr>
<tr>
<td>Turn off all sounds</td>
<td></td>
</tr>
<tr>
<td>Hearing aids</td>
<td>Improve the sound quality of your device for use with hearing aids.</td>
</tr>
<tr>
<td>Samsung subtitles (CC)</td>
<td>Off</td>
</tr>
<tr>
<td>Google subtitles (CC)</td>
<td>On</td>
</tr>
</tbody>
</table>
HD Voice

- **Legacy PSTN**
  - Narrowband
  - 8 kHz sampling

- **Wideband**
  - G.722 codec
  - 16 kHz sampling

Frequency range:
- 50 Hz to 300 Hz
- 3400 Hz to 7000 Hz
Final words

• We also use mainstream telecom options like everyone else:
  – Texting/IM
  – Facetime, Skype video, Hangouts, …
  – Email
  – Etc etc

• None of these offer the ability to make calls through the 10-digit phone system
Questions

• Questions? Comments?
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