

Remote Interpreting Guide for Courts, Court Staff, and Justice Partners

CLAC Remote Interpreting Guide Working Group Members:

Thank you to the Council of Language Access Coordinators (CLAC) who volunteered their time and expertise to contribute to this document: Sandra Barrios (ID), Lisa Bell (FL), Brooke Bogue (NC), Carmel Capati (WI), Brenda Carrasquillo (NJ), Sheryl Connolly (NB), Richard Denney (GA), Gaye Gentes (MA), Andrea Krlickova (NV), Emy Lopez (CO), Anne Marx (CA), Kelly Mills (OR), Carol Mitchell (AZ), Elizabeth Reimer (KS), Aimee Rivera (NM), Richard Williams (LA), and Mary Rose Zingale (TN).

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INTRODUCTION

Ensuring meaningful access to court services for Limited English Proficient¹ (LEP) individuals by providing qualified court interpreters is now considered a key standard and best practice throughout most jurisdictions in the country. The diversity of languages, geographic location, availability of qualified interpreters, and limited budgets are all factors that have led to an increase in technology-mediated interpreting services.² In the past, Remote Interpreting (RI) services, if available, were generally provided via telephone. Today, courts have access to a wide variety of technology-mediated communication solutions that allow for the off-site location of the interpreter, the LEP party or both. Just as *telejustice*, the use of video conferencing to conduct judicial proceedings, is becoming progressively more popular throughout our country for select hearings and events, video remote interpreting is beginning to gain acceptance as a trusted language access solution.

State judiciaries are at varying stages of implementing remote interpreting (RI) services. Some states have long-established standards for telephone interpreting; other states have made significant efforts in expanding RI to include video remote interpreting (VRI); while others are now just beginning to study or implement RI services.³ A successful RI session, regardless of the communication technology used, requires specific knowledge, training, coordination, cooperation, and patience from everyone involved.

The quality of the interpretation is of paramount importance and should never be compromised. While RI is not generally a substitute for an on-site interpreter, in certain situations, if the effectiveness of the communication is in no way compromised and certain controls are in place, RI can provide LEP court users with immediate access to a qualified interpreter in their language.

¹ Limited English Proficiency or LEP refers to individuals who may have language barriers based upon national origin or a disability. References to both Title VI of the Civil Rights Act as well as Americans with Disabilities Act (ADA) are made throughout this document.

² 2010 Professional Issues Committee (PIC) Biennial Survey, Consortium for Language Access in the Courts reported that 34 states used some form of audio or video interpreting services in their courts. See full PIC survey at: <https://www.ncsc.org/~media/Files/PDF/Services%20and%20Experts/Areas%20of%20expertise/Language%20Access/Member%20Professional%20Issues%20Survey/Professional%20Issues%20Survey%202010.ashx>

³ State programs that have developed policies and procedures governing the use of RI services as well as other resources on RI can be found on the NCSC website at <http://www.ncsc.org/Services-and-Experts/Areas-of-expertise/Language-access/Resources-for-Program-Managers/State-Specific-Resources.aspx> In addition state judicial leadership through the Conference of Chief Justices (CCJ) and the Conference of State Court Administrators (COSCA) are supporting efforts to establish national guidance on RI through a shared video interpreting network.

This guide is designed to be a practical reference tool for language access program managers, judges, interpreter coordinators/schedulers, court staff, administrators, technology staff, interpreters, and justice partners. It provides an overview of the general factors to consider when using RI, its appropriateness, recommended best practices, a survey of the technologies currently available for RI, and the recommended system requirements. In addition to recognizing the requirements established by the Americans with Disabilities Act (ADA) and guidance set forth by the US Department of Justice (USDOJ)⁴, court systems should first consider examining their state statutes, local rules, and policies before executing an RI project to ensure full compliance with both federal and state laws.

REMOTE INTERPRETING

In its broadest sense, RI can be defined as *the provision of interpreting services using communication technology in a situation where the interpreter is at a location physically separate from the consumers of the interpreting service*. With RI, the English speaker, the LEP speaker, and the interpreter are not all physically located in the same place (unlike on-site interpreting where the interpreter, the LEP speaker and the English speaker are physically located in the same place). Also, the consumers of RI may or may not be collocated.⁵

Using RI, the court can connect the LEP court user with an interpreter either via *audio* or *integrated audio and video technology*. The interpreter can provide interpretation services in either the consecutive or simultaneous mode, depending upon the RI technology being used, setting, and interpreter's ability to render either mode of interpretation.

⁴Regulations implementing the ADA recognize Video Remote Interpreting (VRI) services as a kind of auxiliary aid that may be used to provide effective communication. 28 C.F.R. § 35.104. When a public entity uses VRI it must provide real-time, full-motion video and audio that delivers high quality video images and clear audible transmission of services. 28 C.F.R. § 35.160(d)(1)-(3). See also Daniel A. Osher, Esq., *"The Americans with Disabilities Act Updated to Reflect 21st Century Challenges,"* Lozano Smith (2011); US Dept. of Justice, "Questions and Answers Regarding the August 16, 2010 Title VI Language Access Guidance Letter to State Courts" which says that determining whether RI is a reasonable method to provide court language assistance depends upon circumstances such as whether other participants are appearing remotely, availability of qualified in-person interpreters, and quality of the remote technology. See <http://www.lep.gov/faqs/faqs.html> for full FAQs.

⁵ Oregon Judicial Department, Court Interpreter Services, "Remote Interpreting in Oregon Courts: A Roadmap," 7/21/2008, p.12

END USER LOCATION

If a court system is interested in pursuing RI services, it will be necessary to assess the equipment and the types of connectivity currently available in the courtrooms or other areas of the courthouse where interpreting services may be utilized (e.g. landline telephones, cameras, computers, audio system, hardwired or wireless internet access, and available bandwidth, etc.) Communication technology needed to provide RI during a court proceeding can be as simple as a speaker telephone or more elaborate, such as an integrated VRI system. Consider establishing a designated RI workgroup comprised of key players such as judges, courtroom staff, court services staff, court technology staff, interpreters, and anyone else who should be included in the design, development, implementation, maintenance, and oversight of the RI model the court wishes to execute.⁶

Consultation with a court system's Information Technology (IT) experts during all phases of the

While some courtrooms may be equipped with wireless internet capabilities, wireless internet is not recommended for interpreted video sessions on the record as the continuous upload/download speeds may not be sufficient to ensure a steady, consistent video. Security issues also arise when using wireless internet.

decision-making process is an important first step to

identify the personnel and fiscal requirements needed to install, maintain, repair, and upgrade equipment.

Technology staff can provide insight on whether proposed RI equipment meets industry standards⁷ and can effectively perform as intended.

A cost-benefit analysis should be performed to weigh the expenses of upgrading a courtroom's technological capabilities against the current costs for providing on-site interpreting services (e.g. travel expenses, languages frequently used, availability of qualified interpreters, use of credentialed staff versus freelance interpreters, etc.).

INTERPRETING SERVICE PROVIDERS

During the assessment phase of analyzing courtroom requirements, it is vital to consider who will provide the interpreting services. Individual RI service providers may

require different equipment and specifications. Determining who will provide the service at this stage is a decision that will dictate many of the requisite technological upgrades within the courtroom or courthouse as well as detailed specifications for the upgrades.

⁶The Language Access Advisory Committee (LAAC) has developed technical and business standards as part of a national VRI network. [\[Provide web link\]](#) for the standards.

⁷[\[Provide web link from NCSC.org\]](#) from the NCSC CTC Conference 2013 on industry standards.

The three main options for providing RI services are:

- 1) Staff or freelance interpreters working out of a location (or locations) under the control of the court, jurisdiction or Administrative Office of the Courts⁸ (AOC);
- 2) Freelance interpreters working in a location not under the court or AOC's control, such as a home, outside office, institution of higher learning, or military installation; and
- 3) Commercial vendors.

In some court systems, a combination of all three resources may be utilized, depending upon the type of service needed. For example, a freelance or commercial vendor interpreter may be an adequate choice for interpretation occurring at the counter while a staff interpreter may be more appropriate during court proceedings.

NEEDS ASSESSMENT

Determining when RI is appropriate

The decision when to use or not use RI is one that requires a balancing test to weigh multiple factors such as the type and expected duration of the event, , language, cost, and special needs of the LEP person requiring an interpreter, to name a few.⁹ Historically, RI may have been seen as a second choice solution, to be used only when an on-site interpreter was not available. Recent technological advances as well as increased experience and satisfaction using RI in courts around the country, are now allowing RI to be selected as a first-choice interpreting method in certain situations.

As a guiding principle, RI should only be used in place of on-site interpreting whenever it will allow for meaningful language access. Courts should ensure LEP court users are able to fully and meaningfully participate in the proceedings. If it is determined that using RI would negatively impact access for any reason, an on-site interpreter should be used instead.

States are encouraged to first rely on qualified interpreters who meet the state's credentialing requirements. Outside agencies usually have their own internal processes in place for qualifying interpreters. Such standards may or may not meet the state's requirements. It is necessary to inquire about the qualifications of interpreters working for commercial

⁸ Some states have a State Court Administrator's Office or SCAO. The term AOC is intended to encompass all variations of the state office that oversees administration of a statewide court system.

⁹National Consortium of Interpreter Education Centers (NCIEC), *Fact Sheet on the Use of Video Remote interpreting in the Courtroom*, See http://www.interpretereducation.org/wp-content/uploads/2012/10/FACT_SHEET_The_Use_of_Video_Remote_Technology_in_the_Courtroom.pdf

Consider the nature of the event

For events that are complex or lengthy, it remains essential to seek an on-site interpreter whenever one is reasonably available. In short, non-complex cases, or those that will not involve the presentation of extensive evidence, courts may wish to proceed with RI without considering the availability of an on-site interpreter.

Determining availability of an on-site interpreter

For purposes of this guide, the availability of an on-site interpreter should be determined by the interpreter coordinator or other court staff responsible for assigning the interpreter through the analysis of several factors. This analysis should include the state’s interpreter credentialing requirements, proximity of an on-site interpreter, whether an on-site interpreter can be present when the event is scheduled, and overall cost of the on-site interpreter being considered, including interpreting fees, cancellation costs, travel, and lodging expenses.

Events and situations presumed appropriate for RI

- **When proceedings are expected to be short and non-complex.**

For example, initial appearances, arraignments, scheduling conferences, or status conferences.

- **When proceedings will involve limited testimony by no more than one or two parties.**

- **When interpreting assistance is needed outside the courtroom.**

Often LEP individuals and families will show up at the court information desk or clerk’s counter to pay a fee or file a document. RI is a good resource for these types of situations.

- **When no credentialed court interpreter is available in person.**

RI is a good option when interpretation is needed for urgent, emergent or unexpected situations, or when an on-site interpreter is unavailable for any reason.

- **When there are not multiple parties who all require the services of an interpreter.**

An example of a relay team may be a remote interpreter who speaks Spanish and an indigenous language such as Quiche working in tandem with an on-site interpreter who speaks Spanish and English.

Factors to consider when determining “reasonable availability” of an on-site interpreter:

- **When the available on-site interpreter does not meet a state’s credentialing requirements.**

A qualified remote interpreter may be the better option over a less qualified, on-site interpreter who has not met the state’s requirements.

- **When the person in need of an interpreter speaks a language of limited diffusion (a rarer language).**

RI opens the possibilities for locating and employing qualified interpreters for rarer languages in different cities, states, or countries. In some cases, a remote interpreter may work alone or even as part of a relay team.

- **When a local interpreter discloses a conflict of interest.**

Many immigrant communities are also small linguistic communities. An interpreter's own family, social or professional relationship with an LEP individual may compromise the neutrality of the proceeding. In such case, it may be necessary to use a neutral, remote interpreter to avoid a real or perceived conflict of interest.

- **When it is more fiscally responsible to use a remote interpreter than an on-site interpreter.**

If interpreter travel costs or interpreter rates are high relative to the length or criticality of the hearing, RI with a qualified interpreter provide a cost-effective alternative.

When an on-site interpreter who meets a state's court credentialing requirements is available, RI should normally NOT be used in the following situations:

- **When the proceedings are expected to be complex.**

RI should be avoided during trials, long hearings, or complicated proceedings because of interpreter fatigue and other logistical factors that can jeopardize the accuracy of the interpretation.

- **When the proceedings involve many participants.**

If audio-only technology is used, the interpreter will not have the benefit of visual signs and cues; and it will be challenging for the remote interpreter to know who is speaking at any given time. Also, hearings that involve many participants are more difficult to manage, resulting in an increased potential for parties to speak over one another.

- **When emotionally charged or contentious testimony is anticipated.**

For witness testimony that may be lengthy, includes highly-specialized expert terminology, or involves a contentious cross-examination, RI may not be suitable.

- **When it is difficult to establish communication adequately.**

RI should be avoided in situations involving young children, the elderly, people with mental illness, individuals who have profound speech or language impairments, and hard of hearing court users as the use of audio RI technology may cause added confusion.¹⁰ In addition, RI should generally not be used in situations involving

¹⁰ National Association of Judiciary Interpreters and Translations (NAJIT) Position Paper, Telephone Interpreting in Legal Settings, 2/27/2009. Telephone interpreting may be inappropriate or even traumatic for certain cultures, for example, Cambodians have associated the unknown voice of a telephone interpreter with brainwashing sessions carried out by the

individuals with a secondary disability (e.g. low vision) which may impede use of video technology.¹¹

POLICIES AND PROCEDURES

It is important for a court system using RI to develop standard policies and procedures regarding its use and to convey this information to court personnel, interpreters, and justice partners. A sample policy might state:

“At the discretion of the court, all non-complex traffic offense proceedings requiring an interpreter may be conducted via interactive audio-visual device.”

There may be instances where one of the parties or the judge objects to the use of remote interpreters even for seemingly simple or routine proceedings. The interpreter coordinator or scheduler should be prepared to address this situation with the court and provide an on-site interpreter if possible.

Courts should have a policy or procedure in place regarding what to do if video or audio is lost during remote interpretation. All parties should be made aware of this policy or procedure at the beginning of the proceedings, either orally or in writing. For example, when using spoken language interpreters, should the VRI system fail, an acceptable RI alternative might be the use of a landline speaker telephone in the courtroom as well as a landline telephone on the interpreter’s end. Clear, sensible, and well-thought-out policies and procedures will enable good decisions to be made regarding the use of remote interpreters in the courtroom.

TRAINING

Training materials on RI protocols and procedures should be made available for all judges, court personnel, legal practitioners (e.g. prosecutors, public defenders, probation officers, Child Protective Services officers, etc.), staff and freelance court interpreters, and all others who would be involved in a court proceeding using an interpreter remotely.¹² If specialized equipment will be used, the interpreters and other relevant court staff responsible for operating the equipment should be trained on its operation and basic troubleshooting. The use of RI technology can present challenges for judges and court staff who have never used the

Khmer Rouge. See also Southeast Asian subcommittee of the Asian American/Pacific Islander work group, National Diabetes Education Program. Silent Trauma: Diabetes, Health Status, and the Refugee Southeast Asians in the US.

¹¹Registry of Interpreters for the Deaf (RID), Standard Practice Paper on Video Remote Interpreting, Video Interpreting Task Force, 2010.

¹² Under the ADA, 28 C.F.R. § 35.160(d)(4) says a public entity that chooses to provide qualified interpreters via VRI services shall ensure that it provides adequate training to users of the technology and other involved individuals so that they may quickly and efficiently set up and operate the VRI.

technology or equipment. If a commercial vendor is being used, an inquiry should be made as to the type and frequency of training their interpreters receive as well as their troubleshooting capabilities. It is also advisable that court staff have direct contact information for quick and easy troubleshooting should issues arise during an RI event with a commercial vendor.

When training judges and court staff on the use of RI, the training program should include informational sessions and mock hearings. More than one mock hearing will likely be necessary before judges, court staff, and interpreters are comfortable with the technology and have a chance to troubleshoot technical issues.

It is important to have IT staff available whenever possible during all aspects of setup, testing, and training. Local IT can typically provide quick resolution of any problems during setup, testing, and training as well as identify or foresee technical problems before they arise.

Once RI systems are in place, courts will need to be mindful of them as other court technologies (i.e. phones, recordkeeping, and other A/V systems) are added, changed, upgraded, or refreshed over time. Involving IT staff tasked with preserving the functionality of RI systems will help mitigate disruptions to them.

SPECIAL CONSIDERATIONS

While using RI can be a cost-effective option, it may not be appropriate in all circumstances. Courts must remember to consider all factors addressed above to make a situation-specific decision as to the appropriateness of RI.

Attorney-Client Communications

The issue of ensuring private attorney-client conversations can occur is more challenging when RI is being used. Consideration should be given to developing proper protocols for attorney-client communications to take place, regardless of the type of RI being used in the courtroom.¹³ Additional equipment or components on existing equipment may be needed. If all else fails, the court may clear the courtroom to allow the attorney, LEP client and interpreter to converse privately.

LEP Speaker Appearing Remotely

Situations may arise where the LEP speaker appears remotely, such as from jail, other geographic location, or other detention center. Special thought should be given for best placement of the interpreter under these circumstances. Some factors to consider when making such a determination include the location of the LEP speaker's attorney (if he/she has an attorney) and security of the interpreter.

¹³ New York State Unified Court System, Office of Court Administration, *Remote Interpreting Operational Standards*, November 2007

In those instances where the LEP individual and the attorney of record are not collocated (e.g. attorney is in the courtroom while defendant is at the jail) or if the LEP individual is *pro se*, the better practice is to have the interpreter in the courtroom. This configuration shields the interpreter from being alone with the LEP individual, ensures impartiality and the appearance thereof, and helps avoid the situation where the LEP individual asks the interpreter for legal advice. It also ensures the safety of the interpreter. If the LEP individual and the attorney of record will be situated at the remote location, the interpreter should be placed where accuracy of the interpretation will not be compromised.

Room Standards¹⁴

Attention should be given to the room layout and furniture in the courtroom and at the remote location. Tables with a matte finish, solid colored curtains, adequate lighting, non-squeaky chairs, and neutral colored rooms are ideal for RI. Sound dampening materials may need to be installed in locations that use block construction, such as many detention facilities where acoustics may interfere with the interpreter's ability to adequately hear the proceedings due to echo or other sound reverberations within the hearing room.

EQUIPMENT PLACEMENT

Microphones, Monitors or Screens, and Cameras

Courtroom acoustics should be clear, with no reverberations or echoes, and should be enhanced in the litigation area. The audio equipment must be positioned to ensure the best sound quality for the remote interpreter, the parties and the judge. Attention must be given to the placement of microphones so there is no distracting echo. Proximity between the speaker and microphone or lapel microphones can mitigate these issues. A speakerphone is not recommended unless only one hearing individual is using it, the speakerphone is in that individual's immediate proximity, and no exchange of privileged communication takes place over the speakerphone.

When video equipment is used, cameras should be placed to ensure an optimal view of the various speakers by the interpreter and to optimize the LEP speaker's view of the interpreter to capture any non-verbal cues. Cameras on all stakeholders are recommended. A clear view between the LEP court user and the interpreter is more important than a view of every speaker to optimize viewing of non-verbal cues. In more complex hearings, involving testimony or multiple speakers, monitors or screens and cameras should be of sufficient size and number to allow convenient viewing by all participants. Multiple cameras and screens may also assist with

¹⁴ Canadian Network for Inclusive Cultural Exchange, *Remote Real-Time ASL Interpretation Guidelines*, <http://cnice.idrc.ocad.ca/guidelines/asl.pdf>

confidentiality and security issues. Systems that allow the remote interpreter to control the camera view and position aide interpreter performance.

In proceedings where an interpreter for the deaf or hard of hearing is required, the positioning of the parties is particularly important. Facial expressions, lip movements and body language are part of the communication process. Therefore, the person who is deaf or hard of hearing must be able to see the monitor or screen clearly; and the remote sign language interpreter must also be able to see the deaf person clearly.¹⁵ For communication to be effective, the views on the monitor or screen must include the head, shoulders, upper torso, arms and hands of the deaf/hard of hearing person and the interpreter.

Fax Machine, Scanner, Document Camera, and Printer

A fax machine and/or computer scanner should be available to send and receive court documents, if required. Some remote interpreter systems provide the capability of transferring documents over a secure remote instant messenger-like connection or use of a document camera. Additionally, a scanner may be used to scan documents for emailing, which would result in a much clearer representation of court documents.

DATA COLLECTION AND FINANCIAL CONSIDERATIONS

RI has the potential to be a cost-saving endeavor. It is important to implement a data-collecting system to monitor the use of RI, ensure its appropriate use, and track the number of RI eents and costs of providing interpreting services remotely versus in-person. Courts may also wish to track their ability to utilize court credentialed or trained interpreters, even if remotely, as opposed to an on-site interpreter without proper credentials. These data can highlight how RI directly improves language access and makes better use of funds allocated to language access services.

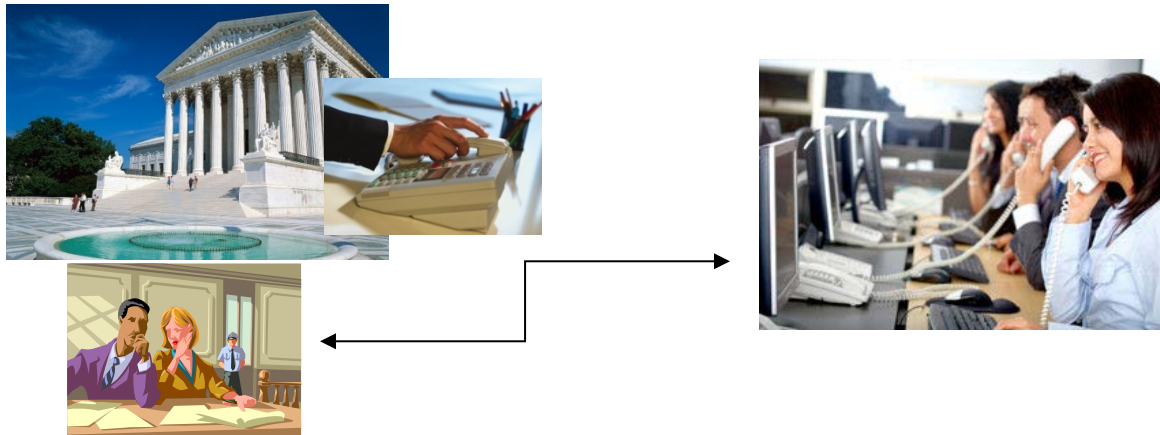
¹⁵ The New York State United Court System, *Working with Interpreters by Video or Teleconference: Tips for Remote Interpreting*, <http://www.nycourts.gov/courtinterpreter/pdfs/CISTipSheet.pdf>

AUDIO TECHNOLOGIES

Telephone

Description: Using a standard telephone and landline to provide remote spoken language interpreting services.

How it Works: The interpreter is based in a separate location from the court official and the LEP speaker and provides interpreting in the consecutive mode. The telephone can be integrated and amplified through a courtroom’s existing audio speaker system using a digital audio platform device or can be used as a simple stand-alone device with amplification occurring through the telephone’s internal speaker.



Equipment and Connectivity Required for Interpreting Via Telephone

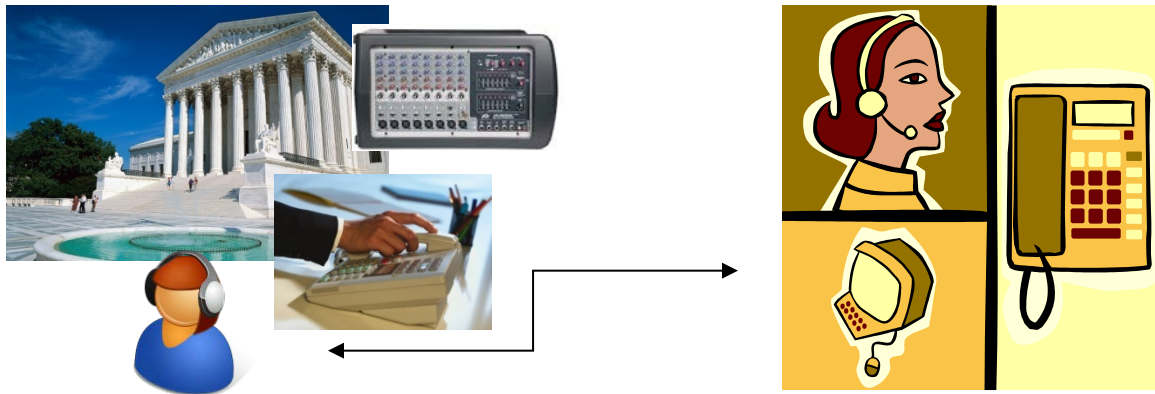
RI via Telephone		
Courtroom Equipment	Interpreter Equipment	Connection
<ul style="list-style-type: none"> ● Telephone with some form of audio capability (internal speaker or amplification through courtroom’s audio system) 	<ul style="list-style-type: none"> ● Telephone with reliable connectivity <i>*A speaker phone is generally not recommended because of possible issues with room acoustics, which could make it difficult for the courtroom/LEP individual to adequately hear the interpreter</i> 	<ul style="list-style-type: none"> ● Standard telephone line <i>*Cellular phone service is not recommended because of the potential for dropped calls or lost signals</i>

RI via Telephone		
Courtroom Equipment	Interpreter Equipment	Connection
	<ul style="list-style-type: none"> • An over-the-ear headset with microphone is recommended. 	

Specialized Telephone System

Description: Telephone interpreting with specialized equipment (i.e. mixer, integrated phone line, handset, headphone, touchtone telephone, and speakerphone) allows the opportunity to provide consecutive and simultaneous spoken language interpreting services using telephones and a standard telephone line.

How it Works: Specialized telephone equipment can be installed directly into an existing courtroom’s audio system so that all speaking and hearing occurs through the microphone and speaker system. When installed into the existing microphone system, this system can provide enhanced audio quality into the entire courtroom. A second option is to have mobile carts/consols that contain a telephone and speaker system that can be wheeled around from courtroom to courtroom. In both scenarios, the system allows the remote interpreter to control where his/her voice is going using a keypad: directly to the LEP speaker, into the open courtroom, or to the LEP speaker and his/her attorney.



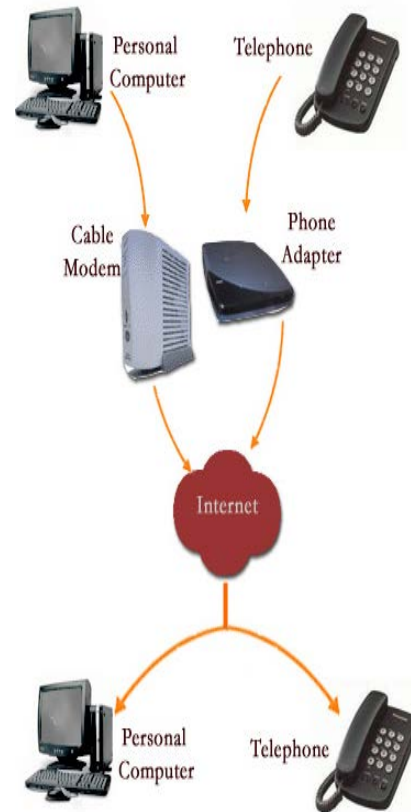
Equipment and Connectivity Required for Interpreting via Specialized Telephone System

RI via Specialized Telephone System		
Courtroom Equipment	Interpreter Equipment	Connection
<ul style="list-style-type: none"> ● Mixer device 	<ul style="list-style-type: none"> ● Touchtone telephone with reliable connectivity. 	<ul style="list-style-type: none"> ● Standard telephone line
<ul style="list-style-type: none"> ● Integrated phone line 	<ul style="list-style-type: none"> ● Headset and speakerphone (optional) 	
<ul style="list-style-type: none"> ● One handset/headset for non-English speaker 		
<ul style="list-style-type: none"> ● One handset/headset for attorney 		

Voice over Internet Protocol (VoIP)

Description: Voice over Internet Protocol (VoIP) is a form of communication that *allows making phone calls over a broadband internet connection* instead of typical analog telephone lines. Basic VoIP access usually allows users to call others who are also receiving calls over the internet. Calls can also be made to traditional landline numbers, usually for a service fee. VoIP can turn a standard internet connection into a way to place phone calls.

How it Works: A broadband (high-speed internet) connection is required, which can be done through a cable modem or high-speed services such as DSL or a local area network. A computer, adaptor or specialized phone is necessary. Some VoIP services only work over a computer or special VoIP phone, while others allow use of traditional phones connected to a VoIP adapter. If a computer is used, software and a microphone will be needed.



Equipment and Connectivity Required for Interpreting via VoIP

RI via Voice Over Internet Protocol (VoIP)		
Courtroom Equipment	Interpreter Equipment	Connection
<ul style="list-style-type: none"> • Telephone using standard telephone line or computer with internet connection 	<ul style="list-style-type: none"> • Computer or specialized telephone 	<ul style="list-style-type: none"> • Broadband high-speed internet connection through a cable modem or high-speed services such as DSL or LAN
	<ul style="list-style-type: none"> • Software and microphone 	<ul style="list-style-type: none"> • Firewall traversal must be taken into consideration for video transmission

VIDEO TECHNOLOGIES

Video Conferencing System

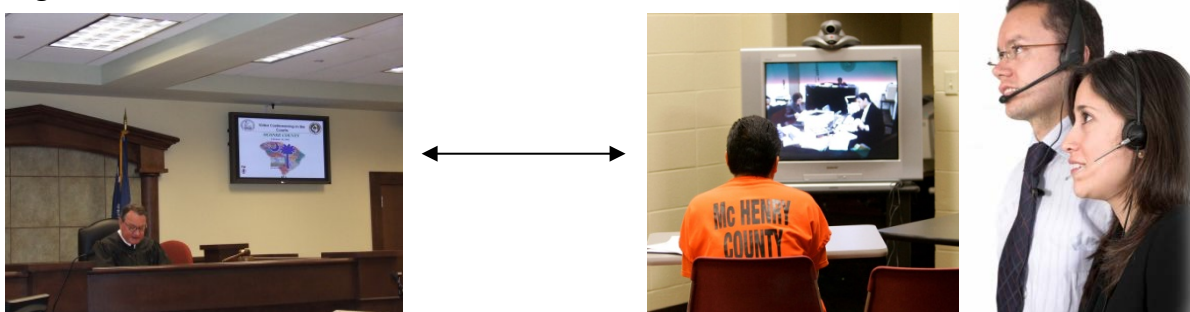
Description: Videoconferencing is an interactive technology that sends video, voice, and data signals over a transmission circuit so that two or more individuals or groups can communicate with each other simultaneously using video monitors.

How it Works: There are several ways of using videoconference technology to provide interpreting services. For instance, an interpreter can be offsite, interpreting for the participants in the courtroom (Fig. A); or the interpreter can be located with the LEP speaker and attorney in a location such as a prison or other courthouse (Fig. B).¹⁶ The off-site speakers are projected on a screen or monitor, and their speech is transmitted directly to the headsets of participants and interpreters or over the speaker system. The interpretation is typically conducted in the consecutive mode, although additional technology can allow simultaneous interpretation.

Fig. A



Fig. B



¹⁶Braun, Sabine. & J. L. Taylor, *Videoconference and Remote Interpreting in Criminal Proceedings*, Guildford: University of Surrey, 2011, pp. 27-57.

Equipment and Connectivity Required for Interpreting via Video Conferencing System

A wide array of technical components that support evidence presentation, remote site interactions, language interpreting and audio enhancement is required. The components needed for a video conferencing system include:

RI via Video Conferencing System		
Courtroom Equipment	Interpreter Equipment	Connection
<ul style="list-style-type: none"> ● Camera or webcam 	<ul style="list-style-type: none"> ● Camera or webcam 	<ul style="list-style-type: none"> ● ISDN or IP which contains the required CODEC
<ul style="list-style-type: none"> ● Computer, monitor, television or projector with related software 	<ul style="list-style-type: none"> ● Desktop or laptop computer with videoconferencing equipment and related software 	<ul style="list-style-type: none"> ● Integrated cabling system
<ul style="list-style-type: none"> ● Microphones, CD/DVD player 	<ul style="list-style-type: none"> ● Microphone 	<ul style="list-style-type: none"> ● High-speed broadband internet
<ul style="list-style-type: none"> ● Loudspeakers 	<ul style="list-style-type: none"> ● Headset 	
<ul style="list-style-type: none"> ● Analog or digital network, LAN or internet 	<ul style="list-style-type: none"> ● High-speed broadband internet 	

Minimum bandwidth requirements differ depending upon the type and model of camera being used in each location, compression ratio being used, and the video format (720p or 1080p) desired. Refer to the manufacturer’s documentation for specific bandwidth requirements. It is recommended that the download and upload speeds are equal for smooth video transmission.

Recommended Minimum Equipment Specifications

Refer to video equipment manufacturer for specific requirements.

RI via Video Conferencing System		
Computer	Camera or Webcam	Connection
<ul style="list-style-type: none"> ● Latest Windows® version (32-bit or 64-bit) 	<ul style="list-style-type: none"> ● Full HD 1080P 30fps 	<ul style="list-style-type: none"> ● 2 Mbps upload/download for 720p

RI via Video Conferencing System		
Computer	Camera or Webcam	Connection
<ul style="list-style-type: none"> ● i5 Intel or faster processor 	<ul style="list-style-type: none"> ● H.264 Video Compression format 	<ul style="list-style-type: none"> ● 3 Mbps upload/download for 1080p (See note below)
<ul style="list-style-type: none"> ● 4 GB RAM 		
<ul style="list-style-type: none"> ● USB 2.0 port 		

Many environmental factors must be considered when employing video across the internet. Download and upload speeds in a courthouse may fluctuate drastically depending on the available bandwidth across the network, the number of users on the network and the type and amount of streaming data being uploaded or downloaded. This fact should be considered when determining minimum available bandwidth requirements. Wireless internet is not recommended for video transmission unless the equipment and setup are thoroughly tested by court participants and demonstrate in mock hearings that they can provide stable sound and picture quality. It is important to include local IT in the decision-making process to get the best equipment that the local network can support in order to achieve satisfactory video performance.

Specialized Video Remote Interpreting Systems

Description: VRI uses video conferencing technology over dedicated lines offering a high-speed, wide-bandwidth video connection that delivers high-quality video images that allow for sign and spoken language interpreting services. The technology is similar to a different service called Video Relay Service (VRS) which is a free telephone relay service using video technology to allow deaf and hard of hearing persons to make and receive phone calls using American Sign Language (ASL). With VRS, the deaf and hearing participants are in separate locations.¹⁷

VRS is not appropriate for court proceedings and is not permitted by the Federal Communication Commission (FCC). VRS interpreters only identify themselves by a number and typically do not possess legal qualifications or state credentials.

How it Works: VRI uses video conferencing equipment over high-speed broadband connections or ISDN lines carrying both video and audio messages. Equipment is paired with wired or wireless connections. VRI sessions can be conducted via internet, intranet or ISDN.¹⁸ Typically, the LEP person and English speakers are located together at one location (courtroom) with a web camera (or other technology) while the interpreter works from a separate location.

Equipment and Connectivity Required for Interpreting via Specialized VRI System

RI via Specialized VRI System		
Courtroom Equipment	Interpreter Equipment	Connection
<ul style="list-style-type: none"> • Desktop or laptop computer with appropriate software 	<ul style="list-style-type: none"> • Desktop or laptop computer with appropriate software 	<ul style="list-style-type: none"> • High-speed broadband internet access such as T1, DSL, SDSL, ISDN (3 Mbps upload/download recommended)
<ul style="list-style-type: none"> • Webcam 	<ul style="list-style-type: none"> • Webcam 	
<ul style="list-style-type: none"> • External speakers and headphones 	<ul style="list-style-type: none"> • Headphones or integrated speakers 	
<ul style="list-style-type: none"> • Integrated software 	<ul style="list-style-type: none"> • Software 	

¹⁷Registry of Interpreters for the Deaf (RID), *Video Relay Service Interpreting Standard Practice Paper*, 2007. VRS services are regulated by the Federal Communications Commission (FCC) which sets standards that VRS companies and their interpreters must follow. VRS is an offshoot of traditional Telecommunications Relay Service (TRS) or text-based relay services.

¹⁸Registry of Interpreters for the Deaf (RID), *Video Remote Interpreting Standard Practice Paper*, Video Interpreting Task Force, 2010.

Minimum technology requirements for VRI that will also meet ASL requirements

- 1. Video screen:** A flat-panel, LCD computer monitor, with a minimum screen size of 17 inches (measured diagonally from corner to corner) for providers and 19 inches (measured diagonally) for courtrooms. Minimum device resolution capability of 1280 x 720 pixels.
- 2. Video camera:** Minimum video resolution of 720p (1280 x 720 pixels, progressive, at 30 frames per second); ideal resolution of 1080p30, 1080p50, or 1080p60 (1920 x 1080 pixels, progressive, at 30, 50, or 60 frames per second, respectively).
- 3. Endpoint bandwidth:** Every endpoint must support at least 3Mbps upload/download speed for video calling.
- 4. Computer:** Macintosh or PC with a minimum processor speed of 2 ghz, at least 3 gb of physical RAM, 300 gb or larger hard drive with at least 5 gb free, a dedicated video card, and USB 2.0 or higher. The computer should be dedicated to VRI during an interpreting event if you are operating a software endpoint.
- 5. QoS:** A connection to a WAN circuit with Quality of Service (QoS) settings that take into account the potential number of concurrent video calls over the WAN and the quality settings for each call. In addition to the bandwidth reserved by QoS, an adequate amount of bandwidth should be available to support other operations, such as e-mail and web traffic, etc.
- 6. Encryption:** Every endpoint used for VRI, regardless of type (room based all-inclusive unit or software/computer-based) must support encrypted transmissions, preferably using 256-bit Advanced Encryption Standard (AES-256).
- 7. Firewall opening:** The capability to safely traverse court firewalls without compromising security.
- 8. URI capability:** All endpoints should be able to place and receive video calls using Uniform Resource Identifiers (URIs).

Courts should consider if situations will arise when the RI system will need to bring together participants located in more than two (2) separate locations (e.g. courthouse, jail, and off-site interpreter). In these situations, the video equipment will need to support multiple licenses so the views on monitors or screens will include two video feeds.

Web-Based Applications

Description: Commercial downloadable software applications that allow users who are using the same application to make free video calls over the internet.

How it Works: These applications are peer-to-peer systems rather than a client-server system. It is best used in the courtroom via a laptop computer with an internal or external camera. The laptop computer can either be placed in front of the LEP person to ensure that he/she and the interpreter have clear visibility and audio of each other; or if the speakers are all standing in a small area (e.g. at the bench), the laptop can be placed there to better include principal participants.¹⁹ Courts should carefully weigh the security features, ease of use, and bandwidth demands of free or commercially available software applications before employing them in a live court proceeding.

Equipment and Connectivity Required for Interpreting via Web-Based Applications

RI via Web-Based Applications		
Courtroom Equipment	Interpreter Equipment	Connection
<ul style="list-style-type: none">● HD quality webcam and a dual core processor, audio capabilities sufficient for all courtroom participants to hear	<ul style="list-style-type: none">● HD quality webcam and a dual core processor	<ul style="list-style-type: none">● A fast internet connection of 3 Mbps upload/download

¹⁹Nebraska Administrative Office of the Courts, *Protocol for Use of Remote Interpreters*, Hon. Patrick McDermott, 5th Judicial District and issued by the Nebraska Supreme Court Interpreter Advisory Committee, October 2009.

GUIDELINES AND RECOMMENDATIONS

After appropriate training of all relevant court staff has been conducted, and regardless of the audio or video technology used, remote interpreting requires additional considerations and cooperation by all people involved to successfully utilize the qualified interpreter's skills.

Ultimately, it is paramount that the LEP individual receives appropriate language access to fully participate in the court proceeding.

The following are practical recommendations for the court, interpreters, and legal practitioners to consider when using RI technology.

Before the scheduled start time of any RI proceeding, a connection test with the interpreter should always be conducted.

Before the hearing, the COURT should:

- ✓ *Train the interpreter on the uses of any specialized equipment.*
- ✓ *Make sure that a connection test with the remote location is successfully completed.*
- ✓ *Inform attorneys, LEP parties and LEP witnesses and court staff that RI will be utilized during the proceedings and explain its purpose. As appropriate, provide easy-to-understand instructional cards to courtroom participants.*
- ✓ *Inform attorneys and LEP parties that if at any point the RI process is compromising the LEP speaker's language access, they should inform the court. If circumstances affecting language access cannot be mitigated, an on-site interpreter may be provided, if available; or the hearing will be continued.*
- ✓ *Introduce the interpreter to the LEP court user to ascertain whether they can understand, see and hear each other.*
- ✓ *Instruct the interpreter that he/she will be bound by the same professional standards and ethics as on-site interpreters.*
- ✓ *Explain to the LEP litigant and attorney the process for conducting a confidential communication between attorney and client.*
- ✓ *Instruct the parties in the courtroom that only one person should speak at a time.*
- ✓ *Instruct the LEP person to notify the court immediately if he/she ceases to hear, see or understand the interpreter. The court, in turn, will address this problem.*

- ✓ *Instruct the interpreter to notify the court immediately if connectivity issues arise or if he/she is unable to see or hear the proceedings. The court may call a recess to address any technical issues affecting communication.*
- ✓ *Instruct the bailiff, judicial clerk or other appropriate court staff to keep a log of all technical breakdowns and the remedies used to correct the situation.*
- ✓ *Qualify and swear in the interpreter following local rules or procedures.*
- ✓ *If audio-only equipment is being used, provide additional instructions to the interpreter and the participants if a non-verbal cue is not communicated effectively and the interpreter must verbally interrupt the speaker to maintain the integrity and completeness of the interpretation.*

During the hearing, the Court should:

- ✓ *Direct any statement to the interpreter by beginning “Mr. /Madame Interpreter” to alert the interpreter he/she is being addressed directly.*
- ✓ *Offer breaks to the interpreter if the proceeding is going longer than anticipated as mental fatigue may have adverse consequences for the judicial process. Interpreters may begin to experience mental fatigue after only approximately 30 minutes of uninterrupted work.*
- ✓ *Instruct any witness to keep in mind an interpreter is being used to transmit the testimony and to speak in complete but shorter sentences.*
- ✓ **[*Specialized Telephone System Only*]** *Speak directly to the interpreter when the “mode” buttons on the telephone equipment need to be changed. For example, “Mr. or Madame Interpreter, I am going to address the defendant” (if the LEP defendant is going to be addressed directly for a response so the interpreter will know to switch to the “Courtroom” mode to interpret the defendant’s response); or “Mr. or Madame Interpreter, attorney would like to consult with his/her client” (to alert the interpreter to switch from “Defendant Only” mode to “Counsel-Client Only” mode).*

Before the hearing, the interpreter should:

- ✓ *Become familiar with the interpreting equipment, using training materials and/or instructional cards.*
- ✓ *Be comfortable with toggling between the options “Courtroom” mode, “Defendant Only” mode, and “Counsel-Client Only” mode when using specialized telephone equipment.*
- ✓ *Inform the court which verbal cue will be used to notify the witness to pause so accurate interpretation can occur.*

- ✓ *Establish with the court the proper protocol to use if a repetition or clarification is needed.*
- ✓ *Wear proper attire if video equipment is being used. The same professional appearance that is required for in-person appearances is required for appearances via video.*
- ✓ *Report any connectivity issues to the court immediately.*
- ✓ **[*Specialized Telephone System Only*]** *Develop a system to keep track of what mode is being used.*

During the hearing, the attorney should:

- ✓ *Keep in mind that if only audio technology is being used, the interpreter cannot see the courtroom, therefore he or she cannot observe the non-verbal cues naturally noticeable by an in-person interpreter.*
- ✓ *Stop posing questions when interpreter states: “Your Honor, the interpreter requests a repetition.”*
- ✓ *Not interrupt others who are speaking*
- ✓ *Position the microphone to ensure speech is being transmitted to the interpreter at all times.*
- ✓ *Avoid shuffling papers or making other unnecessary noises near the microphones.*
- ✓ *Be patient while the interpreter completes the interpretation.*
- ✓ *Utilize the established protocol to request that an attorney-client conversation be conducted.*

**** Specialized Telephone System Only: Attorney-Client Conversations****

- ✓ *Instruct the interpreter that he/she should switch to “Counsel-Client Only” mode if counsel needs to speak to the LEP client at counsel table and the RI equipment allows it.*
- ✓ *Advise the interpreter that the confidential communication has concluded so the interpreter can return to either “Defendant Only” or “Courtroom” mode.*

Selecting an equipment vendor:

- ✓ *Research the vendors’ history of providing the types of desired telecommunication services.*
- ✓ *Request and carefully review client recommendations.*

- ✓ *Request that local IT staff be present at all meetings, presentations, and equipment demonstrations to validate technical claims and to assist in determining local court infrastructure compatibility.*
- ✓ *Enquire as to the company's policy of providing equipment warranty, technical support, and turn-around time of repairs/equipment replacement, as well as ongoing maintenance costs for any specialized equipment.*
- ✓ *Technical assistance should include both telephonic and on-site support. It is important to develop and execute a service contract that supports the needs of the court with timely and effective customer service.*

GLOSSARY OF TERMS²⁰

Analog: term used to describe any system based on continuous data or events. When used about data storage and transmission, analog format is information that is transmitted by modulating a *continuous* transmission signal, such as amplifying a signal's strength or varying its frequency to add or take away data, e.g. telephones take sound vibrations and turn them into electrical vibrations of the same shape before they are transmitted over traditional telephone lines. The opposite of analog is digital.

Audio Mixer: a device that accepts “inputs” from multiple separate sound sources combines them in a customizable way and then “outputs” the result, typically to speakers or a recording device.

Bandwidth: the volume of information per unit of time that a transmission medium (e.g. an internet connection) can handle. As the bandwidth increases, so does the amount of data that can flow through in a given amount of time. An internet connection with a larger bandwidth can move a set amount of data much faster than an internet connection with a lower bandwidth.

Broadband: generally, refers to high-speed internet access that is always on and faster than traditional dial-up access. Broadband includes several high-speed transmission technologies such as cable, DSL, fiber, wireless, satellite, and broadband over power line (BPLs).

Cable Internet: internet service that runs off the same network as cable television. For cable internet to work, a transmission between a cable modem termination system and a subscriber cable modem is required for a user to utilize internet service on their computer.

Client Server System: a network made up multiple computers connecting to a single, central server. Client computers connect over the internet to use resources.

CODEC: software that takes a raw data file and turns it into a compressed file. Because compressed files only contain some of the data found in the original file, the codec is the necessary “translator” that decides what data makes it in to the compressed version and what data gets discarded. Codec is a short name for “coder-decoder” or “compression/decompression.”

²⁰This glossary of terms was developed using information from various useful websites and articles on the web which include: <http://www.livinginternet.com/>; “The Top 30 Internet Terms for Beginners, 2012 by Paul Gil <http://netforbeginners.about.com/od/internetlanguage/tp/the-top-internet-terms-for-beginners.htm>; <http://pcsupport.about.com/od/termsb/g/bandwidth.htm>; www.wisegeek.com; www.wikipedia.org

Consecutive Interpreting: the mode of interpreting used where the interpreter renders statements made in a source language into statements in the target language intermittently after a pause between each completed statement in the source language. This mode is used in all question and answer settings such as witness testimony, where simultaneous interpreting is not feasible, and when the interpreter is not skilled in simultaneous interpretation.

Dial-Up Internet: internet service that uses the facilities of the Public Switched Telephone Network (PSTN) to establish a dialed connection to an ISP via telephone lines. The user's computer or router uses an attached modem to encode and decode IP packets and control information into and from analog audio frequency signals, respectively.

Digital: any system based on *discontinuous* (not continuous or having breaks, e.g. computers) data or events which handle data in digital form, requires modems to turn signals from digital to analog before transmitting those signals over communication lines such as telephone lines that carry only analog signals. The signals are turned back into digital form (demodulated) at the receiving end so that the computer can process the data in its digital format. The opposite of digital is analog.

Digital Subscriber Line (DSL): a wire line transmission technology that transmits data faster over traditional copper telephone lines already installed to homes and businesses. DSL-based broadband provides transmission speeds ranging from several hundred Kbps to millions of bits per second (Mbps). The availability and speed of DSL service may depend on the distance from the business to the closest telephone company facility. DSL service is asymmetrical (ASDL), with the bulk of the bandwidth reserved for receiving data, not sending it. (See SDSL)

Digital Subscriber's Line Access Multiplier (DSLAM): a network device (usually at a telephone company central office) that receives signals from multiple customer DSL connections and puts the signals on a high-speed backbone line using multiplexing techniques. It acts as a switchboard for local DSL clients, routing requests and responses between each client's computer address and the internet.

Ethernet: a type of connection between computers that forms the basis of most Local Area Networks (LAN). It generally covers only a single building or premises that are close to each other, but Ethernet networks may span tens of kilometers. Ethernet allows many computers to connect to one another into a network with the help of special hardware and protocols.

Firewall: a system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software or a combination of both. They are frequently used to prevent unauthorized internet users from accessing private networks connected to the internet, especially intranets.

High Definition (HD): term used to describe video that has resolution substantially higher than that of traditional standard definition. HD has one or two million pixels per frame, roughly five times that of standard definition.

Integrated Services Digital Network (ISDN): a set of communications standards for simultaneous digital transmission of voice, video, data, and other network services over the traditional circuits of the public switched telephone network. Prior to ISDN, the telephone system was viewed as a way to transport voice, with some special services available for data. The key feature of ISDN is that it integrates speech and data on the same lines, adding features that were not available in the classic telephone system.

Internet: a massive interconnection of computer networks that spans the globe. It is comprised of millions of computing devices that trade volumes of information. The internet houses many layers of information, with each layer dedicated to a different kind of documentation.

Internet Protocol (IP) Address: a unique numerical address that every computer on the Internet has which is used to route packets to the computer (or cell phone, etc.) across the Internet. IP addresses are usually written and displayed in human-readable notations, such as 172.16.254.1..

Internet Service Provider (ISP): a private company or government organization that connects a consumer into the internet around the world for a fee.

Intranet: a generic term for a collection of private computer networks within an organization. An intranet uses network technologies as a tool to facilitate communication between people or workgroups to improve the data sharing capability and overall knowledge base of an organization's employees. Intranets utilize standard network hardware and software technologies like Ethernet, Wi-Fi, TCP/IP, Web browsers and Web servers. An organization's intranet typically includes internet access but is firewalled so that its computers cannot be reached directly from outside the organization.

LAN/MAN/WAN:

- **LAN** (Local Area Network): a group of computers and network devices connected, usually within the same building. The connections must be high speed and relatively inexpensive (e.g., token ring or Ethernet).
- **MAN** (Metropolitan Area Network): a larger network that usually spans several buildings in the same city or town.
- **WAN** (Wide Area Network): in comparison to a MAN, it is not restricted to a geographical location, although it might be confined within the bounds of a state or country. A WAN connects several LANs and may be limited to an enterprise (a

corporation or an organization) or accessible to the public. The technology is high-speed and relatively expensive. The internet is an example of a worldwide public WAN.

Limited English Proficient (LEP): LEP individuals are persons whose first language is other than English and have a limited ability to read, write, speak, or understand English either because of where that person is from (national origin) or because of a disability.

Malware: software designed to disrupt computer operation, gather sensitive data, or gain unauthorized access to information. “Malware” is short for malicious software.

Modem: an electronic device that converts a computer’s digital signals into specific frequencies to travel over telephone or cable television lines. At the destination, the receiving modem demodulates the frequencies back into digital data. Computers use modems to communicate with one another over a network. “Modem” is short for modulator-demodulator.

Network: a group of two or more computer systems linked together.

Open Systems Interconnection (OSI) Model: internet working in terms of a vertical stack of seven layers. The “upper layers” of the OSI model represent software that implements network services like encryption and connection management. The “lower layers” of the OSI model implement more primitive, hardware-oriented functions like routing, addressing, and flow control. In the OSI model, data communication starts with the top layer at the sending side, travels down the OSI model stack to the bottom layer, then traverses the network connection to the bottom layer on the receiving side and up its OSI model stack.

Peer-to-Peer System: a network made up of two or more computers pooling individual resources such as CD-ROMS, disk drives and printers together. Each computer acts as both the client and the server and communicates directly with the other computers on the network

Protocols: layers of information dedicated to different kinds of documentation. The most popular protocols are the World Wide Web, instant message, and email.

Quality of Service (QoS): an industry-wide set of standards and mechanisms for ensuring high-quality performance for critical applications. The goal of QoS is to provide preferential delivery service for the applications that need it by ensuring sufficient bandwidth, controlling latency and jitter, and reducing data loss.

Router: a device that typically works in combination with a modem and acts as the traffic cop for network signals flowing into a location. A router can be wired, wireless, or both.

Server: a computer or device on a network that manages network resources. For example, a file server is a computer and storage device dedicated to storing files whereby any user on the network can store files on the server.

Simultaneous Interpreting: the mode of interpreting where the interpreter renders an interpretation continuously at the same time someone is speaking; hence, there are no pauses in conversation This mode of interpreting is used for most courtroom proceedings.

Symmetric Digital Subscriber Line (SDSL): high-speed internet access service with matching upstream and downstream data rates. Data can be sent to the internet from the client machine or received from the internet with equal bandwidth availability in both directions.

T1 Lines: ("T-carrier line") a type of broadband connection used to connect to the internet. A T1 line uses a highly advanced method of transferring data with the ISP. Advantages of using a T1 line include constant speeds and highly secure connections, though a downside is that most T1 lines have very high monthly subscription charges associated with them. A T1 line uses a specific type of telephone line that can carry more data than standard telephone phone lines. T1 lines can be made from twisted copper or glass fibers (also known as fiber optics). Twisted copper and fiber optics allow larger amounts of data to be transferred than normal copper wires used with a DSL or dial-up connection.

Transmission Control Protocol (TCP)/Internet Protocol (TCP/IP): two distinct network protocols; TCP and IP are so commonly used together that TCP/IP has become standard terminology to refer to either or both protocols. IP corresponds to the Network layer (Layer 3) in the OSI model, whereas TCP corresponds to the Transport layer (Layer 4) in OSI. In other words, the term TCP/IP refers to network communications where the TCP transport is used to deliver data across IP networks. The average person on the internet works in a predominately TCP/IP environment. Web browsers, for example, use TCP/IP to communicate with Web servers.

Videoconferencing: to conduct a meeting or conference between two or more participants at different sites by using computer networks to transmit audio and video data.

Video Remote Interpreting (VRI): the process of providing interpreting services via video or web cameras and telephone lines with an off-site interpreter.

Voice-Over Internet Protocol (VoIP): a form of communication that allows the consumer to make phone calls over a broadband internet connection instead of typical analog telephone lines. Basic VoIP access usually allows a person to call others who are also receiving calls over the internet. Interconnected VoIP services also allow a consumer to make and receive calls to/from traditional landline numbers, usually for a service fee. Some VoIP services require a computer or a dedicated VoIP phone, while others allow the consumer to use a landline phone to place VoIP calls through a special adapter.

Wireless Fidelity (Wi-Fi): a wireless networking technology used across the globe. It refers to any system that uses the 802.11 standard, which was developed by the Institute of Electrical and Electronics Engineers (IEEE) and released in 1997. In a Wi-Fi® network, computers with Wi-

Fi® network cards connect wirelessly to a wireless router. The router is connected to the internet by means of a cable or DSL modem typically.

World Wide Web (Web): a way of accessing information over the medium of the internet. It is an information-sharing model built on top of the internet. The Web uses the HTTP protocol, only one of the languages spoken over the internet, to transmit data. Web services, which use HTTP to allow applications to communicate to exchange business logic, use the Web to share information.

Webcam: a video camera which feeds its images in real time to a computer or computer network, often via USB, Ethernet or Wi-Fi. Webcams are known for their low manufacturing cost and flexibility making them the lowest cost form of videotelephony.

APPENDIX A: EXAMPLES OF COMMERCIAL PROVIDERS

COMPANY	WEBSITE	TELEPHONE
TELEPHONE INTERPRETING SERVICES		
LanguageLine Solutions	www.language-line.com/	800.752.6096
Voiance Language Services (formerly Language Learning Enterprise, LLC)	www.voiance.com/	866.742.9080
Language Link	www.language-link.com /	800.208.2620
Certified Languages International	www.certifiedlanguages.com/	800.225.5254
Stratus Video	www.optimalphoneinterpreters.com/ www.stratusvideo.com	877.746.4674
Cross-Cultural Interpreting Services	www.heartlandalliance.org/ccis/	773.751.4094
SPECIALIZED TELEPHONE EQUIPMENT		
BIAMP Systems	http://biamp.com/	800.826.1457
Tieline Technologies	http://tieline.com/	888.211.6989
VOICE OVER INTERNET PROTOCOL		
Trident Global Services	http://www.tridentglobalservices.com/	832.665.2868
VIDEO CONFERENCING EQUIPMENT		
Polycom	http://www.polycom.com/	800.765.9266

COMPANY	WEBSITE	TELEPHONE
VIDEO REMOTE INTERPRETING EQUIPMENT		
CISCO	http://www.cisco.com/	800.553.6387
LifeSize	http://www.lifesize.com/	877.543.3749
VIDEO REMOTE INTERPRETING SERVICES		
Monterey Language Services	http://www.montereylanguages.com/video-remote-interpretation-services.html	831.655.3460
Stratus Video	www.stratusvideo.com	727.451.9766
DOWNLOADABLE WEB BASED APPLICATIONS		
Skype	http://www.skype.com/intl/en/home	

APPENDIX B: GENERAL OVERVIEW SHEET

TERM	DESCRIPTION/DEFINITION
Remote Interpreting (RI)	The provision of interpreting services using communication technology in a situation where the interpreter is not collocated with the consumers of the interpreting services.
RI Appropriateness	<ul style="list-style-type: none"> ● Urgent, emergent or unexpected situations where no in-person interpreter is available ● Routine matters for which the quality of the interpretation will not be unduly compromised, and the duration is expected to be short and testimony will be limited and brief ● Interpreter for a language of limited diffusion is needed and no on-site interpreters are reasonably available
RI Inappropriateness	<ul style="list-style-type: none"> ● Trials, long hearings or complicated hearings ● Proceedings involving many individuals ● Proceedings involving parties who are elderly, very young, have mental illness or those who have profound speech or language problems ● Anticipated emotionally charged or contentious testimony
Audio Technologies	<p>Telephone – Services provided with the use of telephones and a standard telephone line; telephone interpreting is usually delivered in the consecutive mode.</p> <p>Specialized telephone equipment – Services provided with technology that allows for simultaneous interpreting services using a standard telephone and standard phone line.</p> <p>Voice Over Internet Protocol (VoIP) – Services provided through phone calls initiated over a broadband internet connection.</p>
Video Technologies	<p>Video Conference System – Services provided using technology where the interpreter is either in the courtroom or in a location with the LEP individual</p> <p>Specialized Video Remote Interpreting (VRI) System – Services provided with video web cameras and telephone lines to provide sign and spoken language interpreting services through an off-site interpreter.</p> <p>Web-Based Applications – Services provided using downloadable applications that allows users to make free video calls over the internet.</p>

TERM	DESCRIPTION/DEFINITION
Recommendations for the court	<p>Before the hearing – provide specific guidelines or protocols/instructions regarding remote interpreting use and equipment testing.</p> <p>During the hearing – address the interpreter, pay attention to fatigue, establish a short signal (between the interpreter and the LEP witness) to request a pause and address the LEP witness regarding a testimony.</p>
Recommendations for interpreters	<p>Before the hearing – be familiar with and comfortable using the RI equipment and actively participate in the RI process via open communication.</p> <p>During the hearing – be able to transition from mode to mode when multiple speakers are involved in an exchange.</p>
Recommendations for attorneys	<p>Before the hearing – aid the interpreter by giving him/her as much information about the case as possible (i.e. statutory language for criminal offenses, facts and subject matter of the case, names, dates, any exhibits that will be introduced, etc.).</p> <p>During the hearing – note specific suggestions described on page 29; pay special attention to privileged attorney-client conversations.</p>

APPENDIX C: DETERMING BROADBAND NEEDS

How to Estimate Business Broadband Needs

Typical applications and their performance for various download/upload speeds - single user

Application	1.5 Mbps / 384 Kbps	7 Mbps / 768 Kbps	10 Mbps / 1 Mbps	20 Mbps / 2 Mbps	50 Mbps / 2 Mbps	100 Mbps / 10 Mbps
Simple email, no attachments	Green	Green	Green	Green	Green	Green
Web browsing	Green	Green	Green	Green	Green	Green
Email, attachments and graphics	Green	Green	Green	Green	Green	Green
Download small files (1 MB, 50 pages)	Green	Green	Green	Green	Green	Green
Download large files (2 MB, 100 pages)	Green	Green	Green	Green	Green	Green
Online trading, e-business	Green	Green	Green	Green	Green	Green
Online meeting, with document sharing	Green	Green	Green	Green	Green	Green
Videconfernce (384 Kbps) - 1 user	Yellow	Green	Green	Green	Green	Green
Skype videoconference - 5 users	Yellow	Green	Green	Green	Green	Green
Cloud applications (business apps, backup)	Yellow	Green	Green	Green	Green	Green
VPN, remote service access	Red	Yellow	Yellow	Green	Green	Green
Videconfernce (768 Kbps) - 5 users	Red	Yellow	Yellow	Green	Green	Green
Voice over IP (ten external lines)	Red	Red	Yellow	Green	Green	Green
Upload videos, presentations (1 GB)	Red	Red	Yellow	Yellow	Green	Green
Download HD video (2 GB) in real-time	Red	Red	Red	Yellow	Green	Green
Server backup, up to 20 GB (off-hours)	Red	Red	Red	Yellow	Green	Green
Telecommuting	Red	Red	Red	Yellow	Green	Green
Distance learning	Red	Red	Red	Yellow	Green	Green
Telemedicine (160 MB, radiologic images)	Red	Red	Red	Yellow	Green	Green

Table adapted from "The Impact of Broadband Speed and Price on Small Business" at <http://archive.sba.gov/advo/research/rs373tot.pdf>