From Google:

https://gemini.google.com/

Scott: I need an informative, substantive briefing for librarians on the kinds of language & translations services available to local communities. We need to help these public service professionals understand how to effectively assist an underserved population in their communities. People are depending on us.

Acting as my professional research expert, please ask me any questions I can answer for you to move this vital project forward.

Gemini:

# **Understanding Your Target Audience and Goals**

To provide the most effective briefing, it's essential to have a clear understanding of your target audience and the specific goals you hope to achieve.

## **Target Audience**

- **Librarians:** What is the general level of their language and cultural competency? Are they familiar with the concept of language access services?
- Underserved Population: Can you provide more details about the specific community you're focusing on? What are their primary languages and cultural backgrounds?

### Goals

- **Inform:** What specific information do you want to convey to the librarians? Should the briefing focus on types of services, funding opportunities, or best practices?
- **Equip:** What skills or knowledge do you want librarians to acquire? Should the briefing focus on identifying language needs, building relationships with community partners, or providing effective referrals?
- **Empower:** How do you want librarians to apply the information? Should the briefing focus on developing language policies, creating welcoming spaces, or advocating for language access?

Once I have a better understanding of these factors, I can tailor the briefing content and format accordingly.

Would you like to start by providing more details about your target audience and goals?

Scott: For the moment, let's focus on the community of Novi, Michigan, USA.

The librarians need to to know the difference in service levels, costs, funding opportunities and best practices. They need particular assistance with Asian language, including Japanese, Chinese/Mandarin and Korean services. Librarians will be building relationships with community partners, and providing effective referrals. They will focus on developing language policies, creating welcoming spaces, or advocating for language access.

# Gemini: Understanding the Needs of Librarians in Novi, Michigan

### Focusing on Asian Languages: Japanese, Chinese/Mandarin, and Korean

**Excellent!** This provides a clear focus for the briefing.

To ensure the briefing is comprehensive and actionable, I'd like to gather some additional information:

- 1. **Current Language Services:** Are there currently any language services offered by the Novi library? If so, what are they?
- 2. **Community Needs Assessment:** Has there been a recent assessment of language needs within the Asian community in Novi? If so, what were the key findings?
- 3. Library Resources: What are the library's current resources in terms of staff, budget, and technology?
- 4. **Collaboration:** Are there existing partnerships with local organizations that provide language services or support the Asian community?

Understanding these factors will help tailor the briefing to the specific needs of the Novi library and its community.

Would you like to start with the current language services offered by the library?

Scott: For the moment, let's focus on the kinds of translation services that might be currently available. Please present and outline to assist me in locating and identifying the kinds of services and any comparative cost information that might be available. Present your summary with a succinct overview and descriptions of various kinds of service types and levels generally available so we know what to look for locally. Include a table/matrix so the information is easy to understand, compare and contrast.

# **Gemini: Types of Translation Services**

**Overview:** Translation services can vary widely in terms of quality, speed, cost, and specialization. Understanding the different types available will help librarians effectively assess their needs and choose the most suitable option for their community.

## **Service Types**

#### 1. Professional Human Translation:

- Description: This involves human translators with expertise in specific languages and subject matter.
- o **Quality:** Typically high-quality, accurate, and culturally appropriate.
- o Cost: Generally higher due to human labor involved.
- o **Specialization:** Available for various fields (legal, medical, technical, etc.).

#### 2. Machine Translation:

- o **Description:** Automated translation using software algorithms.
- o Quality: Varies significantly, often produces grammatically incorrect or nonsensical output.
- o **Cost:** Generally low or free.
- o **Specialization:** Limited to general language translation.

### 3. Hybrid Translation:

- o **Description:** Combines machine translation with human post-editing to improve accuracy.
- o **Quality:** Intermediate between machine and human translation.
- o Cost: Lower than professional human translation but higher than machine translation.
- o **Specialization:** Can be tailored to specific fields.

#### 4. Crowdsourced Translation:

- o **Description:** Multiple individuals contribute to the translation process.
- o **Quality:** Can vary widely, depending on the contributors' expertise.
- o **Cost:** Generally lower than professional human translation.
- o **Specialization:** Suitable for large volumes of text with less critical content.

#### Service Levels

- Basic: Simple, general language translation without specialized terminology or cultural nuances.
- Standard: Translation with attention to accuracy and clarity, suitable for most documents.
- Advanced: High-quality translation with specialized terminology and cultural adaptation.
- Certified: Translation with legal or official certification, required for specific documents.

## **Comparison Table**

Service Type	Quality	Cost	Speed	Specialization
Professional Human Translation	High	High	Moderate	High
Machine Translation	Low- Medium	Low	High	Low
Hybrid Translation	Medium- High	Medium	Medium	Medium
Crowdsourced Translation	Medium	Low-Medium	High	Medium

**Note:** Cost and speed can vary significantly depending on factors such as language pair, document length, turnaround time, and service provider.

By understanding these different types of translation services, librarians can make informed decisions about which option best suits their community's needs and resources.

Would you like to explore specific examples of translation service providers or discuss potential funding sources for these services?

Scott: Let's explore specific examples of "Machine Translation" service providers. Please, prepare a briefing of any high-quality online services, specifically if they utilize AI or other technology. Focus the response on these that offer 'best of breed' services for Asian or character-based languages. Please share any potential funding sources or general cost for these services, as available.

Gemini:: Machine Translation Services: A Focus on Asian Languages

**Disclaimer:** While machine translation has made significant strides, it's essential to remember that human translation often provides superior accuracy and nuance, especially for complex or sensitive content.

1. The Importance of Human Translation Services in the AI Era



#### atlasls.com

## **Understanding the Limitations of Machine Translation**

Before diving into specific providers, it's crucial to acknowledge the limitations of machine translation:

- **Accuracy:** While improving, machine translation can still produce errors, particularly with complex sentence structures, idioms, and cultural references.
  - 1. 6 Cultural Mistakes to Avoid in Market-Specific Translation Localize Articles



#### localizejs.com

- **Nuance:** Subtleties in language and meaning can be lost in translation.
- Contextual Understanding: Machine translation often struggles with context-dependent words and phrases.
  - 1. What are the most common linguistic nuances that machine translation systems struggle with? | 5 Answers from Research papers SciSpace



typeset.io

## **High-Quality Machine Translation Providers**

Despite these limitations, certain providers offer advanced machine translation capabilities, especially for Asian languages.

#### Google Translate

- Strengths: Offers a wide range of language pairs, including high-quality support for Asian languages like Japanese, Chinese, and Korean. Leveraging AI and neural machine translation, it provides relatively accurate and fluent translations.
- Weaknesses: Can still struggle with complex text, idioms, and regional variations.
- Cost: Free for basic use, with premium options available for businesses.

#### Microsoft Translator

- **Strengths:** Similar to Google Translate, Microsoft Translator offers strong support for Asian languages and utilizes AI for improved accuracy.
- Weaknesses: May have limitations in handling specialized terminology and regional dialects.
- **Cost:** Free for basic use, with enterprise-level plans available.

#### DeepL Translator

- **Strengths:** Known for its high-quality translations, especially in European languages. While not as specialized in Asian languages as Google or Microsoft, it still offers decent results.
  - 1. DeepL Translator launches 13 new European languages



#### www.deepl.com

- Weaknesses: Limited language support compared to the other two options.
- **Cost:** Free for basic use, with paid plans for businesses.

#### Other Notable Providers

- Baidu Translate: A strong option for Chinese language, especially Mandarin.
- Yandex Translate: Offers good results for Russian and Ukrainian, but also supports some Asian languages.

### **Funding Sources for Translation Services**

- Library Grants: Explore grants specifically for language services or technology initiatives.
- Community Foundations: Local foundations might support projects benefiting underserved communities.
- Corporate Sponsorships: Local businesses may be interested in supporting language access initiatives.
- Government Grants: Check federal, state, and local government programs for potential funding.

**Note:** The cost of machine translation services varies widely based on factors such as the volume of text, language pair, and desired turnaround time. It's essential to obtain specific quotes from providers to accurately assess costs.

### SOURCES:

The Importance of Human Translation Services in the AI Era



<u>6 Cultural Mistakes to Avoid in Market-Specific Translation - Localize Articles</u>



What are the most common linguistic nuances that machine translation systems struggle with? | 5 Answers from Research papers - SciSpace



DeepL Translator launches 13 new European languages



Would you like to explore specific use cases for machine translation within the library setting or discuss potential partnerships with local organizations?

## Online Services for Speech-to-Text and Text-to-Speech

Yes, there are several online services that can convert spoken word into text (speech-to-text) and then convert that text back into spoken word (text-to-speech). These services utilize advanced speech recognition and natural language processing technologies to provide accurate and natural-sounding output.

### **Popular Options**

- **Google Assistant:** This is a virtual assistant built into many Android devices and Google smart speakers. It can understand spoken language, provide information, and perform actions.
- Amazon Alexa: Similar to Google Assistant, Alexa is a virtual assistant available on Amazon Echo devices and other compatible devices.
- Apple Siri: Another popular virtual assistant, Siri is primarily used on Apple devices.
- **Microsoft Azure Speech Services:** Offers a comprehensive suite of speech-to-text and text-to-speech APIs for developers and businesses.
- **IBM Watson Speech to Text:** Provides advanced speech recognition capabilities with support for multiple languages and dialects.

## **Key Considerations for Libraries**

When considering these services for library applications, consider the following:

- **Accuracy:** The ability of the service to accurately transcribe spoken language, especially in noisy environments or with different accents.
- Language Support: The range of languages supported by the service, including Asian languages like Japanese, Chinese, and Korean.
- Cost: The pricing structure for different usage levels and features.
- Accessibility: The ease of integration with library systems and devices.
- **Privacy:** The service's handling of user data and compliance with privacy regulations.

Would you like to explore specific use cases for speech-to-text and text-to-speech technologies in a library setting?

Scott: yes.

# **Use Cases for Speech-to-Text and Text-to-Speech in Libraries**

## **Potential Applications**

Speech-to-text and text-to-speech technologies offer a range of potential applications for libraries to enhance accessibility and user experience:

#### Accessibility

- Language Translation: Real-time speech-to-text conversion can facilitate communication between library staff and patrons with language barriers.
- **Transcription Services:** Creating accessible content, such as transcripts of audio or video materials, for patrons with hearing impairments.
- Reading Assistance: Text-to-speech can aid patrons with visual impairments or reading difficulties.

#### User Experience

- Virtual Assistants: Implementing voice-activated assistants to help patrons find materials, search the catalog, and access library services.
- Interactive Exhibits: Creating engaging and interactive exhibits using speech recognition and text-to-speech.
- Language Learning: Providing language learning tools with speech recognition and text-to-speech components.

#### **Library Operations**

- Dictation: Enabling staff to dictate notes, emails, or reports.
- Audio Book Creation: Producing audiobooks from written materials.
- Accessibility Audits: Evaluating the accessibility of library materials and services.

## **Specific Use Cases for Asian Languages**

Given the focus on Asian languages, it's crucial to select services with strong support for these languages. Potential use cases include:

- Language Learning: Offering language learning resources with speech recognition and text-to-speech capabilities for Japanese, Chinese, and Korean.
- Cultural Programs: Creating interactive cultural programs that use speech recognition to engage participants.
- Accessibility: Ensuring that library materials and services are accessible to patrons with language and disability needs.

Would you like to explore any of these use cases in more detail or discuss potential challenges and solutions?