Language Translation Applications

Market Survey Report

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Homeland Security
Science and Technology

NUSTL®
NATIONAL URBAN SECURITY TECHNOLOGY LABORATORY

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FOREWORD

The U.S. Department of Homeland Security (DHS) established the System Assessment and Validation for Emergency Responders (SAVER) program to help emergency responders improve their procurement decisions. Located within the DHS Science and Technology Directorate (S&T), the SAVER program conducts objective assessments and validations on commercially available equipment and systems and develops knowledge products that provide relevant equipment information to the emergency responder community. The SAVER program mission is to:

- Conduct impartial, practitioner-relevant, operationally oriented assessments and validations of emergency response equipment
- Provide information—in the form of knowledge products—that enables decision-makers and responders to better select, procure, use and maintain emergency response equipment.

SAVER program knowledge products provide information on equipment that falls under the categories listed in the DHS Authorized Equipment List (AEL), focusing primarily on two main questions for the responder community: "What equipment is available?" and "How does it perform?" These knowledge products are shared nationally with the responder community, providing a cost-saving asset to DHS by ensuring federal, state, and local responders are prepared to make operational and procurement decisions.

The National Urban Security Technology Laboratory (NUSTL) manages the SAVER program. NUSTL works with stakeholders to identify and prioritize project topics that address emergency responder needs, develops SAVER knowledge products, and coordinates with other organizations to leverage appropriate subject matter expertise.

NUSTL also provides expertise and analysis on a wide range of key subject areas, including chemical, radiological, nuclear, and explosive weapons detection; emergency response and recovery; and related equipment, instrumentation, and technologies. Under the SAVER program, NUSTL conducted a market survey of commercially available language translation applications. This equipment falls under the AEL reference number 09ME-07-TRAN titled "Equipment Translation/Accessibility."

For more information on NUSTL's SAVER program, language translation applications or to view additional reports on other technologies, visit: www.dhs.gov.science-and-technology/SAVER.

U.S. Department of Homeland Security

SAVER

System Assessment and Validation for Emergency Responders

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EXECUTIVE SUMMARY

First responders face many challenges when confronting an emergency, including a possible language barrier with persons involved. Communicating with victims, witnesses or other people involved with an emergency situation is essential to a responders' assessment of any emergency. If those persons involved speak a different language than the responder, it could significantly impact a responder's ability to act quickly, efficiently, and appropriately.

Emergency responders, including medical services, law enforcement or fire departments, historically relied on interpreters to alleviate language barriers. The time it takes for an interpreter to reach an emergency scene could cause delays in a responder's ability to act on the scene.

Mobile communication devices such as smart phones and tablets are commonly acceptable tools used by both emergency responders and civilians. Language translation applications are available for mobile devices, and most integrate with its camera, speaker, and microphone, allowing for text and voice translation functionality.

Between November 2019 and November 2020, the National Urban Security Technology Laboratory's (NUSTL's) Systems Assessment and Validation for Emergency Responders (SAVER) program conducted a market survey of commercially available language translation applications. The survey identified nine products, ranging from being available at no cost, to one-time fees and monthly service fees. All products listed here are commercially available, mobile device applications that comply with Health Insurance Portability and Accountability Act (HIPAA) regulations.

The purpose of this market survey is to provide information that will guide emergency response agencies in making equipment selections. When making procurement decisions, emergency response agencies should carefully research the overall capabilities, limitations, and technical specifications of each product in relation to their agency's operational needs. Information included in this report has not been independently verified by NUSTL.

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1.0 INTRODUCTION

During an emergency response, language barriers can challenge a first responder's ability to quickly assess and respond to a situation. First responders must be able to accurately communicate with persons at an emergency scene in order to provide a prompt, appropriate response. The quick translations provided by mobile language translation applications can remove the language barrier between first responders and civilians with whom they interact, enabling better health and safety outcomes.

Before the adoption of smartphones, first responders relied on human translators, either in-person or via live telephone translation services. Human translators served an important function and any delay in a human translator's arrival on scene could adversely affect the communication of time-critical information and aid.

Language translation applications are downloadable tools that run on mobile communication devices and translate text or speech from one language to another. Various language translation applications are available on the market, including applications specifically for emergency response personnel. Language translation applications designed for responders can provide specific emergency and medical terminology and adhere to privacy standards such as the Health Insurance Portability and Accountability Act (HIPAA).

Between November 2019 and November 2020, the System Assessment and Validation for Emergency Responders (SAVER) program conducted a market survey of language translation applications. This market survey report is based on information gathered from manufacturer and vendor websites, internet research, industry publications, and a government-issued request for information (RFI) that was posted on the Federal Business Opportunities website. The U.S. Department of Homeland Security (DHS) Science and Technology Directorate's (S&T) Technology Scouting Group also contributed to the market research used in the development of this report.

For inclusion in this report, the language translation applications had to meet the following selection criteria:

- Downloadable, mobile application – available from the Apple App Store or Google Play and offers in-app functionality and compatibility with mobile devices
- HIPAA compliant – abides by the rules and regulations outlined by HIPAA
- Multi-lingual – capable of translating between English and more than one other language
- Does not require purchase of hardware designed for use with the application, such as headsets or ear buds, nor a dedicated platform to connect to the internet

Due diligence was performed to develop a report that is representative of products in the marketplace. No evaluation of the translation applications was performed.

2.0 LANGUAGE TRANSLATION OVERVIEW

Language translation applications vary in functionality and features, but generally operate by leveraging machine translation, mobile device hardware, and mobile device application features. Machine translation is the act of automatically translating source text[1] from one language to target text[2] in another language. Additionally, some language translation applications leverage machine learning[3], which is the implementation of computer software that can learn autonomously and continually improve performance aspects, such as accuracy. Important features to consider when downloading a language translation application include real-time language detection, real-time language translation, voice and text recognition, functionality during low bandwidth, and available languages.

- Real-time language detection is the capability of detecting the input language in text or voice format, which prevents the user from having to identify the language requiring translation. Real-time language identification is the ability to indicate to the app user what language is being spoken or written.
- Real-time language translation provides language translations as a user is speaking or typing.
- Voice recognition enables users to speak a word or phrase to be translated and outputs in an audible response. Utilizing their device's screen and on-screen keyboard, users can also input text to be translated; the app then displays the translation on the screen.

Language translation app functionality depends on whether the mobile device it is installed on has connectivity. Some apps have downloadable libraries with commonly used questions and terms that are specific to emergency situations in order to mitigate the impact of being offline. Some apps rely on telecommunication infrastructure or WiFi to access the application's server and complete the translation. Some applications utilize both a downloaded library and a server connection and allow for some user customization on which are used.

The number and availability of languages on an app depends on whether the app's library is stored onboard the device or on a server. Apps may vary in the availability of offline language translation but typically offer fewer options than possible with connectivity. Additionally, some apps have specialized purposes, such as medical translation. These focus specifically on preloaded health related phrases or questions, as well as renderings of the body.

[1] "Source text" is the word or phrase (written or verbal) input to be translated.
[2] "Target text" is the translated word or phrase output in the identified language.
[3] Machine learning is a branch of artificial intelligence (AI), which can be defined as the ability of a digital computer or computer controlled device to perform tasks typically associated with human-like intelligence. This includes learning from examples or experiences, understanding and responding to language, and recognizing objects.

2.1 Current Technologies

Downloadable mobile device apps are specifically designed to work on mobile devices and differ from those designed to run on a computer as they use less computing and processing power, and typically offload the processing to an external cloud server. The user interfaces of mobile device applications are specifically designed for the size and layout of mobile device screens. Language translation applications leverage mobile device speakers, microphones, keyboards, and screens to allow text or voice translation functionality.

Language translation applications use machine translation, which may not provide an exact translation between languages due to the ambiguity and flexibility of human language. Despite inaccuracies, machine translation is the most commonly accepted process and widely used by applications. Various machine translation methods may be used to complete language translation such as neural machine translation.

Neural machine translation and the increasing size of data sets enable effective translations. Neural machine translation leverages statistical methods and uses artificial neural networks to predict the likelihood of a sequence of words. As data sets increase, and prior translations are validated, context and word ambiguities can be resolved.

In using most translation applications, users begin by inputting words to be translated via text or voice into the application, as well as indicating the desired output language. The input is then sent to a cloud server, where an application's software or machine translation algorithm processes the input and translates it. The translation is then sent back to the device in real-time. Some translation applications use downloadable language libraries that allow users to translate offline. This may be beneficial in low telecommunications infrastructures; however, it may take longer to complete a translation, and may not be as accurate as leveraging cloud services.

Other products are available on the market that come with specific audio hardware, such as ear-pieces, designed to provide additional capabilities. For example, some devices actively listen for speech in another language and automatically translate to the user's native language directly into an ear-piece. This hardware is necessary to the functionality but it's not a standalone device as the audio hardware must be paired with an internet-connected device which performs the translation. Additionally, there are translator systems that include dedicated platforms to connect to the internet for translation (i.e. not downloadable apps for phones or tablets). Such products requiring additional hardware may not be practical for emergency responder operations. These devices use the same methods for translation between languages as well as the use of downloadable language libraries.

2.2 Use Cases

Language translation applications can be used to overcome language barriers in a variety of situations that first responders encounter, such as medical emergencies, traffic stops, lost person searches, and field interviews.

The primary use case for language translation applications in this report is for emergency responders who are assessing an emergency and need to communicate with medical patients, victims or witnesses who speak a different language than the responder. Language translation applications enable first responders to perform their mission effectively and efficiently by enhancing their ability to communicate.

This report does not cover the use of language translation applications for any official document translation.

2.3 Standards and Regulations

This market survey report focuses on applications that—according to their vendors—comply with the HIPAA Privacy Rule, which provides federal protection for individuals' identifiable health information held by covered entities and their business associates. "The Rule requires appropriate safeguards to protect the privacy of personal health information, and sets limits and conditions on the uses and disclosures that may be made of such information without patient authorization [1]."

Within this report, emergency responder agencies can be considered covered entities and language interpreters, both human and electronic, are considered business associates [2]. Patient privacy protections extend to the language translation applications used by covered entities. It is an important consideration when selecting and using a language translation application if personally identifiable information is likely to be translated.

In order to adhere to HIPAA regulations, language translation applications must provide security measures for safeguarding information that may be stored in any of the application's server infrastructure. Some applications work with cloud services that have built in security measures; others do not store any data by design. Any data in transit that includes personal identifiable information (PII) should also be safeguarded. Data encryption is a common security tool used for keeping data in transit safe.

The vendors of each of the applications featured in this market survey report have stated their solution has the ability to be HIPAA compliant which mitigates potential violations for responder organizations.

2.4 Personally Identifiable Information and Privacy

Privacy should be taken into consideration when selecting the appropriate app for first-responder-specific use cases. All potential users of these applications are strongly encouraged to thoroughly review the privacy policy of any application and/or company before the application is installed or used. Distinct from identifiable health information, many companies capture information related to the user of the app that is considered Personally Identifiable Information (PII). The United States federal government has defined PII as any information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. The definition of PII is not anchored to any single category of information or technology. Rather, it requires a case-by-case assessment of the specific risk that an individual can be identified.

Within the privacy policy of many language translation applications, there are clauses that allow the company to disclose personal information to third-party service providers, sponsors or promoters, sub-contractors, and marketing providers. In addition to PII, translated conversations may be retained and used by companies for analysis and continued refinement of their services. Correlation of PII to translated conversations is dependent on use cases and operational practices. It's important to review these disclosures to make an informed decision before providing any data.

This market survey report includes information from each company's privacy policies, where available, including the types of data collected when using translation apps. The types of data that may be collected by the applications are:

Commercial may include records of products and services purchased.

Device data may include the type of device being used and operating systems.

Geolocation may include physical locations and movements (inferred by IP address).

Internet or network activity may include information on a consumer's interactions with a website.

Non-personal identifiable may include the type of browsers being used or websites being visited before and after visiting the translation services.

Personal identifiable may include full names, e-mail addresses, phone numbers, social media profiles, addresses or payment information.

Sensory may include audio recordings.

3.0 PRODUCT INFORMATION

This report provides information on nine HIPPA-compliant language translation applications that range in price from free to $99.99 per year. These applications fall into two categories. The first, which includes three products, uses preloaded words or phrases and the other, which includes six products, are capable of real-time translation. The real-time translation apps typically use microphone buttons on a single phone's display screen to allow speakers to select the appropriate language button and take turns speaking. Real-time translation can also be achieved by typing into the app and receiving the translation as text or audible words. These apps allow for input and output in the languages of both users so that each can speak, type or read in their native language and be understood by the other user.

Products are listed alphabetically by manufacturer in Table 3-1, which provides general product characteristics and specifications. The information presented in this report was obtained directly from manufacturers, vendors, and their websites from November 2019 to November 2020. The information has not been independently verified by the SAVER program. While not included in the table below, information on customer support offerings are included in each product section of this report.

Product information in Table 3-1 is defined using the following translation techniques, listed and defined in column order.

Speech-to-speech functionality indicates the ability to translate spoken words from one language to spoken words in another language.

Speech-to-text functionality indicates the ability to translate spoken word from one language to text in another language.

Text-to-speech functionality indicates the ability to translate typed words from one language to spoken words in another language.

Preloaded phrase translation indicates the ability to translate between languages, using prepopulated phrases or questions; some applications targeted to health and medical situations include renderings of the body.

Number of languages/dialects supported indicates the number of languages and dialects able to be translated by the application.

Real-time language detection indicates the ability for the mobile device to utilize voice activation to recognize speech input and begin translation.

Real-time language identification indicates the ability to automatically recognize, identify, and show the input language to the user.

No comms capability indicates the ability to translate without internet access or Wi-Fi connectivity.

MSRP indicates the manufacturer's suggested retail price.

Table 3-1 Product Comparison Matrix

Manufacturer	Product	Speech-to-speech	Speech-to-text	Text-to-speech	Preloaded phrase translation	Number of languages supported*	Real-time language detection	Real-time language identification	No comms capability†	MSRP
AppTek	AppTek Speech Translate	✓		✓		40+			✓	‡
Canopy Innovations, Inc.	Canopy Speak				✓	15			✓	Free
iTranslate	iTranslate Medical	✓	✓	✓		4	✓	✓	✓	$99.99/year
LanguageMAPS, Inc.	1st Minute-Pro				✓	10			✓	$9.99 (one-time fee)
Microsoft	Microsoft Translator	✓	✓	✓		72	✓	✓	✓	‡
myLanguage, Inc.	Vocre Translate	✓	✓	✓		11				Free
myLanguage, Inc.	Vocre Translate Premium	✓	✓	✓		58	✓	✓	✓	$4.99/month
SayHi Translate	SayHi	✓	✓	✓		89	✓	✓		Free
Universal Projects and Tools S.L.	Universal Doctor Speaker				✓	16			✓	Free

Notes:
* – Refers to the number of languages that can be translated to/from English.
† – In a no comms environment, apps typically offer fewer capabilities such as limited pre-loaded phrases or subsets of a language.
‡ – More information required to determine cost such as the number of users.

Information in the table is based on data gathered from vendors and their websites from November 2019–July 2020.

3.1 AppTek, AppTek Speech Translate

AppTek Speech Translate provides two-way speech communication by leveraging neural machine translation and machine learning to complete translations. Users can speak directly into their devices in English for immediate speech-to-speech translation into a different language. The application also allows users to type words or phrases for text-to-speech or text-to-text translations. Pre-loaded phrases are available for specific situations and can be used offline. These phrases are customizable so users can develop their own questions or phrases.

Translation is available between English and more than 40 languages using neural machine translation as well as more than 30 languages using automatic speech recognition including Arabic, Chinese Mandarin, Dutch, French, German, Hebrew, Italian, Japanese, Korean, Persian, Russian, and Spanish.

AppTek Speech Translate cost is dependent on the number of end users that are needed, and whether it's purchased as a software or as a service solution. Paid subscriptions ensure added security measures and enable the application to be HIPAA compliant. Support for the application is available via e-mail or phone.

Figure 3-1 AppTek Speech Translate
Image courtesy of AppTek

AppTek may collect device data such as device type or operating system, and personal information such as name, e-mail, phone/mobile number, home or mailing address, work address, payment information, and social media profiles. This information is stored and processed in the United States or wherever AppTek's partners, affiliates, and/or third-party providers maintain facilities. Additional information regarding AppTek's privacy policy can be found at https://www.apptek.com/privacy-policy-apptek [3].

3.2 Canopy Innovations, Inc., Canopy Speak

Canopy Speak is a medical phrase translation application that utilizes more than 4,000 preset medical phrases for text and audio translations. These phrase translations, created by medical professionals, are organized by nine specialties and cover areas such as Greeting and Goodbye, History, Physical Exam, Labs, Radiology, Procedures, Rounding, Labor and Delivery, Gynecology, Reassessment, etc. The application uses text-to-speech and text-to-text translation methods. Canopy Speak also provides a one-touch interpreter call button that connects the user directly to an over-the-phone interpreter line. This application does not offer real-time language detection or identification and requires the user to select its input and output languages. Preset medical phrases can be used offline.

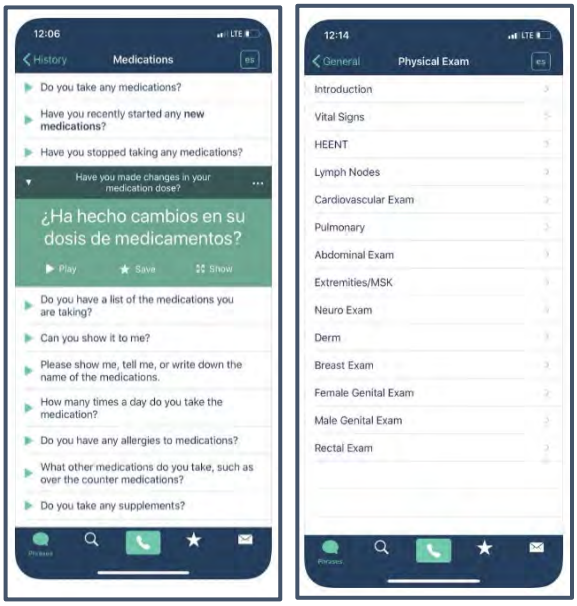

Figure 3-2 Canopy Speak
Courtesy of Canopy Innovations, Inc.

Phrases are available between English and 15 languages and dialects: Arabic, Bengali, Chinese Cantonese, Chinese Mandarin, Filipino, French, Haitian Creole, Hindi, Japanese, Korean, Malay, Portuguese, Russian, Spanish, and Vietnamese. Certain languages are limited to text-only mode.

Canopy Speak is available at no cost via the Apple Store and Google Play. Support for the application is available online and by e-mail.

Canopy Innovations, Inc. collects personally identifiable information such as name, e-mail, employer institution, and occupation. This information is retained and may be used by a third-party service that may collect information used to identify users. Additional information regarding Canopy Innovations, Inc.'s privacy policy can be found at https://withcanopy.com/privacy-policy-2/ [4].

3.3 iTranslate, iTranslate Medical

iTranslate Medical launched in response to the COVID-19 pandemic to enable existing devices to reduce the exposure of human translators to potentially infected individuals. The application is capable of speech-to-speech, speech-to-text, text-to-speech, and text-to-text translations. iTranslate offers real-time language detection and identification but also allows the user to request translation between two languages. The application is fully functional offline.

Translation is available between English and four different languages including Chinese, French, German, and Spanish.

iTranslate Medical is available for $99.99 per annual subscription via the Apple App Store and Google Play. Support for the application is available online and by e-mail.

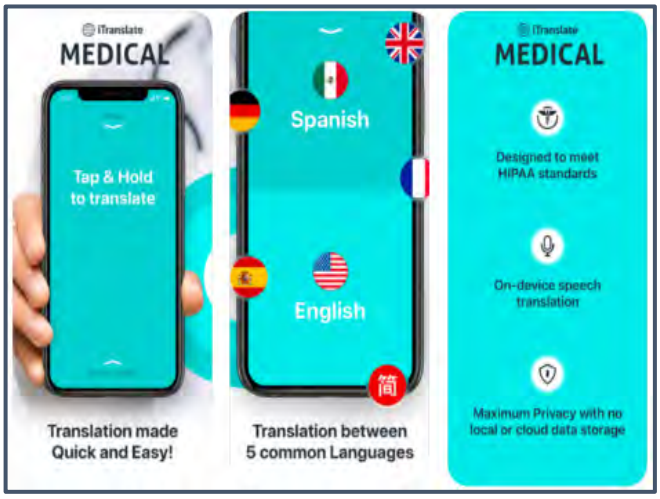

Figure 3-3 iTranslate Medical
Image Courtesy of iTranslate

iTranslate collects personal information such as identifiers (e.g., real name, alias), personal records (e.g., name, e-mail addresses, username), commercial information (e.g., records of products or services purchased, obtained or considered), internet/network activity (information on a consumer's interaction with a website) and geolocation data (physical locations or movements inferred by IP address). Sensory data such as audio recordings may also be collected. iTranslate may transfer personal information to countries other than the country in which data is initially collected. Additional information on this data retention and sharing can be found at https://www.itranslate.com/medical-privacy-policy#DataRetention. Additional Information regarding iTranslate Medical's privacy policy can be found at https://www.itranslate.com/medical-privacy-policy [5].

3.4 LanguageMAPS, Inc., 1st Minute Pro

1st Minute Pro was designed for translation during medical emergencies. Users can obtain triage information, medical history, details of sickness or injury, and more from patients in as little as 60 seconds. The app offers text-to-text translation and is intended to be used solely in medical scenarios with its patient interview and format guiding questions. The 1st Minute Pro app features full offline functionality with its pre-populated language database.

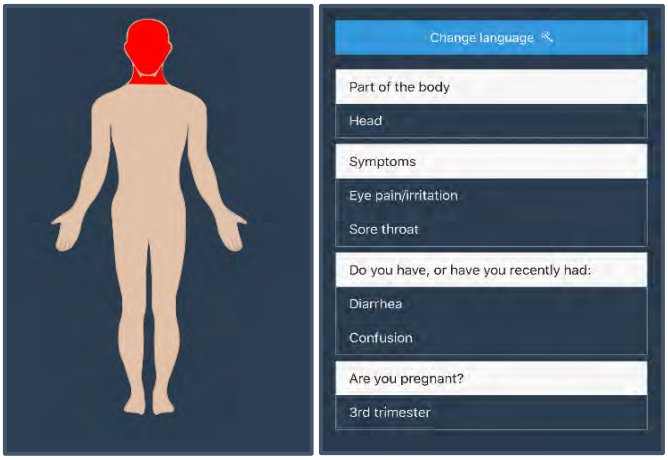

Figure 3-4 1st Minute Pro
Courtesy LanguageMAPS, Inc.

Translation is available between English and 10 languages: French, German, Haitian, Hindi, Japanese, Mandarin, Russian, Spanish, Tagalog, and Vietnamese.

1st Minute Pro is available for a one-time cost of $9.99 via the Apple App Store and Google Play. Support for the application is available online and by e-mail. A free version, 1st Minute Lite, is available that translates between English and Spanish only.

LanguageMAPS collects both personal identifiable information (e.g., name, address, e-mail address) and non-identifiable information (e.g., URL of the website visited before coming to LanguageMAPS Service, type of browser being used, IP address) from users. This information may be used to provide products or services to users, enhance operations of LanguageMAPS services or analyze use of the services. This information is not shared with nor sold to parties other than authorized third-party service providers or as required by law. This information can be accessed by users via username and encrypted password. Opting out of sharing this information may prevent usage of LanguageMAPS services. Additional information regarding LanguageMAPS privacy policy can be found at https://1stminuteapp.com/privacy-policy/ [6].

3.5 Microsoft, Microsoft Translator

Microsoft Translator is a language translation application that utilizes cloud-based machine translation technology and is capable of speech-to-speech, speech-to-text, text-to-speech, and text-to-text translations. The application offers real-time language detection and identification but also allows for the user to select between any two offered languages. When given camera access, Microsoft Translator is capable of translating text from images. The application has offline capabilities enabled by its more than 200 preset phrases, but also allows users to download languages for offline text-to-text communication.

Translation is available between English and 72 different languages and dialects including Afrikaans, Arabic, Bengali, Bosnian, Bulgarian, Cantonese, Catalan, Chinese (both Simplified and Traditional), Czech, Russian, Spanish, Turkish, and Welsh. Forty-five of the available languages can be downloaded for offline use.

Information on pricing, customization, and download options is available from Microsoft. Support is available by phone and self-service portal as well as an online chat.

Figure 3-5 Split display of Microsoft Translator
Courtesy of Microsoft

Microsoft products are not written to persistent storage. However, audio and text translations that are recorded may be used for service improvements. Additional information on Microsoft's privacy statement can be found at https://privacy.microsoft.com/en-us/privacystatement [7].

3.6 myLANGUAGE, Inc., Vocre Translate

Vocre Translate is a translation application that is capable of speech-to-speech, speech-to-text, text-to-speech, and text-to-text translations. The application allows the user to select translation between languages. Vocre Translate does not offer translation in low or no communications environments.

Translation is available between English and 11 different languages and dialects including Arabic, Chinese (China mainland), French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish, and Turkish. Note that certain languages are limited to text-only mode.

Vocre Translate is available at no cost via the Apple App Store and Google Play. Support for the application is available by request from within the Vocre Translate app.

myLanguage collects personal, usage and tracking, and cookies data. This information may be used to provide and maintain their service, notify users of changes to service, improve their service or detect, prevent and address technical issues. myLanguage, Inc. retains data only for as long as necessary. Personal data may be transferred to or maintained on computers located outside of the United States. Additional information on myLanguage's privacy policy can be found at https://app.vocre.com/privacy [8].

Figure 3-6 Vocre Translate
Courtesy of myLanguage, Inc.

3.7 myLANGUAGE, Inc., Vocre Translate Premium

Vocre Translate Premium is a translator application that is capable of speech-to-speech, speech-to-text, text-to-speech, and text-to-text translations. The application offers real-time language detection and identification but also allows the user to select translation between languages. Vocre Translate Premium offers full offline text and voice translation functionality. With the exception of Chinese, French, Portuguese, and Spanish, languages need to be downloaded for offline use.

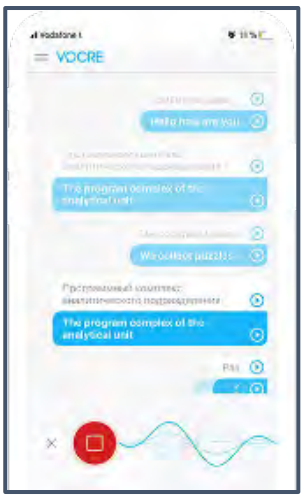

Figure 3-7 Vocre Translate Premium
Courtesy of myLanguage, Inc.

Translation is available between English and 58 different languages and dialects including, but not limited to, Arabic, Danish, French, German, Hebrew, Portuguese, Russian, and Turkish. Note that certain languages are limited to text-only mode.

Vocre Translate Premium is available for $4.99 per month via the Apple App Store and Google Play. Support for the application is available online and by e-mail.

myLanguage collects personal, usage and tracking, and cookies data. This information may be used to provide and maintain their service, notify users of changes to service, gather analysis or information for improving their service, or detect, prevent and address technical issues. myLanguage, Inc. retains data only for as long as necessary. Personal data may be transferred to or maintained on computers located outside of the United States. Additional information on myLanguage's privacy policy can be found at https://app.vocre.com/privacy [8].

3.8 SayHi, SayHi Translate

SayHi Translate is a translation application that is capable of speech-to-speech, speech-to-text, text-to-speech, and text-to-text translation. The application offers real-time language detection and identification while online and allows users to request translation between languages. SayHi Translate is not functional offline. Internet connection is required in order to utilize the language detection and identification capability, and to access the high-quality speech translation and voices.

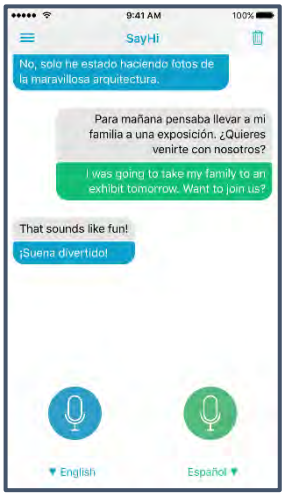

Figure 3-8 SayHi Translate
Courtesy of SayHi

Translation is available between English and 89 languages and dialects including Afrikaans, Arabic, Chinese (Mandarin), Croatian, French, Hebrew, Italian, Norwegian, Portuguese, Russian, Spanish, Turkish, and Welsh.

SayHi Translate is available at no cost via the Apple App Store, Google Play and Amazon App Store. Support for the application is available online and by e-mail.

SayHi Translate collects log information and device information such as the type of browser being used, IP address, device hardware model, and operating system. Speech, text of that input, and the translated output of speech or typed input is also collected. This information may be used to monitor and analyze trends, usage, and activities related to the services provided, and to make users aware of technical notices, security alerts, and updates. Additional information on SayHi Translate's privacy policy can be found at https://www.sayhi.com/en/translate/terms/ [9].

3.9 Universal Projects and Tools S.L., Universal Doctor Speaker

Universal Doctor Speaker is a medical phrase translation application that utilizes more than 500 preset medical phrases for text-to-speech and text-to-text translations. The application does not offer real-time language detection or identification and requires the user to select its input and output languages. Once downloaded, all the translations and audio can be accessed offline.

The application was developed as a tool for communication between healthcare professionals and patients who do not share a common language.

Phrases are available between English and 16 different languages and dialects including Arabic, Catalan, Chinese Mandarin Simplified, French, German, Italian, Japanese, Moroccan Arabic, Norwegian, Polish, Portuguese, Portuguese (Brazil), Romanian, Russian, Somali, and Spanish.

Universal Doctor Speaker is available at no cost via the Apple App Store and Google Play. Support for the application is available online and by e-mail.

Figure 3-9 Universal Doctor Speaker
Courtesy of Universal Projects and Tools S.L.

Universal Doctor Speaker collects personal information for providing and improving services. The app uses third-party services that may collect and have access to personal information to facilitate the service, provide the service on Universal Projects and Tools S.L.'s behalf, perform service-related activities, assist in analyzing the service or improve the app. Additional information on Universal Projects and Tools S.L.'s privacy policy can be found at https://www.universaldoctor.com/privacy-policy [10].

4.0 MANUFACTURER CONTACT INFORMATION

Additional information on the language translation applications included in this market survey report can be obtained from the manufacturers listed in Table 4-1.

Table 4-1 Manufacturer Contact Information

Manufacturer	Product(s)	Website	E-mail & Phone Number (if listed)
AppTek	AppTek Speech Translate	https://www.apptek.com	info@apptek.com 703-821-5000
Canopy Innovations, Inc.	Canopy Speak	https://withcanopy.com/medical-phrases-app/	info@withcanopy.com
iTranslate	iTranslate Medical	https://www.itranslate.com	medical@itranslate.com
LanguageMAPS, Inc.	1st Minute Pro	https://www.1stMinuteApp.com	hello@1stMinuteApp.com
Microsoft	Microsoft Translator	https://www.microsoft.com/en-us/translator	N/A
MyLanguage, Inc.	Vocre Translate Vocre Translate Premium	https://www.vocre.com	support@vocre.com
SayHi	SayHi Translate	https://www.sayhi.com/en/translate	support@sayhitranslate.com
Universal Projects and Tools S.L.	Universal Doctor Speaker	https://www.universaldoctor.com	info@universaldoctor.com +34 686 617 809

5.0 SUMMARY

First responders face many challenges when confronting an emergency, including a possible language barrier with persons involved. Communicating with victims, witnesses or other people involved with an emergency situation is essential to a responder's assessment of the situation. If those persons involved speak a different language than the responder, it could significantly impact a responder's ability to act quickly, efficiently, and appropriately. Language translation applications can provide an accelerated method to convey information, translate instructions, and gather data with people who speak a different language than the on-scene emergency responders.

This market survey report provides information on nine language translation applications that are HIPAA compliant, including six with real-time speech-to-speech capability and three that use pre-loaded medical phrase translations. In addition to HIPAA compliance, other privacy matters should also be taken into consideration regarding data storage and transmission. Some terms of service clauses may allow language translation applications to disclose the app user's personal information to third-party service providers, sponsors, promoters, sub-contractors, and marketing providers. In addition to the app user's personal information, translated conversations may be retained and used by companies for analysis and continued refinement of their services. Correlation of personal information to translated conversations is dependent on use cases and operational practices. Privacy policies should be reviewed to determine suitability for use prior to downloading and inputting data into a language translation application. The products in this report range in price from being available at no cost, to one-time fees and monthly or annual service fees.

Emergency responder agencies should carefully research the overall capabilities and limitations of language translation applications in relation to their agency's operational needs when making procurement or acquisition decisions.

6.0 REFERENCES

[1] Office for Civil Rights, U.S. Department of Health and Human Services, "The HIPAA Privacy Rule," December 10 2020. [Online]. Available: https://www.hhs.gov/hipaa/for-professionals/privacy/index.html.

[2] IU Group, "HIPAA Compliance for Language Service Providers.," July 2016. [Online]. Available: https://interpretersunlimited.com/uncategorized/hipaa-compliance-language-service-providers/ .

[3] S. Cook, "Privacy Policy," Apptek.com, 10 August 2020. [Online]. Available: https://www.apptek.com/privacy-policy-apptek.

[4] Canopy Innovations, Inc., "Privacy," 2020. [Online]. Available: https://withcanopy.com/canopy-speak-privacy-policy.

[5] "iTranslate Medical--Privacy Policy," 29 September 2020. [Online]. Available: https://www.itranslate.com/medical-privacy-policy.

[6] "Privacy Policy," [Online]. Available: https://1stminuteapp.com/privacy-policy/.

[7] Microsoft, "Microsoft Privacy Statement," January 2021. [Online]. Available: https://privacy.microsoft.com/en-us/privacystatement.

[8] Vocre, Inc., "Vocre Privacy Policy," app.vocre.com, 25 May 2018. [Online]. Available: https://app.vocre.com/privacy/.

[9] Amazon.com, "SayHi Privacy Policy," 27 April 2020. [Online]. Available: https://www.sayhi.com/ar/translate/privacy/.

[10] Universal Projects and Tools S.L. (UniversalDoctor), "Privacy Policy," 2020. [Online]. Available: https://www.universaldoctor.com/privacy-policy.