ViewPlus® Technologies Announces Braille Printer Software Upgrade to Assist Teachers of the Visually Impaired and Enable Students to Achieve Learning Breakthroughs

Q & A

Background:

ViewPlus® Technologies recognizes that not all readers of this news release will be intimately familiar with the mission and challenges experienced by both Teachers of the Visually Impaired (TVI) and Blind and Visually Impaired (BVI) students. The exciting new capabilities detailed in this release have the potential to significantly impact the daily lives, educational achievement, futures, and well-being of both.

To facilitate an understanding of this announcement we have provided several general overview questions that detail the features, benefits, and implications this software offers at the beginning of this document, and a Glossary of Terms at the end.

Q. What is the essence of this announcement and why is it important?

ViewPlus®, the technology leader in the design of printers and braille embossers, is announcing the latest release of its Tiger Software Suite (TSS8.0) printer/embosser software for the reproduction of both tactile graphics and braille.

This new software release provides new capabilities and features for use by teachers of the visually impaired (TVIs). These capabilities and features will create breakthrough learning opportunities for BVI students, accelerate their educational achievement, and open educational pathways to careers in Science, Technology, Engineering, Arts, and Mathematics (STEAM).

Q. What exactly are tactile graphics and why are they important?

The term tactile graphics refers to the embossed reproduction of images, letters, characters, and words that, in combination, enable a visually impaired individual to experience and understand a graphic or image using their sense of touch.

A cartoon character, a map, a mathematical or scientific image, or a sketch or profile of the face of a famous person, are all examples of things a visually impaired

individual might delight from "*seeing through touch*" – their tactile sense. Such a capability adds an extra dimension and clarity to understanding and learning - particularly science, technology, engineering, arts, and mathematics (STEAM).

Q. What potential learning breakthroughs are you referring to in your release?

The concepts of science, technology, engineering, arts, and mathematics (STEAM) need to be mastered by students wanting to achieve peer learning objectives in class, and in their future, become educated and skilled enough to have a professional job. STEAM subjects are difficult to express, teach and learn using just braille letter characters or audio – that's why tactile graphics is such an effective approach.

STEAM foundational learning is essential to higher educational achievement – and gainful employment and a feeling of personal well-being.

Q. How many people fall into the categories of blind or visually impaired worldwide?

According to the ORBIS, a non-profit dedicated to helping manage medical and educational efforts to alleviate blindness worldwide, 43 million people worldwide are blind and 400 million+ are moderately to severely vision impaired.

Q. What does TSS stand for? And what does the number 8 signify?

TSS stands for Tiger Software Suite and the number 8 signifies its latest release, including these new capabilities and features:

Word and Excel Add-in Enhancements:
1. Customizable UEB Grade 2 contraction tables are available so users can enable and disable certain contractions when learning.
2. Reformatting of page layout to settings of current Tiger Profile and reformatting text font to Braille font in correct size.
3. Update to Liblouis 3.21.0, and updates in Math translations.
4. Braille36 fonts are now available in addition to Braille29 fonts.
   - Braille36 replaced Braille29 as default after finding better OS interoperability between Windows, Mac and Linux with new font. Experienced graphic designers can use the application they are most familiar with (e.g. Adobe Illustrator and CorelDraw) and print directly.

Tiger Designer:
1. Open or import PDFs easily adjusting size, snap & rotation with braille text recognition.
2. Pattern Editor provides more default patterns to choose from and an intuitive user interface when using the pattern fill tool.
3. Possibility to assign tactile patterns to specific colors and applying color mapping (saved in tactile fill library) automatically when printing to ViewPlus Columbia, Delta, or Rogue.
4. Ink printing is possible to any mainstream color printer.

Rogue support:
Save files in PRN or TDSX format so now VP Rogue can print any files – fast (faster to print VP Max PRN files), cut sheet or continuous feed AND with the tightest dot placement to obtain smooth curves with multiple dot heights.

Q. What is the difference between a braille embosser and braille printer?

Braille embossing is the process of deforming a piece of material (paper, metal, plastic) with a punch, to produce a bump that can be felt with the fingertip.

ViewPlus® printers have the ability, through a combination of their hardware design and operational software, to produce both normal visual ink printing AND embossed braille characters.

Tiger Software Suite enhances the ability of ViewPlus® printer/embossers to reproduce graphics as braille embossed images – including automated color rendition through variable embossed dot heights.

ViewPlus's integrated printer driver allows users to utilize mainstream applications (e.g. Microsoft Word and Excel, Adobe Illustrator, CorelDraw) to mix braille with tactile graphical images for reproduction using ViewPlus embossers/printers. Other brand's braille embossers require specialty software with an emboss function and multiple additional steps for tactile graphics before sending to the embosser.

In addition, ViewPlus printers/embossers utilize existing standard printer-flows in Windows, MacOS, Linux, Android, and iOS, combined with free braille fonts. This capability enables access to a much wider range of applications and creates a one-step market-leading user-friendly experience compared to all others requiring complicated emboss processes.

The implications on both the TVI and BVI student are a quick, accelerated, and creative classroom learning experience.

Q. How unique in the marketplace is ViewPlus's Tactile Graphics capabilities?

ViewPlus's capabilities are unique, comprehensive, and include:

1. *Multi-Language, Simultaneous Braille Translation*: A unique feature that enables users to translate multiple languages into braille simultaneously.

2. *PDF Image Import*: The ability to import PDF formatted documents directly into TigerDesigner.

3. *Pattern Fill*: The ability to automatically create and apply tactile-embossed pattern fills to graphic images. This is particularly helpful in reproducing maps, statistical graphics, physiological/biological images, and other graphics for which area discernment is essential to understanding. Using tools similar to MS Paint.

4. TSS8 can also assign assorted colors a certain pattern and enable easy edits and document adjustments prior to printout. These capabilities significantly reduce document editing time.

5. *Back Translation*: TSS8 also offers the capability of back translation - from braille dot pattern to text form.

6. *QuickPaw*: Using an emulated on-screen braille keyboard, the QuickPaw feature allows correction of single braille cells, sections of text, or whole sentences,

7. *Mathematical Equation Translation*: Using the MathType 7 desktop equation editor from Wiris, TSS8 can translate mathematical equations and insert these into documents in the correct mathematical braille dot pattern.

8. *Ink and Braille Text Interlining:* TSS8 is one of only two text-to-braille programs that can perform interlining. TSS8, however, is the only one which can reproduce *both* the black ink language text, interlined with the braille document text on screen and on paper.

9. *Improved User Interface*: Buttons within the software user interface can be labelled in the primary language of the country in which the system is being used. This feature is called*, language-specific button labelling*.

10. *Braille Color-to-Text Translation*: TSS8 offers mainstream Windows printer drivers which reads colors, translates, and reproduces each color as one of seven different braille dot heights for printing on paper.

Q. What does Tiger Software Suite actually do?

Tiger Software Suite is used in conjunction with braille embossers produced by ViewPlus® Technologies to translate documents, words, letters, numbers, and characters directly to braille representation. In addition, it also enables the reproduction of images, graphs, and pictures into braille-dot patterns that can be traced, learned, and understood by the visually impaired individual - and subsequently printed.

Q. How much will TSS8 cost for a first-time license per user? What does the TSS8 upgrade cost?

Free with New Printer Purchase: TSS8 is delivered at no charge with each new ViewPlus® printer/embosser purchase. One license of TSS8.0, once released, will be provided with each embosser purchased.

New Licenses are $595 per copy, if purchased stand-alone without a printer.

Upgrades of older versions of TSS software are $395 upgrade.

Special "Recent Purchase" Window: Customers who purchased an embosser, TSS or TSS upgrade after March 15, 2022, are eligible for a free upgrade. Annual subscription licenses are also available for those customers who always want to have the latest release. Email sales@viewplus.com with current TSS license number and/or embosser serial number.

Q. What significant improvement or capability does TSS8 provide for the Teacher of the Visually Impaired?

Teachers of the Visually Impaired are called TVIs. TSS8 opens up their world for creative lesson planning, rapid production and reproduction of learning and lesson materials, and incorporation of advanced learning objectives in lesson planning.

A significant improvement in TSS8 is the ability to customize grade 2 Unified English braille (UEB) tables. Contractions can be enabled and disabled to create individual learning tables depending on the skill level of the student.

Another significant improvement is the ability to use materials from existing tactile image libraries, such as the APH (American Printing House) Tactile Graphics Image Library, the San Francisco Lighthouse for the Blind, and a whole library of PDF files that contain tactile graphics made by and for other technologies, like swell paper printing. These PDF files will open using TSS8's Tiger Designer function – which includes braille text recognition that can be printed directly without further editing.

These capabilities provide significant sources of ready-made materials for use by TVIs.

Q. *What significant capability or skill improvement does TSS8 enable for the visually impaired student?*

For the visually impaired, TSS8 and tactile graphics opens up the complex world of science, math, and graphical communications. Such advanced education, in turn, opens up the world of personal growth, independence, and opportunities for a professional career.

Building on the general benefits of TSS, version 8, enables the ability to apply a braille template to BRF **(Braille Ready Format)** files when opened in MS Office Word. This simplifies the use of braille documents created by third party braille translation programs for printing to ViewPlus® embossers, and also for the purpose of combining the uploaded braille text with tactile graphics before printing.

Q. *How do Tactile Graphics capabilities integrate with lesson planning at the individual, class, and school district levels?*

TSS8 and tactile graphics learning enhances the ability of the visually impaired student to achieve grade-level learning objectives at a peer level with other normal-sighted individuals at the class, school, and district level.

Q. *What stories can you provide, examples or testimonials about its effectiveness that you can share with us?*

There are many amazing stories that you can read in ViewPlus testimonials at:

https://viewplus.com/about/testimonial-page/

Q. *Is the use of TSS8 and Tactile Graphics primarily targeted at benefiting grammar schools (K thru 8) or can it also deliver impact in high school level and adult-learning instruction?*

The value of TSS8 is relevant to all ages and levels of visual impairment. Some basic braille-level literacy skill is required, however.

Imagine attempting to learn about mathematical functions.

Before tactile graphics, a blind student would be taught equations and how to solve them through character-by-character braille reading. But the ability to actually "*see through touch*" the graph of the equation being studied, and the dependency

between input value and outcome value of the equation along the graph, opens up a whole new world of deeper understanding and quicker comprehension.

The same is true of learning about statistical representations in graphical form on any subject or being able to "*see through touch*" the designs of electrical circuits. There are endless opportunities through high school and high-level level education for the blind or visually impaired student to benefit from the capabilities of TSS8.

Q. *What impact could this capability have on visually impaired people worldwide?*

With the correct learning programs, instructors, and learning tools, through their advanced education and learning, the visually impaired can become a source of creative, talented, and productive labor in a growing economy and contribute to science.

Q. *How does a Teacher for the Visually Impaired implement and connect TSS8 to their current set-up? How do they upgrade their older version of TSS to avail themselves of these added features?*

Older versions of TSS should be uninstalled first, then TSS8 installed. All ViewPlus® software packages for Windows are provided with advanced installer features which guide the user through the installation process.

TSS can be purchased and downloaded from ViewPlus® website. Once downloaded, the installer simply runs, and follows instructions given by installer dialog.

After TSS installation completed, all features are available immediately.

Q. *What other developments in assisted learning for the Visually Impaired can we expect to see from ViewPlus® Technologies in the future?*

ViewPlus® is dedicated to opening up the world of possibilities to the blind and visually impaired with groundbreaking braille AND tactile graphics solutions.

By adding color ink and compatibility with mainstream software and hardware, we will improve the situation for TVIs and other members of the support team, to make their work less time intensive and more productive.

Expanded Wi-Fi access from wireless devices directly inside the classroom, is an exciting way for others in the classroom to communicate and share learning experiences with a visually impaired student. Such a capability will make the learning situation more social and interactive for both students and teachers, improving learning opportunities, and stimulating creativity.

Q. *For what purpose was this software developed?*

TSS was created with the intention to provide easy and fast braille to text translation in mainstream Windows compatible software - and allowing braille to be combined in one document with tactile graphical content.

The goal is to provide multiple language translation, if desired, in one document.

Q. *What are the benefits of TSS worldwide?*

TSS can translate not only the local language but two or three additional languages in one document.

This means, for examples that a question on a quiz or test can be placed in the correct English braille format and the correct answers given in the correct Spanish (or other language) braille format. In addition, through a drop-down menu the user can select from a wide variety of user interface languages (English, Swedish, German and many more). Each may select their own language to display in the User Interface.

The User Interface language is independent of the braille languages that can be selected and translated.

Q. *Will this product be available worldwide?*

Yes. ViewPlus has an international distributor, dealer and technical support network for its braille embosser products and software worldwide. TSS8 will be available, both direct and through that dealer network, as of mid-June 2022.

Q. *What economic impact do you believe this might have on ViewPlus® as a company?*

We believe that TSS8 will strengthen our competitive advantage even further. With each release of ViewPlus TSS software, we have included something new and given our users even more features which makes their everyday life easier creating documents either for themselves or for a BVI person.

The ViewPlus® Mission:

Empower people worldwide by making information accessible through innovative, inclusive technology solutions.

For more information contact Dan Gardner at Dan.Gardner@ViewPlus.com or call 541.754.4002 extension 210

Glossary of Terms

APH	American Printing House is a non-for-profit corporation empowered in 1879 by an Act of Congress to supply tools, materials, and resources to encourage independent living for people who are blind and visually impaired. APH creates and provides products and services to support all aspects of daily life without sight. APH Home | American Printing House
Assistive Technology	Any technology-based tool or device which assists an instructor or the visually impaired individual in the learning or navigating their world.
Braille	Braille is a system of embossed raised dots arranged in individual cells of six dots each, each cell representing one letter or character. Blind and visually individuals can "read" those letters through touch. Braille was invented by Louis Braille in France in the early 1800s.
BVI	A blind or visually impaired individual
Printer/Embosser	A computer peripheral used for producing hard-copy paper versions of both normal print and braille-embossed documents.
Tactile Graphics	A representation of an image, graphic, or concept (a map, process, mathematical concept, sketch, etc.) using braille-embossed dots. A BVI individual can "see through touch" the details of the image – even to the degree of recognizing differences in color through braille dot heights.
TSS	Tiger Software Suite. Software for leveraging the full capabilities for the ViewPlus® family of printer/embossers.
TVI	A Teacher of the Visually Impaired