



January 14, 2003

Attn: Velica Steadman
United States Patent and Trademark Office
Office of Legislative and International Affairs
Room 902
2121 Crystal Drive
Arlington, VA 22202

Re: Protexis Inc.'s Comments on Technological Protection Systems
for Digitized Copyrighted Works

Dear Ms. Steadman:

In response to the Federal Register notice dated December 3, 2002 entitled "Request for Written Comments and Notice of Hearings on Technological Protection Systems for Digitized Copyrighted Works" published by the United States Patent and Trademark Office, Protexis Inc. hereby submits the following comments.

Company Information

Protexis Inc. is a privately held company with head offices in Vancouver, British Columbia. Protexis Inc. offers nTitles™, which is a software license transaction system that combines the best of product activation and copy protection with user registration, channel support and e-Commerce capabilities. The company's patented technology offers software and content publishers flexible, Internet-based solutions for securing software and content and for providing electronic licenses through any distribution channel, and offers users an easier and more convenient means for obtaining protected works and ensuring license compliance. Protexis Inc. is venture-backed and investors include the Canadian Science & Technology Growth Fund Inc., Trudell Medical Limited and Silicon Valley based Sunwolf Ventures LLC.

The Protexis Inc. nTitles™ system is a software license transaction system that supports all channels of distribution. The nTitles™ system incorporates product activation, registration, persistent and flexible copy protection, powerful channel support and integrated commerce capability. The nTitles™ system delivers all of the benefits of an easy-to-use activation system and adds fully integrated payment and channel support capability.

Protexis Inc.'s customers include software industry leaders such as Crystal Decisions, DivX Networks and Interact Commerce. The company's nTitles™ platform manages the licensing for product leaders like ACT!, Crystal Reports and DivX Pro among others.

Consequently, Protexis Inc. is extremely interested in issues relating to the development and use of technological protection systems to protect copyrighted works.



Because the Federal Register notice is responsive to a requirement in the TEACH Act, it is important to recognize that Protexis Inc. has a significant interest in the use of technology in the educational environment. Many software and content publishers provide educational software tools and digital curriculum to the K-12, higher education and corporate training markets. Protexis Inc. believes that technology is critical to meeting both national and international education and training goals and is committed to providing the technology necessary to facilitate and support these software and content publishers. In addition, Protexis Inc. is in a unique position to support the students and the institutions (e.g., educational institutions such as schools and businesses that train people or provide the training materials and software) that use the educational tools, software and content provided by these software and content publishers.

Protexis Inc.'s Comments on the TEACH Act

It is with this background information, and through these experiences, that Protexis Inc. provides its comments (below) on the first and third questions posed by the PTO in the Federal Register notice.

1. What technological protection systems have been implemented, are available for implementation, or are proposed to be developed to protect digitized copyrighted works and prevent infringement, including any upgradeable and self-repairing systems?

Protexis Inc. provides electronic software licensing, user activation and registration solutions for software publishers and their products. The Protexis Inc. competitive advantage is derived from its patented core technologies enhanced with real-world, customer-driven solutions. Our technology portfolio includes:

- Piracy protection using industry-standard cryptographic algorithms
- A patented digital content extraction and delivery system
- An electronic license distribution system supporting existing and future sales channels
- On-line transaction payment processing

For example, the nTitles™ solution is a complete e-business platform for software and digital content that provides web-based solutions for protecting software, securing content and delivering, managing and selling electronic licenses through any distribution channel. To summarize:

- We make unauthorized copying hard;
- We make purchasing easy; and
- We track license distribution and support the distribution channel.

Protexis Inc. has made considerable technology investments in recent years to support:



- (1) content and software providers that provide educational materials (i.e., content and/or software), among others, in their efforts to protect and distribute software and content and track licenses therefor;
- (2) organizations such as educational institutions in their efforts to select materials, and often to recommend and/or redistribute bundling of these materials, as well as to perform license compliance measures;
- (3) users (e.g., students, educators and technical support personnel) that desire seamless content/software acquisition and licensed use thereof; and
- (4) other channel partners in the content/software distribution chain such as license clearinghouses and distributors.

In one application scenario, the Protexis Inc. technology allows educational software to be offered as a comprehensive solution for an educational institution (e.g. K-7), as well as support individual students (e.g. K, 1, 2 or 3) who wish to conduct home-based learning. With nTitles™, this can be accomplished with the exact same CD set, or even school or home created copies of it. Protexis Inc. nTitles™ supports peer-to-peer, or pass-along, style distribution and allows the individual student to make a copy of the CD set that could then be passed along to another student, while checking, verifying and maintaining license compliance. The publisher can now access and better serve a broader market with significant user flexibility without fear that piracy will destroy the inherent value of the product. and the investment therein. Students can have access to school-based programs in the convenience of their homes without having to purchase the entire school package.

Protexis Inc.'s technology will be classified into the following three categories for more detailed discussion below:

- (A) content protection, distribution and activation/registration;
- (B) license management; and
- (C) distribution management.

A. Content Protection, Distribution and Activation/Registration

Protexis Inc. has demonstrated its ability to provide a worldwide electronic licensing system that supports Internet and non-Internet connected users in developed and developing countries. The ability to secure and distribute content and software via the Internet, as well as via more traditional methods such as delivery of copies on a compact disc (CD), for example, is particularly important when supporting distance education programs. Further, activation and registration can be conducted either over the Internet, or by more traditional methods such as telephone and facsimile.

The nTitles™ Content Distribution System aims to secure software and digital content so that traditional cracking techniques become ineffective. As will be described below, the



nTitles™ Content Distribution System bundles the content in a protective wrapper that requires a unique license key to unlock. The end-user receives the license key when activating and registering the product. This activation and registration can be conducted either over the Internet, by phone, or by facsimile.

Copy Protection - nTitles™ provides copy protection beyond enforced registration by wrapping or encrypting software – or a portion thereof – or other digital content in a self-extracting bundle that can only be decrypted upon successful registration. A License Compliance component of nTitles™ is included in the self-extracting bundle.

License Compliance - In order to activate nTitles™ protected software, the product serial number must be 'activated' by the end-user. The activation process generates a machine and product specific key – an activation – that allows the end-user to unlock the software. This unlocking key is obtained automatically from Protexis Inc. over the Internet. Users without an Internet connection are not held up in the installation process since telephone and facsimile registration is also available and commonly supported through representatives appointed by the software publisher. The nTitles™ License Application Programming Interface (API) allows the software publisher to implement persistent copy protection through imbedded license verification checks in their software. The result is an installation tied to a specific computer. Any attempts to use the software on another computer will fail. CDs can be copied but they have no commercial value unless they are tied to a specific computer with an activation code obtained through the registration process.

In the case of a time-trial license, the license expires a certain number of days after installation, after a certain number of uses, or after a specific date. Once the license expires, the key for the license becomes unusable.

The nTitles™ system is unique in that the publisher has the choice of three secure solutions: an activation-only system, an activation system with optional registration, or a mandatory registration system. With an activation-only system, end-users need not supply any personal information in order to activate their products. In all cases, the activation code that is generated on the activation and registration server can only be used on the end-user's computer system, although the system itself is blind to the identity of the computer. The user or computer identification is not compromised in any way. This activation code cannot be used on other computers.

Beyond its successful use for software programs, the nTitles™ Content Distribution System can be used to distribute all forms of digital content such as digital images, as well as audio and video files. The original content is encrypted and bundled into a package that contains the unwrapping tool, a digital license, and optional preview content or limited trial versions of the software. The wrapped package is a self-extracting executable package. No additional software is required on the end-user's computer to activate, register, unwrap and use the content.

The nTitles™ platform makes it easy for users to become license compliant, while addressing unwanted copying. Protexis Inc. offers technology that is particularly well suited



for distance education since, at any given time, 24 hours per day, Protexis Inc. is activating a license for a user in over 100 different countries. Our e-commerce solutions for converting shareware to 'fairware', for example, have delivered substantial benefit to providers in this marketplace. Moreover, our solutions actually support friend-to-friend and user pass-along distribution models which can be common in an education environment or application.

B. License Management

The nTitles™ system integrates a licensing transaction system into a complete e-business platform for software and digital content. The cornerstone of the nTitles™ system is the ability to define software license terms digitally and to automatically ensure compliance. Our solution works with or mirrors common and accepted software installation methods, so it does not distract end-users or complicate product usage.

License Configuration - nTitles™ license configuration starts with basic product identification within the Protexis Inc. database. The system supports easy configuration of a variety of time-trial licenses (e.g. try-buy, beta ware), as well as standard unrestricted perpetual licenses. The nTitles™ license format is extensible, giving software publishers the ability to define and store proprietary license terms securely within the encrypted nTitles™ license. These terms can be recovered and tested using the nTitles™ License API. License terms can be set at any time pre and post build, and pre and post distribution. This allows the publisher to augment, enhance or refine the software and the license to provide new features or better serve the market. nTitles™ also offers feature-specific licensing whereby the feature would be activated on appropriate use. The flexibility that the Protexis Inc. nTitles™ platform provides in this regard, along with its convenience is unique in Digital Rights Management. Each license is bundled with software that can be freely distributed via CD or ESD or other common systems. Before installing the software, an end-user must complete the activation process.

The content provider creates the digital license using the nTitles™ platform. The digital license is incorporated into the package and is activated when an end-user selects the desired content in a package via the associated serial number and enters the activation code. As stated above, the nTitles™ Content Distribution System supports activation by telephone, facsimile and e-mail, as well as through a secure registration web site. Optional or mandatory registration can be incorporated with the nTitles™ activation system for customer support and management or for market information purposes. The system can also incorporate payment processing into the activation process so that end-users, and even distributors, can purchase the activation code in a complete automated transaction. Distributors can use nTitles™ to purchase and resell product serial numbers.

The content provider can use the nTitles™ License System to register users while generating new digital licenses. The Registration system allows better management of the terms of these licenses and can generate a variety of powerful registration reports to monitor channel-based activity, license abuses, and even peer-to-peer or peer-referenced sales.



C. Distribution Management

The nTitles™ system combines protection and licensing of software and digital content with powerful e-business tools for distribution management. As stated above, the nTitles™ system supports Internet and traditional distribution methods. Protexis Inc. believes that existing distribution channels and partners provide substantial benefit to software and digital content providers. The nTitles™ system is a powerful toolset that supports these software demand chain partnerships and expands services and channel capabilities. nTitles™ empowers the channel by maintaining customer relationship references from the initial sale. The Protexis Inc. nTitles™ system allows for referenced targeted marketing, user upgrade tracking, new feature purchases and even viral marketing.

Our proven system makes for painless channel partner and customer buy-in because our application of technology successfully hides the complexity of the problem. This outward simplicity reduces the barrier for software and digital content providers who want to implement solutions for managing licenses and increasing revenues without adding to their workload. In the software business, revenue recognition is a difficult problem; Protexis Inc. helps solve this long-standing business problem by creating a guaranteed reporting mechanism for product installation by an end-user. This reporting mechanism can then be used to validate revenue recognition. The simple and effective nTitles™ system not only reports the install, it also tracks the sale of goods through a multi-channel support system.

Activation - The nTitles™ system integrates license and registration activation management in a simple end-to-end solution that helps solve the revenue recognition problem for software publishers. For software publishers to recognize revenue, they often require confirmation that the product has been installed by the end-user. The registration activation process embedded in the nTitles™ License Compliance component ensures that the software publisher receives this information regardless of the complexities of the distribution channel.

Reporting - The nTitles™ system allows publishers to track activity throughout the channel right to the end-user. Customized reports on activation activity in the channel can be created, including information such as serial numbers purchased and remaining, number of activations completed, and activation-limitation overrides. Additional end-user information can be gathered as required

Channel Support - The nTitles™ License Administration System supports valuable traditional sales channels. Using the nTitles™ system, software and digital content providers can distribute products through existing channels, preserving all the benefits of existing relationships and purchasing habits.

Partner Administration - The nTitles™ Partner Administration component allows software publishers to define multi-tier distribution channels according to their own particular business needs. Each partner type can be associated with different price structures, terms of payment and system permissions.



Product Administration - Rather than buying physical media - like a CD - channel partners need only purchase serial numbers from software providers. With nTitles™, each serial number is associated with a license for a specific product or product bundle (depending on how products are marketed) that can be delivered not only through physical media but also by ESD. Channel partners eventually sell these serial numbers to end-users who require this information to register and install the software. Software publishers can distribute the same product in different ways by defining various bulk packages of serial numbers, each with their own price and activation limits.

Asset Management - Many companies use third-party asset management products and nTitles™ can provide the link between these products and individual licenses. This creates value for system administrators charged with ensuring the license compliance of a large number of end-users. While each nTitles™-protected product has its own license and is separately registered, third-party asset management products can independently query all licenses that are installed on a particular machine.

The nTitles™ advantage can also be demonstrated through its ability to involve, equip and satisfy the interests of vested parties such as channel partners. Making purchasing easy requires much more than a pay button. Our nTitles™ platform is designed to facilitate and track license transactions. Channel partners can be kept as informed and as involved in the sales and support process as the software/content publisher requires. Our solutions work with multiple and complex business models simultaneously to satisfy a myriad of user needs and business requirements.

3. Consistent with the types of information requested by Congress, please provide any additional comments on technological protection systems to protect digitized copyrighted works and prevent infringement?

Because the [Federal Register](#) notice is responsive to a requirement in the TEACH Act, it is important to discuss the use of technological protection systems by educational institutions.

Educators, content providers, policymakers and the high-tech industry have been working together for decades to bring the benefits of computer technology to the classroom. In particular, students of all ages are benefiting from the increasing ubiquity of the Internet and the accompanying expansion of educational materials that are made available to students with access to networked computers. Technology, however, must also be in place to reduce risks associated with illegal re-distribution and misuse of copyrighted materials used for educational purposes.

New and improved technologies are being developed everyday to protect copyrighted content and software from piracy. Just as educational institutions have integrated computer technologies into teaching and learning to facilitate delivery of course curricula, under the TEACH Act, P.L. No. 107-273, they now must also integrate content protection systems into their distance education programs to protect copyrighted works used in those programs. This requirement was an essential component of the TEACH Act.



Without the use of robust, effective technological protection systems, the copyrighted educational content used in distance education programs is likely to be illegally distributed and/or misused by students enrolled in the programs, as well as others that may gain unauthorized access. When educators take advantage of new technologies to encourage students to use and access copyrighted content, they must keep in mind that end users generally do not know or do not care about protecting the copyrighted content.

The TEACH Act needs to support evolving content/software protection and distribution systems that facilitate that protection and distribution, as well as license compliance and ease of use by students, educators, educational institutions, and content providers, among others.

Conclusion

In closing, we would once again like to thank the PTO for giving us the opportunity to provide our comments. Should the PTO have any questions or concerns about the statements made in this letter, we would be pleased to expand upon them.

Respectfully submitted,

David Dunnison
President and CEO
Protexis Inc.