Introduction (FASTEN: Flexible E-Content API Framework)

Since 2010, when library e-book circulation began to grow substantially, progress has been made in the digital reading experience. The process to get and read a text, which once required as many as eighteen steps, has been improved. Technological solutions, especially the adoption of Application Programming Interfaces (APIs), do seemingly hidden work to streamline finding and reading. Nevertheless, barriers to a truly seamless content experience still exist--barriers which are likely to loom ever larger as other library digital content formats, such as audio and video, grow more popular. One of the biggest barriers for library digital patrons is navigating between the many content platforms libraries must offer to ensure a depth and variety of digital content. Having to create an account for two, or three, or more vendors makes for a confusing and fragmented experience. Users may opt for one platform only, so that much content from other sources is simply never discovered. Libraries need to be able to offer all their digital content in one easy-to-use, integrated, and comprehensive platform—a platform that can be accessed and operated by the devices most commonly used by library patrons. Otherwise, libraries will be left behind by commercial solutions that set high standards for dynamic, flexible, and responsive features.

In June 2016, NISO proposed a working group to develop standards that would allow this vision to become a reality. The group has built upon Queens Library's work, which itself involved a world-wide conversation and resulted in a pioneering interface that integrated many vendor platforms. The hope is to replace aging, inflexible, and hard-to-use enterprise tools, which deploy disparate protocols such as SIP, SIP2, proprietary interfaces, web proxy solutions, and more, with a more elegant solution. The NISO Working Group assessed the draft of Queens Library's API document with the aim of extending interoperability between various components: integrated library systems (ILS), vendor platforms and other library discovery software, and devices. The intent is to modernize library-vendor interoperability to address challenges, including creating consistent language and data objects using RESTful web service APIs and standard mobile application intent calls.

The Working Group was made up of product developers, librarians, and interested participants. Library vendors were an integral part, ensuring a view from all angles. We carefully considered the pain points of the library digital content experience and library and vendor business practices. We have created a foundational API toolset that the library industry can build on to fulfill an array of user and library needs, leading to faster response times, improved discovery of resources, better integration, and an enhanced user experience. We have covered all steps of the experience, from log-in to return of digital materials. Our recommendations are aspirational: we wish to supplant the existing SIP standard with the more versatile LCF. We will, however, also provide some variations for those wishing to remain with SIP. Any extra work that vendors undertake in working towards the standards we recommend, however, will we believe be more than rewarded as libraries, and their users, embrace digital content even more fully, pleased with a more secure, private, and above all easy and intuitive experience.

You will find the results of our work below, beginning with a definition of terms. A recommendation of best practices follows, with detailed specifications forming a conclusion that will help practitioners adopt the standards.

We are recommending LCF programming rather than SIP/NSIP.