**Definition:** API allows an application or service to communicate with other applications or services based on protocols in order to exchange data both internally and externally to other businesses and developers.

**History:** API has been around since the 1980’s for the use of hardware and software development. The modern use of API has only been around for about thirteen years. In the early 2000’s service-oriented architecture (SOA) attracted many businesses to begin business-to-business data sharing with standard interfaces, such as simple object access protocol (SOAP). Thanks to the user friendly create, read, update, and delete (CRUD) interface, developers now had easier interoperability technologies like REST API. Based on statistics from ProgrammableWeb, API’s use grew 100% between 2005 and 2011, and by April 2015 there were 13,000 API’s in use.

**Standards:** API is an open-source, so there is no single entity that sets a standard. According to Project Open Data, it is an API owner’s responsibility to contribute innovations to the API community. To create a successful API community, there needs to be a social network presence as well as offline conferences, meet-ups, and hackathons.

**Controversies:** As it turns out, API’s are actually very difficult to use. Programmers of all levels find learning new API’s very time consuming and the program is often used incorrectly. This incorrect use results in bugs and significant security problems. The more security an API can offer, the less usable it becomes, which is a large problem when companies are sharing data otherwise protected with a “firewall.” Myers and Stylos suggest a “gold standard” to improve API’s interface based on studies that report the way users interact with API. However, issues also arise when improving API because the user-friendly interface is only half of API’s function. The other half is the ability to interact with other computers to share information. Humans can learn new codes a lot easier than computers can.

**Relationship to Libraries:** Wayne State University Libraries were able to use API to collect their different Interlibrary Loan services for copyright billing purposes. WorldCat has multiple API’s used to benefit user needs. The iPhone app RedLaser has a scan feature for users to scan a book’s barcode to learn which library the book can be accessed from based on WorldCat’s records. Furthermore, users can create their own library-related applications with WorldCat Basic API. Publishers of ebooks have been able to use API to integrate their online materials into a local library’s catalog, so ebooks can be searched and
Week 8 Buzzword: API (Application Programming Interface)

found within the same system as print copies. Libraries continue to use API for ILS, discover services, accounting systems of the library’s parent organization, eBook lending platforms, ecommerce systems, and online ordering platforms of suppliers.

Future: The hope for the API community is that API will create its own ecosystem. This means more people will learn and correctly use API and then contribute their codes to the greater API community for further development. The difficulty in using API is hindering this ecosystem. To do this, API needs to become more easily personalized, so programmers can create their own API’s to meet their needs rather than spending so much time trying to learn existing API’s and then adjusting their needs to fit that API.

Discussion Questions:
1. API has helped libraries share information with other library networks and publishers. What other institutions could libraries begin, or more successfully, begin to share materials with via API?

2. This presentation mainly focused on libraries, how could API be incorporated into museums and archives?

3. As future librarians, how can we help contribute to and support the API community to continue to set standards for improvement?

Citations:


