Skype and Slack and Internet Archive

First Draft of Document, 7/7/2015

Abstract

Slack is a communications and organizational system, based off IRC technology, that is currently in use by various portions of the Internet Archive organization. A proposal has been put forward to shift most other communication to it as well, which has included a functioning Slack system running as an experiment. Some concern has been raised about the process being done smoothly and without a loss of current functionality. This white paper is an attempt to put these concerns at ease. Ultimately, the conclusion is that Slack is superior in almost every way to Skype, to the point that Skype and Slack are not even in the same family of application, and that Skype's audio-video conferencing has been subsumed by a variety of other services in the decade-plus since its creation.

What is Skype?

Before discussing Slack, it helps to understand what exactly Skype is. Created in 2003 along with aspects of the music sharing program Kazaa, it was purchased by Ebay for billions before being transferred to a venture capital firm and then ultimately sold to Microsoft in 2011. [1] The purpose has, and continues to be, primarily one of video/audio connections, with the ability to run conference calls, along with a variety of ancillary aspects including a rudimentary chat, file sharing, and instant messaging.

At some core level, Skype works "good enough", hence its adoption throughout the world - it is free (although there is a pro version that has some necessary features), it is cross-platform, and the back-end server is handled by a large company (Microsoft currently). Skype is the official conferencing and communication application of the Internet Archive, next to e-mail.

What is Wrong with Skype?

Skype has been a compromise for some time, but its "good enough" status has let it linger as an IA vital application beyond when it would normally have been replaced for better solutions.

Skype is extremely long in the tooth - basic functionality is the same, although t has gone through a number of back-end redesigns, including a more recent one by Microsoft. It is proprietary software as well as controlled tightly by its various firms (no third-party clients are allowed to use the network. Skype has been known, via Microsoft, to hand otherwise secure Skype conversations to the NSA. [2]

Fundamentally, though, *the audio-video conferencing has been good enough on Skype*, which makes a compelling argument for inertia. It worked well enough yesterday and today, it will probably work well enough tomorrow.

However, there is a more fundamental situation in place with the proposed Slack system:

Slack does not replace Skype. It adds functionality Skype is simply not capable of delivering, and never will. It is an additional dimension to the aspects of team communication and outside world interaction that the Internet Archive desperately needs as it moves further in the Building Libraries Together direction, that is, volunteer/transient contributors and truly Remote Workers.

What is Slack?

Slack is a re-engineering of the stalwart communications program IRC (Internet Relay Chat [3]), re-designed to be much easier to use and oriented towards project teams and company operations. It was founded in 2013 by veterans of Flickr and other companies after being used as an internal communication tool for years. [4] As of February 2015, Slack had over 500,000 users in 60,000 organizations, and was valued at over $1 billion dollars. [5]

Technologically, using Slack is similar to IRC or other messaging systems - there are rooms (also called channels), private conversations and public ones, along with the ability to be alerted when you are mentioned, the ability to search through archives of conversations, and the ability to share documents and images. The current technologies of communication, including in-line images and Emoji, are supported in Slack. There are options to preview URLs, as well as modify the look and theme of Slack depending on your client. There are a variety of robust clients to communicate with Slack, including phones (iOS, Android), desktops (Windows, OSX) and through a web interface. The various clients synchronize, so viewing information or communication on one is reflected as "read" on the others, instantly.

The Problem with "Slack Versus Skype"

As mentioned above, Slack is a communications tool directed at organizations and teams. It has a number of features meant to improve the ability of teams, especially remote or geographically disparate ones, to interact as if they were all in the same location. One of its more fundamental technologies are *integrations*, where interfaces and data sharing with a wide variety of applications are built into the system. For example, in the main chat area of the Internet Archive slack server, an integration has been set up to display a summary of any new blog posts from the Internet Archive blog, meaning that employees in that channel are almost immediately aware a new general statement or post has been made at the Archive's web pages and they can react or be informed instantly. Slack also has the ability to restrict who is in what channel, and even allows third parties to be integrated into the list of users but only be allowed to go into a single channel or set of channel, with no ability to interact with any other channels. (A channel of just volunteers, for example, or a channel around a project that works with an outside library where 2-3 of the outside library's engineers can benefit from day to day communication but

should not be granted other access.)

None of this is within the realm of Skype, nor should it be.
Skype was never designed to be an organizational tool - it is a communication program, with a small amount of features tacked on over the years. As anyone who has used Skype can attest, it has a propensity to randomly lose long-term messages, does not instantly update, and has little to no granularity with regards to access control or information sharing. There is no way to maintain a project directory, including user lookup, and there are, of course, no real integrations with outside interfaces. In Slack, it is possible to wire system alerts from Nagios into a channel or bridge an RSS feed of @internetarchive twitter mentions. In Skype, this sort of option is not even on the table.

In the small time the Internet Archive employees have been using Slack on an experimental basis, they have wired into the IA blogs, created bots that will return information on items in the Internet Archive collections, and conduct searches of items via a (non-admin, read-only) bridging of the Internet Archive python interface.

Examples of real-world, valid operations that Slack is fully capable now include:

- Scheduling and information on Internet Archive conference rooms
- Quick lookup of who is in or out of the office
- Alerts of various degrees for hardware or network failures
- Weather forecast integration
- Internet Archive employee lookup/directory, including "info cards"
- Sharing of Google Docs and other files within the system, not requiring original user
- Initiating trouble tickets
- Wiring into any number of custom information sources

None of these are in the province of Skype.

Slack is Already in Use

Several teams within Internet Archive already use Slack: the Books group has been using Slack for a significant amount of time, and the Archive-it development group does as well. They bounce between Skype and Slack as needed, because they fulfil different functions, and they do not collide. That said, Skype's significant memory and CPU footprint combined with its issues on some platforms does bring some concern about running both systems, but Slack has both desktop clients and web clients and has a number of features to ensure messages are not missed (as well as informative alerts when a person is referenced in the chats.)

A Slack Future

Because the Internet Archive is a non-profit, Slack has given the Internet Archive a "non-profit" account which allows for unlimited new users on the server. There are a number of open-source versions of Slack available, and Slack has indicated they are producing a local-only version of their software to allow 100% control within the Internet Archive infrastructure in the future. Should Slack experience financial issues in the coming years, the open-source clones will continue to exist. Additionally, Slack has a number of bridges to other chat technologies that can be swapped to completely should the effort come to that. None of these options are available with Skype.

Conclusion

There is no compelling reason to continue to make Skype the central communications hub for the Internet Archive. In many organizations, Slack has cut down on e-mail, has improved productivity and communication, and provides the team members with a sense of inclusion and agency that are more difficult when the communication systems are disjointed and difficult. Slack has provided Internet Archive with a non-profit installation that allows unlimited accounts to be added to our instance. Slack is in use in a variety of Internet Archive projects currently. There are a variety of experiments under way to allow Slack to do functionality and remote working with Internet Archive that will pay strong dividends as more remote workers are added to the employee rolls.

[1] https://en.wikipedia.org/wiki/Skype
[2] http://www.theguardian.com/world/2013/jul/11/microsoft-nsa-collaboration-user-data
[3] https://en.wikipedia.org/wiki/Internet_Relay_Chat
[4] https://en.wikipedia.org/wiki/Slack_%28software%29
[5] http://bit.ly/1DKj4qz