A Framework for International Nodes in Private LOCKSS Networks

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Background

Private LOCKSS Networks (PLNs) provide a cost-effective and robust platform for groups of organizations (e.g., library consortia, state/provincial/national heritage institutions, or multisite universities) to preserve digital content by storing identical copies of that content over a geographically distributed area. This position paper outlines a framework for including "international nodes" in PLNs, that is, nodes that are physically located in a country other than that of most of the a PLN's members.

The benefits of international nodes in PLNs

Including PLN nodes in a foreign country has a number of benefits:

1. For small PLNs, international nodes can help provide the minimum number of nodes (7) required for a robust LOCKSS network, likely at costs lower than those incurred by using commodity cloud-based infrastructure.[i]
2. International nodes would help ensure greater geographic distribution within the PLN. This is particularly important for PLNs based in countries that are very small geographically, where all nodes in the network would otherwise be within a few hundred kilometers of each other.
3. Although unlikely, a situation may arise in which sensitive or controversial information preserved in a PLN that is entirely within a single county's borders may be subject to legal challenges or other actions by that country's government. Preserving one or more copies of sensitive content in other national jurisdictions would help ensure that the content is not lost due to censorship or other actions by local national governments.

This list is not comprehensive; individual PLNs may develop additional rationales for including an international node(s) in their networks.

A framework for international nodes in PLNs

A general framework for including international nodes in PLNs could be used by PLNs in their planning activities, and could be the basis for formal agreements between partner PLNs. The technology that underlies Private LOCKSS Networks is mature and well supported, so such a framework should focus on the following policy issues:

- Service reciprocity: What are the service obligations of the participating PLNs, e.g., each PLN agrees to host a single node for its partner PLN.
- Articulation with partner PLN frameworks/agreements: Members of a PLN typically rely on a formal agreement to define the activity within the network. A general framework for international nodes should provide sample language that describes how the local and international PLN agreements relate to each other.
- Privacy, copyright, and other national laws and regulations: PLNs implementing international nodes would need to respect multiple countries' laws and regulations surrounding privacy and copyright, and also need to be aware of the risks to content posed by foreign laws. A general framework should address these issues and offer concrete advice on ensuring that all pertinent obligations are met and potential pitfalls are understood.

[i] David S. H. Rosenthal and Daniel L. Vargas. "Distributed Digital Preservation in the Cloud" (Paper presented at the 8th International Digital Curation Conference, Amsterdam, January 16, 2013).