Focus: Interoperability

Tsugi is built upon a set of open source implementations of standards like IMS Learning Tools Interoperability, IMS ContentItem, IMS Common Cartridge, and others. These libraries not only implement the standards but are also regularly tested against the various LMS systems in the marketplace and are adapted to work with subtle differences in the standards implementations between LMS systems.

Each tool build with Tsugi is separately standards compliant and can be hosted on its own in a Tsugi container for many tennants. When Tsugi acts as a stand-alone MOOC platform, the platform communicates with Tsugi tools using interoperability standards.

Focus: Innovation

The Tsugi platform has been in production for over two years at scale in support of a number of MOOC offerings on the Coursera supporting >100K students. While Tsugi is designed to run in production at scale, modularity, automatic database migration, and automatic upgrades allows constant growth and innovation.

Maintaining and upgrading Tsugi is as easy as a WordPress installation.

The Tsugi APIs are available in PHP, Java and Node with plans for a Python API in the future. PHP is the most complete Tsugi implementation in order to make contributing to the Tsugi framework or developing a Tsugi tool available to developers of any skill level.

Getting Started

Developer Training

The www.tsugi.org web site includes documentation and videos on how to install, configure and maintain a Tsugi implementation as well as how to build a Tsugi tool. The web site is designed to get new developers and operations staff though their initial learning curve with Tsugi. The site includes assessments and even awards OBI compliant badges as milestones are achieved in the training.

Research / Collaboration

The Tsugi research project is led by Dr. Charles Severance, one of the founders of the Sakai Open Source LMS system as well as one of the primary authors of the IMS Learning Tools Interoperability Specification. He leads the effort as a faculty member of the University of Michigan School of Information.

Their is still a great deal of work to do on Tsugi. Collaborators are welcome and we are fund raising to expand the research staff working on Tsugi. We expect that 2017 will be the year that moves Tsugi to a 1.0 level product.

Gear image, CC0
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www.tsugi.org

Tsugi

Building the Next Generation Digital Learning Environment

tsugi

Researching and Developing Technology to Enable the Next Generation Digital Learning Environment

Educational Application Store

Tsugi enables the development and hosting of learning applications that can be seamlessly integrated into Learning Management Systems.

Learning Object Repository

Tsugi's LOR features allow course content to be developed outside of the LMS and imported into any number of course shells.

MOOC Platform

Tsugi can act as a LMS for a single course. Tsugi can be used to transform Open Educational Resources on the web into a MOOC.

API Libraries

By using Tsugi's well-tested set of open source of interoperability standard implementations, developers can focus on application functionality.

Independent Building Blocks

By building a ground-up implementation of learning tools and capabilities with standards compliance and seamless interoperability as a founding principles, Tsugi is the leading research effort in defining the technical structure of the "Next Generation Digital Learning Environment" (NGDLE).

By focusing on a "building block" approach, Tsugi can be used to achieve a wide variety of use cases by selecting and composing the core components in many different ways.

www.tsugi.org

Flexible Deployment Options

While most vendor efforts are attempting to herd customers into single-source monolithic cloud-hosted solutions, Tsugi enables a wide range of low-cost deployment configurations. A single faculty member can build a web site to promote and share their course materials and supporting tools.

A university can provide an expandable education "app store" where faculty can use tools from a wide range of sources while keeping all of the learner data under control of the university. An edtech startup can quickly build a multi-tenant cloud-hosted application using Tsugi as infrastructure.