

## Use Case Study: EduMart Verification Test

Japan is implementing a national strategy known as the “e-Japan Strategy” to further its IT leadership by 2005. The Strategic Headquarters for the Promotion of an Advanced Information and Telecommunications Network Society (IT Strategic Headquarters) has implemented a variety of measures since January 2001. By June 2002, Internet penetration in Japan reached 44% and penetration among public schools had reached close to 100%. The IT Strategic Headquarters has been implementing measures based on the “e-Japan Priority Policy Program – 2002” which has five policies of emphasis, including the ***promotion of education and development of human resources***.

### PROMOTING THE DISTRIBUTION OF EDUCATIONAL CONTENT

The challenge of creating an infrastructure to distribute educational content had two key components: creation of the physical network infrastructure and the preparation of content for distribution across the network. Much progress has already been made on the physical network – by 2005, all public schools will have a full-time high-speed connection to the Internet. This represents roughly 40,000 elementary, junior high and high schools.

The preparation and distribution of content over the network had two requirements. The first was for distribution to be unrestricted so that multiple content providers could openly participate. This definition of an open interface and building of an educational content distribution network will lead to a system in which additional organizations – both public institutions and private businesses – can mount interfaces and freely participate.

The second requirement was securing privacy and establishing openness. Since the users of the system are students it was vital that much personal information (e.g., grade histories, etc.) be strictly protected. On the other hand, it was recognized that a certain level of personally identifiable information (e.g., focus of study, etc.) was needed so that service providers could deliver more valuable and targeted content.

Typically, the securing of user privacy and establishment of openness are in conflict. Consequently it was necessary to implement a proof of concept to verify that this system for distributing educational content could meet the needs of the e-Japan Priority Policy Program. This pilot was launched when Japan’s Ministry of Public Management, Home Affairs, Posts and Telecommunications planned the “EduMart (coined from Education + Market) Verification Test.”



## EMPLOYMENT OF LIBERTY ALLIANCE PHASE 1 SPECIFICATIONS

Shortly after the onset of this project, it was determined that the technology employed to build the EduMart Verification Test system had to satisfy the following requirements.

- *Interoperability for content delivery.* Securing interoperability to deliver educational content from private businesses (video footage, documents, etc.) to elementary, junior high and high schools throughout Japan
- *Personal information and copyright management.* The system must provide user security and carry out the appropriate protection and management of content copyrights
- *Single sign-on.* A single interface that links user authentication provided by national and local governments, schools and private businesses to a system that provides different functions such as content delivery – without requiring additional authentication
- *Openness.* Open technological specifications that satisfy the above requirements and enable the participation of future users and content providers and that are not country-specific or vendor-specific.

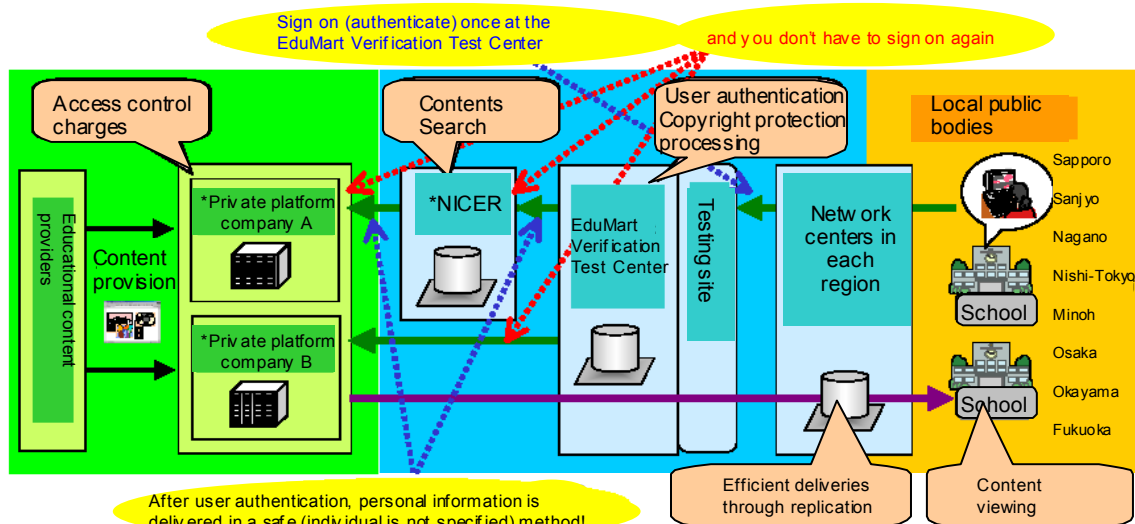
Following thorough analysis, the Liberty Alliance Phase 1 Specifications were selected for the EduMart Verification Test. Key factors in this selection were the fact that the Liberty protocols are based on open specifications and that they are supported by product offerings from multiple vendors. These factors make it easier for local governing bodies and private corporations to participate in the EduMart e-Learning system.

## THE WORLD'S FIRST E-LEARNING SYSTEM BASED ON THE LIBERTY ALLIANCE SPECIFICATIONS

Following selection of middleware compatible with the Liberty Alliance specifications, the EduMart verification test system was successfully constructed in only a few months' time. This effort represents the world's first e-Learning system built on the Liberty specifications.

Presently, private companies consisting of twenty-four content providers and two technology vendors are delivering content on a full-time basis to roughly 3,500 terminals at ninety-eight public schools across Japan. This system is built on a future-ready infrastructure based on Liberty Alliance Specifications that secure both safety and convenience while also providing openness and interoperability.

## OUTLINE OF EDMART VERIFICATION TEST



\*NICER: National Information Center for Educational Resources  
 \*Platform company : Content Aggregation Provers/Distributors

(From materials released by the Ministry of Public Management, Home Affairs, Posts and Telecommunications)