

# LearnITy™ Engine

The LearnITy Engine is an innovative Content Delivery and Management system (LCMS/LMS) that is based on unique synthesis of ideas drawn from the fields of instructional design, intelligent tutoring systems, adaptive hypermedia, etc.

## Features

- ❖ **Platform independence** – Developed using Java and hence works on all platforms (Windows, Linux, Solaris, etc.)
- ❖ **Standard compliant** – The engine is compliant with IMS and ADL SCORM 1.2 (both the Run-time API as well as the content packaging aspects) international standards.
- ❖ **Purely web-based** – The engine is built from scratch to be purely web-based and generates pure HTML 4 plus Javascript. No special plug-ins are required for using the engine itself (note that course contents may require special plug-ins)
- ❖ **Exhaustive Media Support** – The engine supports the delivery and management of all types of media including HTML, Flash, Powerpoint, Audio, Video, Authorware, SVG, etc.
- ❖ **Highly Scalable and Fault Tolerant** – The engine is developed using Java Servlets and its architecture is based on the J2EE standard. As a result of these development and deployment choices, LearnITy is well equipped to address issues of scalability and availability. Clustering techniques may be employed for supporting load balancing, multilayer switches, and SANs.
- ❖ **Adaptive Content Delivery** – The engine supports customised learning paths by implementing 3 types of adaptive behaviour: *adaptive content selection*, *adaptive navigation*, and *adaptive content presentation*. Hence, different delivery strategies may be used for learners with different attributes (e.g., learning styles – inductive vs. deductive, learning approach

– deep vs. shallow, orientation – kinesthetic vs. visual, etc.). All this is supported without the requirement for any programming.

- ❖ **Adaptive Content Selection** – LearnITy supports the notion of *learner qualifiers* (e.g., beginner, intermediate, advanced) that may be assigned to individual learners or groups of learners. It is possible to assign different course structures for the same course to different qualifiers. Thus, content filtering as well as content ordering may be used to define customised learning paths for individual learners or groups of learners. The engine also supports the notion of *prerequisites* so that dynamically changing learning paths may be implemented based on how learners perform in assessments or how much of the course they have completed.
- ❖ **Adaptive Navigation** – LearnITy supports choices in the navigation techniques that may be made available to users. Different types of navigation schemes such as *exploratory* or *guided* navigation may be supported.



- ❖ **Adaptive Presentation** – *Skins* (in the form of Cascaded Style Sheets) may be used to customise the look and feel of the content delivery screen so that varying presentation requirements may be supported.
- ❖ **Virtual Courses** – Supports WWW-based virtual courses by accepting URLs as "content" associated with topics and sub-topics of a course.

- ❖ **Notes Tool** – The engine provides a notebook that allows learners to keep notes for each course he/she is registered for. If a learner shares his/her notes then they become available for viewing by all learners registered for that course.



- ❖ **Integration with QTI compliant Assessment Engine** – Whenever the engine finds that it has to deliver an assessment, it passes control to an Assessment Engine that reads the assessment (XML) file and generates dynamic HTML for interacting with the learner. Once the learner finishes the assessment, the Assessment Engine passes back control to the Content Delivery Engine along with the result of the assessment. The result is stored in the learner model. Any assessment engine that is fully compliant with the IMS QTI standard may be used; the engine comes with built-in support for the LearnITy Assessor.
- ❖ **Integration with various collaboration tools** – Comes integrated with *email*, *Instant Messenger*, *Chat Rooms*, *Threaded Discussion Groups* using which learners can collaborate with other learners who are currently logged-in for the course or have registered for the course.
- ❖ **Internationalisation support** – The tool provides adequate support for international users through the facilities of Java language as well as the CSS generation mentioned above.

### System Requirements

- Any Operating System with support for JDK 1.5 (Any flavour of Windows, Linux, Solaris, etc.)
- Any Servlet API 2.3 compliant servlet engine.
- Any SQL compliant RDBMS with JDBC 1.4.0 support
- Any XML:DB compliant native XML database
- 512 MB of RAM (based on number of concurrent users additional memory may be required)
- 50 MB Hard Disk for the engine itself; additional disk space requirement will depend on the amount of courseware to be managed

### Licensing

The LearnITy™ Engine is sold as a component of the LearnITy LMS that comes in various packages (Lite, Workgroup, Enterprise, etc.)

### Other Products in the LearnITy™ Suite

- ❖ LearnITy™ Assessor
- ❖ LearnITy™ Virtual Classroom
- ❖ LearnITy™ Course Management System
- ❖ LearnITy™ Digital Knowledge Library
- ❖ LearnITy™ Training Management System



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