

What makes CTL2 different?

Executive Summary:

CTL2's e-learning system is the **only** system that provides:

- Reuse of content in many different configurations without new Web programming
- Complete Web portability across all Web technologies
- Quick, easy and inexpensive migration of content to the Web
- A learner versus administrator focus
- Content focus (removing the need for new Web programming)
- Cutting-edge learning experience using multiple pathways to long term memory
- Both active content delivery and multi-variable assessments (including high stakes assessment)

Learners using the CTL2 system learn more and learn it faster because the system:

- Requires complete engagement with the content
- Provides real-time guidance and assessment throughout lessons
- Tutors the learner using the processing power of the computer to monitor progress and manage the flow of information (and remedial information if necessary) based on the learner's goals

Superior Software Design

The architecture design that Francois Paul Briand has evolved over the past 12 years make our software perhaps the most reliable, efficient, and flexible in the e-learning industry. The goal of our software architecture is **ease of reuse**.

Everything CTL2 builds is reusable—as is, no re-programming required. That means your training budget goes further and gets spent on teaching your content not on remedial, menial programming.

Our Motto: More bang for the buck! *Bang for the buck* means you (the client) spend your money on the learner, not the administrator; and you spend your money refining your content, not programming Web pages. As an example, we put Cisco Systems entire test-environment fundamentals curriculum online in one quarter (400 pages of curriculum content.) Cisco's Director of Contract Manufacturing remarked they had tried for 6 quarters to put their curriculum online and had made no progress until they turned to CTL2.

CTL2 vs. Rest of Industry: Others in the industry build e-learning systems that are fancy media players—usually in a proprietary technology such as Flash. A few of them offer minimal assessment capabilities consisting of a set of multiple-choice questions rendered at the end of a lesson. Tracking and reporting are generally done manually, i.e. most corporate training programs require only that each learner says they've taken the training. Large technology companies build monolithic products such as *Learning Management Systems* (LMS) that provide tools for administrators to improve access to training. These companies don't really care about the training content or whether learners actually *learn* the material. All of these companies focus on are server-side technologies that are administrator-focused, very expensive to purchase and even more expensive to implement.

CTL2's system takes a completely **different approach**. An appropriate analogy is a "class library" from the software industry. A class library is like a factory that provides specialized objects, which in CTL2's software provides learning experiences. This allows easy and quick migration of content to the Web. Our software allows content to "assemble" itself into a course when one file is loaded onto a page. The system tracks a learner's time at each task, tracks progress using many different ways of communication, and manages the flow of information to the learner at their own pace. We jokingly call our tracking system "LMS-lite" because it is so much easier—and cheaper—to deploy. Recently, we have been reviewed by industry experts who say our features far out-strip the competition's products that are much bigger and more expensive.

Our system is Web-portable (no proprietary technologies), it has a small footprint and can be deployed standalone or as part of another system.

Learner Focused

CTL2 has always invested its resources in the learning experience. Our automated tutoring feature-set is designed to make the learning experience more effective and efficient – meaning that learners learn faster with higher comprehension. This includes linking to external information sources. We draw inspiration from the work of the eminent learning psychologist and behavioral scientist Reuven Feuerstein whose research has shown that when learners begin manipulating the learning environment, the environment actually begins to enhance their learning.

The Internet has blossomed into a powerful media delivery system; like "TV on steroids!" Most e-learning companies revel in this capability. CTL2 emphasizes applying interactive processing power over simply passive media presentation. The learner must *actively* manipulate our e-learning system as he takes our courses. We track their engagement and correlate it to performance on content-related

activities. But more importantly, we provide all this feedback directly to the learner so they can make informed decisions about their own training.

Our Motto: We draw on the words of Marshall McLuhan, “We create our tools and then our tools create us.” The training industry has recently coined the term “edutainment,” meaning tricking the learner into learning while entertaining them. As important as engaging content can be—entertainment is about passivity. Television is a *cold* medium—all the thinking and imagination is done for the viewer. By taking Internet-based-training in this direction, the industry nullifies the real gem of the environment—the CPU.

CTL2 vs. Rest of Industry: The competition is administrator-focused; CTL2 is learner-focused. They’re media-intensive; we’re processing-intensive. They want to make it painless—sit there and watch; we’re all about the learner driving the train every step of the way. They want to direct the focus; we want to put the learner in control. Our system allows the learner to set goals and manipulate the system to achieve them. Our theory is that people inherently want to change and improve; it is part of being human. We try to put learners in control of change.

Assessment and Critical Thinking

We draw a distinction between testing and assessment. Assessment is more than a test. It is gathering information about the learner. It is identifying the impact on job performance that the training provides.

Most systems claim they provide testing but they really just provide multiple-choice questions. CTL2’s system provides both fixed and constructivist question types. We provide non-verbal (drag and drop, point and click, etc.) questions. We provide research-type questions where a learner is given materials to look up an answer. We provide video-based questions so the learner can make inferences about behavior.

We imbue training with job relevance, highlighting activities that mimic actual tasks from the workplace. We provide forms in which learners enter observations and conclusions in their own words. CTL2 is the **only** e-learning system that offers a mechanism for learners to record themselves making an oral presentation (using a Web cam.) We also provide a download mechanism allowing learners to access third party information or template documents that apply to real-world scenarios.

We analyze scores, content items, and engagement level for *each learner* that provides indices and metrics to characterize retention and comprehension level. Performance metrics are not only made available to teachers, managers, and administrators, but to learners as well. We provide the data so learners can make informed decisions.

We assess knowledge and thinking skills. We draw upon techniques from the critical thinking literature to improve thinking skills.

Our Motto: We believe that the PC's first-best destiny is that of a thinking cap: We should get smarter, in practical human terms, every time we use our computer.

CTL2 vs. Rest of Industry: There are two phases to the assessment process: acquiring data and reporting it. All test engines provide simplistic, multiple-choice response gathering. CTL2 provides acquisition features that others don't have: sophisticated question types, pop-up hints and a variety of feedback options. We provide question skipping. A learner can turn off feedback. The feedback can contain links to course pages or Web sites for remediation. Questions can be clustered so they are administered the same way: in sequence, drawn at random, feedback or no feedback. Questions can be chained together multiple ways: if the learner gets question A correct, question B is displayed, if incorrect, question C is displayed. Questions can be structured into "pools with rules." For example, get three correct and the learner moves up to the next pool. We allow questions to be weighted, assigned a level of difficulty or assigned to a specific role.

CTL2 has the **only** system that provides this many response-acquisition features. We use assessments to diagnose learners' needs, increase comprehension and verify mastery of the material.

The most powerful test engines provide a "high-stakes" solution where test scores are compared to the population of test-takers as a whole. Further, scores can be correlated to demographic segments of the population. The most sophisticated test engines also support "item analysis," in which the responses for each question are compared to segments of the population so the questions can be validated as discriminating between those that have the knowledge and those who don't. Our system is the **only** one that supports these types of analyses and can also correlate scores with individual engagement levels for specific content objects. Other test engines don't provide content objects or track a learner's engagement level—CTL2's is the **only** system that does.

Why are we different again?

Every paragraph in these pages are chock full of features we expose to authors and learners—most of which our competitors don't. The point is that, when taken together, our system is the best choice—the only choice—when learning is **"mission-critical."**

Instant access to information is what other systems emphasize. **Real learning—learning that is applicable to the job, learning that is retained, learning for which the outcome can be measured—makes CTL2 different.... and the only choice.**