

The EITAN (Educational IT Alliance Network) Portal - Vision, Realization and Contributions

EITAN (Educational Information Technologies Alliance Network) is an innovative (not only in Israel), cooperative, academic initiative for the coordination and setup of an open portal on Information Technologies (IT) using IT technologies (see <http://www.eitan.ac.il>). This is not just a talk - eitan is a functional and working system. It intends to advance the state of technological education in Israel, to support development and use of community-based computer applications, and to better utilize the available Internet and Web infrastructures. It will freely furnish interactive contents and tools, especially in Hebrew, to university students and lecturers, high-school pupils and teachers, and ultimately the supporting public.

Eitan has already garnered enthusiastic interest and potential support from the various constituents of the Israeli educational system. It turns out that eitan is just the kind of system they all wish they had already and the sooner they get it, the better. This executive summary expands therefore on the eitan vision, realization and contributions.

Vision

As it turns out, most computer users, pupils and students alike, lack practical know-how in information technologies, especially in the correct use of important tools such as Word, Excel, PowerPoint, etc. In addition, most of the information currently available on the Internet isn't qualitative, lacks organization and focus, is hard to locate, and in any case isn't in Hebrew. This is so also for IT contents, for the educational community searching for information, and especially so for the high-school population.

The goal of eitan is to construct and maintain a public-domain portal that will continually serve all those interested in IT contents and tools. Eitan is to contain numerous interactive tutorials and courses, focused repositories and digital libraries, and friendly tools for generating suitable contents and participating in Learning Communities (i.e., bulletin boards, forums, newspapers, image galleries, etc). It will encourage the generation and use of high-quality multimedia contents, mostly in Hebrew, presented in an interactive manner, while using visualization mechanisms and friendly interfaces. Eitan thus provides usable IT frameworks for easy collaborative generation and self-use of community oriented tools and services.

In summary, eitan aims to bridge the divide between learners and knowledge, theory and practice, academy and industry, and to encourage cooperation and cross-fertilization at varied levels between educational departments and the high-tech industry. The Israeli educational system could certainly benefit from an open portal that has rich Hebrew contents, and that is freely usable, especially for distance education. Eitan could also serve as a model and framework for similar portals in other areas, not just IT.

Realization

Eitan already covers many topics related to Computer Sciences and Mathematics in particular, and to Information Technologies in general. Each topic, while usually introductory in nature, covers the essential basics and more by teaching the topic in an interactive manner (e.g., live examples, animations, simulations, quizzes, self-tests, etc.) through extensive use of multimedia technologies (e.g., hyperlinks, highlighting, images, audio, video, etc.). Topics covered range, for example, from software to hardware, from programming languages to Web technologies, and from Mathematics (university and high school levels) to Algorithmics. Each topic site is a mini-portal in itself considering its content breadth and the varied set of technologies and mechanisms that are in its use. The eitan portal also includes various site catalogs, subject indexes, dictionaries, encyclopedias, etc. A customized, Hebrew supportive, Google search engine provides comprehensive search facilities for the site.

As part of eitan we have run, for the last 3 years, an extensive projects workshop. Hundreds of students have already been involved in executing its projects. This extraordinary workshop has been running in recent years in Bar-Ilan and Tel-Aviv universities but the plan is to introduce it, incrementally, into all other academic institutions. The eitan portal is rich in guidance materials and caters to Web standards. It features a comprehensive powerpoint guide for project developers and scores of highlighted projects. This novel workshop adheres to high academic standards with much time and efforts invested in student guidance and supervision to reach the required qualities. For example, in the near future, the project initiation and analysis phases will use the MethodA framework (NoHal MafTech).

Eitan will eventually contain many Digital Libraries (DLs) constructed via use of a DL framework. The DL framework in eitan bases itself on Greenstone, a UN DL initiative based in New Zealand. We have integrated full Hebrew support into the Greenstone framework in eitan. This framework enables the easy initiation and generation of DLs, integration of various document formats, construction of varied metadata structures that support search and browsing services, all this while supporting DRM (Digital Rights Management). All eitan patrons will be able to enrich the contents and number of DLs in eitan. The contribution of DLs with Hebrew contents can be extremely important to the entire educational system in Israel.

Contributions

The eitan workshop is currently the foundry of much of eitan contents. The students participating in this workshop have developed most of the contents and tools currently in use in eitan. They in turn, have learned and experienced much, capabilities they will be able to commit to further pupils or even extraordinary pupils by themselves that will enhance eitan even further with content most appropriate for the vast and various K12 communities.

Eitan encourages active student/pupil participation and contribution to the portal. In addition to the available list of projects, prospective contributors are encouraged to submit their own project proposals for consideration. Project developers get due credit of course for their site contents and tools. Moreover, with the right sponsorship, we envision soon the provision of several "eitan excellence" fellowships and prizes, granted to those creative developers of outstanding projects that truly advance eitan goals.

Eitan is indeed unique in its concept of freely offering all the above features and services, in such an integrated manner, to the Israeli educational system. This type of offering is important to the entire educational system but especially so for high schools, where pupils, teachers and parents can contribute to and benefit from eitan. We envision cooperative efforts in developing appropriate high-school contents and in its educational sharing. We plan to devote special attention to the needs of

the K12 community by allocating for them specialized sites with much needed contents (i.e., Bagrut topics especially Mathematics, Mathematical recreations, university type courses, etc.) and appropriate online tools and services (i.e., course calendars, school newspapers and forums, test generators, etc).

Clearly, the contribution of eitan, not just to the academic world, but also to the high-school system, can be highly valuable. To realize this though, we are in need of a supporting framework. This includes modest monetary support to acquire the required infrastructure and to able to employ the needed (mostly students) support staff.

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