ETL White Paper

The Emerging Technologies Lab (ETL) is a collective effort to create, extend and adapt best-of-class computer technologies. We foster innovation by encouraging experimentation and collaboration. The ideas that emerge are developed with the intent of making a significant contribution to the computing community.

The above paragraph is intentionally brief and concise; the information within is deserving of further explanation. The remainder of this document is an attempt at such an explanation.

Who is ETL

ETL is a collaborative research and development lab based at Loyola University Chicago. Though primarily comprised of students (past and present) and professors, anyone who shares an interest in the exploration and development of technology is welcome to participate. ETL has a firm foundation in the Computer Sciences but has a broad scope and considers itself an interdisciplinary organization. We encourage individuals from industry to join us, and a few from local industry already have.

ETL puts much emphasis on collaboration. Even when a project only has one active developer, many spend time helping with thought, creative input and constructive criticism. Due to this reliance on collective effort, ETL must be and is open to different approaches, styles, backgrounds, and interests.

There are no educational or experiential requirements for working with or participating in ETL. All that is asked is that everyone continues to advance their thoughts and their projects and treat all other people and ideas with the respect they are naturally due.

ETL's Activities

ETL is, in part, an umbrella organization that provides structure and infrastructure for research and development projects. While creative and interesting projects are always exciting and welcome in ETL, the group acknowledges the importance of projects that are simply helpful, even if they lack sex-appeal. More information on and definition of an ETL project can be found in the paper "Definition of an ETL Project".

While the majority of ETL's public image is built upon the projects that its members are working on, ETL's breadth is not limited to projects only. ETL organizes and hosts weekly meetings where ideas are exchanged, questions asked and explored, and the recent progress of projects are presented. It is a strong tenet of ETL that face-to-face group meetings are valuable to collaboration. We do, however, not require attendance and do make many of our talks available in video form.

Finally, ETL establishes, maintains, and monitors virtual meeting spaces. These spaces include, but are not limited to online discussion groups, collaborative documents for brainstorming and idea formalization, and web sites for the presentation of ideas and projects.
How ETL Helps a Project/Idea
Since the advent of the WWW, an era of collaboration is truly upon us. Solo acts will continue to exist for some time but most modern research, especially in the computing discipline, is of a collaborative nature. Today, the developing an idea into a project and furthering that project until it is a polished product is process that depends on the talent and efforts of many individuals. However, often it is the case that a person with a good idea or a project under development is forced to work alone because they lack an environment that allows for easy collaboration. ETL provides such an environment.

ETL has many functions to support its members and their projects and ideas. These functions are dynamic and expanding so while they may never be fully enumerated in this document, below is an explanation of many of them.

Community

Though ETL is a relatively young organization, it is established and has a solid core of members. Thus, ETL provides a community that supports and fosters the development of ideas and projects. ETL is a sounding board: ideas can be tested by presenting them to the group and bettered by the group's responses.

ETL is a workforce often times the ideas behind a project have been worked out but extra hands and different expertises are needed in order for development to continue. The members of ETL are often ready (and always encouraged) to help each other out with projects. Most members work on a variety of projects and each person brings something new to the projects they work on.

ETL provides a network of projects and people that have a wealth of knowledge and experience. Often times a problem one project or member is confronting has been solved by another. ETL works to bring a variety of parties and projects together in order to ease and speed development.

Connection to a Larger Institution

No matter how large and respected an organization it can always benefit from a healthy relationship with another organization. ETL is closely connected to Loyola University of Chicago (LUC). LUC's motto, "Preparing people to lead extraordinary lives", is its driving force. ETL is proud to be part of this preparation. Loyola does more than provide ETL with its physical lab. By being tied to an institution such as Loyola, ETL has interdisciplinary opportunities and avenues of collaboration that similar organizations are lacking.

Furthermore, ETL builds upon Loyola's strong foundation of social justice. LUC is not a place where lights are hidden and neither is ETL. One of the aims of all of ETL's work is to give back, in some way, to the various communities around us. This will be touched upon later in greater detail.
**Infrastructure**
ETL provides its members with an established and documented infrastructure that is to be used in development. By having a structured process for projects, ETL frees the developers of cumbersome administrative tasks and leaves them with more time and energy to focus on development.

Furthermore, the public success of one project can lead to the public success of other ETL projects. By mandating a certain infrastructure for projects under development, ETL guarantees a shared public face. Think of this as the branding of an organization.

The provided infrastructure includes, but is not limited to: project home pages, source repositories, development and support mailing lists, developers' blogs, issue tracking, and guidelines for the authoring of formal documentation.

**Resources**

Sometimes the resources needed for a project are beyond the means of a single developer or small team. ETL does its best to provide such resources or connect the developers with those who can provide the resources. ETL already has a growing inventory of hardware that can be used by its members and is always working to acquire more.

**Reputation**

Though a young organization, ETL has already established a good reputation with other institutions, developers, and users. As a person or project becomes part of ETL this reputation carries over to them. There are many positive effects of this transference, such as legitimizing a previously unknown or unregarded project. This reputation also allows ETL to give more exposure to a project that it might otherwise get.

**How ETL Gives Back**

As mentioned above, one of the goals of all ETL projects is to give back to the greater communities in which ETL resides. This sense of social responsibility is a large part of ETL and is achieved through openness. ETL does not mandate that a project be open; however, openness in all of its forms is greatly encouraged. The infrastructure ETL provides is one that implicitly encourages openness throughout the entirety of the development process. This openness is not limited to source code but also includes any and all documentation.

Many of ETL's members use open source software; a good deal of ETL projects make use of open source frameworks; much of the research done by ETL members is aided by open resources. In a spirit of reciprocal giving it is expected that ETL members and projects share as much as they are able, not just with ETL but with the greater public.