Killer Apps

This is a summary of some killer apps that anyone (application vendors, academic institutions, people in their garage, Facebook, Google, Microsoft) could develop when EdUnify exists. EdUnify is the infrastructure that enables these composite applications. It is not the intention for EdUnify to build killer applications, but rather lay the groundwork and provide the infrastructure to promote the development of these new applications that reach across higher education. Building these killer applications without infrastructure like EdUnify is cost prohibitive and, in fact, many application won't even be conceived until we can see the landscape of web service across higher education and other sectors.

Government Agency Data and Information Collection

Once EdUnify and its interoperability services are available, it would be possible for anyone to build an application that used the search and interoperability services to find all available web services at K12 institutions and all available web services at colleges and universities to poll, request, snapshot and aggregate data measuring student progress, faculty information, finances, etc. such as Longitudinal Data Warehouses, IPEDS or other survey data serviced.

Faculty Search for Expertise, Schedule, etc.

Once EdUnify and its interoperability services are available, it would be possible for anyone to build an application that used the search and interoperability services to find all available web services at academic institutions that provide faculty directory information and federate them with EdUnify's interoperability services. This application could determine where faculty members teach, what they teach, and more.

Student Search for Enrollment Status

Once EdUnify and its interoperability services are available, it would be possible for anyone to build an application that used the search and interoperability services to find all available web services at academic institutions that provide student enrollemt verification information and federate them with EdUnify's interoperability services. This application could determine student enrollment status and more.

Student Progress Traceback Search

Once EdUnify and its interoperability services are available, it would be possible for anyone to build an application that used the search and interoperability services to find all available web services at academic institutions that report back the academic progress, stop outs, transfer, and more of students enrolled by source high school or feeder institution. K12, high schools and school districts will be able to report student success in college and the transitions they follow post high school by college and university. They will also be able to sort, rank and report on student persistance across colleges by success factors.

Teacher Traceback Search

Once EdUnify and its interoperability services are available, it would be possible for anyone to build an application that used the search and interoperability services to find all available web services at K12 institutions and all available web services at colleges and universities that prepare teachers to poll teacher employement status, district, teaching level, teaching courses and tenue traced back to where they attended college and completed their academic studies. Colleges and Universities will be able to evaluate and publish how their teacher programs of study have produced graduates and teachers in the K12 field and State governments will be able to measure the success of institutions contributing to the teacher population within their state.

Lookup Program and Course Learning Outcomes and Comparability

Once EdUnify and its ontology services are available, it would be possible for anyone to build an application that used the tagging services to codify a common dictionary of terms such as learning outcomes as tags and share them across all institutions. The learning outcomes would be a meta data structure. A program or course is at the abstract level, a service with inputs and outputs, no different than a web service. Applications could be developed to render new course services enabled by common tags. Learning outcomes could be requested for instance by meeting or assignment. Another application could utilize the search to find similar or like courses by the ontology tagging such as find a course that offers nuclear+engineering or basket+weaving. This approach would eliminate or reduce the complexity of collecting course or program data to enable crosswalks. The services can be called to determine comparability and equivalencyby utilizing the tags and calculating goodness of fit.

Student Guidance and Advising Services

Once EdUnify and its interoperability services are available, it would be possible for anyone to build an application that used the search and interoperability services to find all available web services at K12 institutions and all available web services at colleges and universities to serve student guidnance applications to link out from their location to other web services that address health, work, academic, etc. engaging interoperbility services to connect and transform such services for tutoring, career placement and outsourced service providers such as credentialling verifications.

Applications to Accelerate Learning, Research, and Knowledge Gathering

Once EdUnify and its interoperability services are available, it would be possible for anyone to build an application that uses the search services to make knowledge and semantics relevant programatically. Today, we all utilize Google or other search engines (which utilize indexes) to find what is most relevant determined by page ranking, a means of simply measuring the reference links. Imagine using ontology services to link services, documents, artifacts, or anything, that relates to a keyword used by a common dictionary. This form of index would be more useful and accurate than a web search, and could offer new applications to find things on the web across repositories that have been uncoded until now. The Cancer research project funded by the NSF is an example of enabling researches to codify and now find who is researching what in greater detail. Imagine if we could do the same for the business of teaching and learning across all courses. Imagine building simulation games that would have access to smart tags.

Applications for Mobile, Portable or Wearable Computer Devices

Today, the restriction of proprietary systems locking down K12 and higher education data systems means new applications for new platforms is made very difficult. With a lookup service and common ontology, new applications could be harnessed in a variety of ways. Imagine allowing a student to access their course schedule for example and to have twitter reminders for assignments integrated with their common application for messenging. New applications could be developed for the iphone or blackberry that could span courses, programs and institutions. Students could find simply the notification services or alerts like twitter from security to what do I need to bring to class the next day.

New Media Applications

Imagine video streaming a class and allowing me to poll the index of videos created by a course. There could be hundreds for just one course and thousands across my academic year. How would I find what is relevant to me without an index? Imagine making the registries of video streaming of classrooms or presentations or special events available thru the lookup service. Podcasting is indexed. But, I have to go thru the proprietary service utilized, which complicates my search or limits it. Imagine how course and media applications could be cataloged and found. The index search and the ability to develop new applications is similar to how Libraries back in the 70's and 80's put their proprietary catalogs online and then began to allow interchange requests. New applications can be developed for subscribing to new media, old media and making the seach much easier.

A Better Way to Help Students find and apply for Find Aid

Today, financial aid, grants, scholarships and such are recorded and published by a huge number of outlets to help students and parents find what is available to help pay for college. Imagine building an application that could poll sponsors of aid, grants, etc. to determine the good matches for a student's query for aid. Instead of aggegating the aid opportunities in a database, which is static and disconnected from the source, a real-time accurate service could be developed allowing the student to know if the aid available, deadlines, and what is remaining of the fund allocation. If I publish an grant opportunity in other words, and I have five $1,000 scholarships with certain criteria, imagine an application that would show their status of award (respecting confidence). If the awards have been made, the student can see how may are remaining to determine if an application can still be made, and what the rules are. Applications can be built to help the student find the aid and apply for it using the index online.

Publishing the Voluntary Accountability Data

Institutions could publish electronic services rendering the work revealing the voluntary accountability datasets. New applications could be developed to poll and report on the data sets, how they compare, helping students, parents and stakeholders view leading indicators and services with a common reference point. The lookup service and ontology coding would enable the applications to find the similar services and allow a program to call them in a common form. This would give institutions a competitive advantage for the schools investing in publishing the data set over other ranking systems such as US News and World Report.