Proposal for Plone Project Contribution

Brief Introduction of myself

I am currently studying computer Science at McGill University in Canada. My frequently used email is m.y.yang001@gmail.com. While at university, the most interesting project I have done is to design a distributed system which involves in implementing a middleware. This project involves in dealing with network protocol (TCP/IP), request processing, lock mechanism, fault-tolerance and group communications. From this project, I learned a lot of backend development of a web and how to make a scalable web server. This year, it is my first time getting involve into the open source community. I believe this is right moment to get involved because with my current skills, I am capable of contributing to a big project. In addition, I am a Python enthusiast and my previous internship involves in developing in Python a testing server that supports RestAPI. I started to introduce myself in the community and started talking about my idea on the RestAPI. However, the RestAPI is quite complete and the only addition feature that I can think of is to add a parser that accept non-English languages in request. Since my ultimate objective is to make Plone portable, I would like to develop add-on feature that allows Plone behave like WebOb. Portability is the main feature of WebOb. I am posting this proposal under “Change from Zope to WebOb” thread. A few people have commented on it.

My Project

My idea involves in taking the initiative of making a minor switch from Zope to behave like WebOb. This initiative of migrating from Zope to WebOb is minor and experimental. Having the behaviour like WebOB allows it to have features of WSGI. With that it can ultimately achieve portability. Because Plone is used for content management, having the portability feature is important for supporting fault tolerance. Since this involvement of WebOb is minor to the Plone architecture, being compatible with Zope server is also important. On top of this, if ever I have extra time, I would make a small enhancement to the RestAPI.

The main focus is on HTTPRequest. My first option will be to create an interface for wrapper functions of WebOb and Zope. This way, the users can use either framework to deploy Plone and achieve compatibility. The second option is to create a package of WebOb try to deploy Plone partially. This means that Plone will not be fully functional but at least there will be a demo of the prototype. The prototype will be a concept of how plone will be deployed under WebOb. Web pages will be deployed and users can add contents. The goal aim to achieve portability in the end. The great feature of WSGI is its portability.

My first approach is to explore more about plone.subrequest and how Plone 4 is deployed under Zope. Then, I will make wrapper functions to change some packages that depend on ZPublisher. However, this might be not ideal. I think it is best for me to develop a package for WebOb server which can partially deploy Plone. This way, the behaviour of WebOb is guaranteed. However, this will not guarantee the compatibility with Zope. Hence, the project is only considering as an add-on feature rather core development.

In addition to the task mentioned, if ever the time allows, I will add an enhancement to the RestAPI of Plone. This is just an extra parser for the user to send and receive non-English languages through REST.

Reason for this project

There are several reasons that motivates me to contribute to the project:

- Make Plone portable and distributed on common ground. Take advantage of the WSGI middleware.

- Make Plone more scalable. In order for a company to support fault tolerance using Plone, they run the same Plone on two different servers. Use RestAPI for communication among them.

Proposal Timeline (restructure in process):

- At the start of the official coding period (i.e. a month after the accepted projects are announced), I will have enough knowledge about WebOB framework. My project will be starting to construct a WebOb server.

- 3 weeks into the official coding period my project will be mostly adapting the WebOb framework.
- Half way through the period, my project will be continuing building the WebOb framework for simple HTTP requests.

- 3 weeks from the end of the coding period my project will be able to starting to create an interface. I will try to deploy a small part of Plone using WebOb. Hopefully, I will have time to look into the portability feature of WebOb.
- At the end of the coding period my project will be providing a prototype for WebOb server on which Plone will be deployed along with some small test sets. Hopefully, portability will be achieved.
- 3 months after summer of code finishes my project will be continuing on working for the portability feature.

Other commitments (TBD):

This summer, I might attend a database course at Concordia University (no credit) 3-hour per week from May 27th to mid July. However, registration is not yet decided.