

# Proposal for Cordova app for Mailman administration

**Sub-organization:** Mailman

## Personal Details

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## University information

University: Clemson University, Clemson, SC

Major: Computer Science

Current Year, Expected Graduation Date: First Year, Dec 2015

Degree: MS

## Project

### Description

This project is a result of my brainstorming, with the community, over the ideas given on Mailman's GSoC Ideas page[4]. Mailman has Postorius for Admin/Members to perform multiple actions. But having a mobile app would aid the admins in managing the lists on the move. With this project, I would be implementing this app.

My proposed way of solving this problem is by dividing the development into two parts, the first is to modify Postorius to expose a REST API that allows authentication, get and post methods to perform admin actions and the second is to build the app.

### Building the REST API

Postorius project is the web UI for Mailman 3. It is a django based web application. It can be modified to also expose API endpoints. OAuth can be used for authentication. JSON serializers will be used in the existing application's Django code to implement AJAX endpoints. Since the existing REST API is for local use only and exposes more power to the user than required, using it wouldn't be a good idea as Florian Fuchs pointed out in the mailing lists.

## **Building the Cordova app**

AngularJS and jQuery Mobile would be used to develop the mobile app's front end that consumes the REST API I developed. It would be divided into multiple modules to achieve all admin activities based on the flow and priority. For packaging the app into binaries, Intel's XDK[11], as suggested by Terri Oda, and Phonegap Build[12] will be evaluated.

### **Login implementation**

Local storage API exposed with HTML5[9] will be used to store the details of users/admins so that it can be used in the future to make API requests. Also, a user can add multiple admin details so that he can manage multiple lists by choosing one admin. A user will also be allowed to delete an admin user he previously saved.

### **List of domains and mailing lists**

Two views would be implemented to display all the domains an admin has access to and all mailing lists that he is managing.

### **Mailing List details and methods**

There are multiple actions that can be performed in terms of lists and there would be a few that would be required to be provided in a mobile app. These would be implemented in this step. The actions/modules that would be tackled during GSoC period are Allowing addition of members at various roles by picking contacts from mobile using the Phonegap contact chooser plugin[10], view held messages, allow changing the settings and allow deletion of list.

## **Why is this project top priority?**

Providing a mobile app would help list admins in a great way by giving them a tool to moderate and manage their lists on the go. This would be a great addition to tools provided by Mailman.

## **Implementation timeline and Development procedure**

During Community Bonding period (Apr 21 - May 18), I would work on analyzing changes that need to go in Postorius and design of mobile app. I will also go through the tutorials for usage of AngularJS and Django REST APIs. During GSoC, development will tackle different modules as follows.

### **REST API development**

1. May 19 - June 3: Modifying current Postorius code to allow JSON responses for all requests and also accept JSON parameters in case of POST requests.

### **Building Cordova app**

1. June 4 - June 11: Implementing login module as described above.
2. June 12 - June 19: Implement listing of domain and mailing lists. Allow creation of the both.
3. June 20 - June 27: Thorough testing and integration of the modules done so far and provide mid term evaluation forms.
4. June 28 - July 5: Implement the member addition module.
5. Jul 6 - Jul 9: Addition of Contact chooser plugin into the app and provide this only in case of Android and iOS.

6. Jul 10 - Jul 17: Implement List identity settings and message acceptance settings changes.
7. Jul 18 - Jul 25: Implement Auto response settings changes.
8. Jul 26 - Aug 2: View and manage held messages.
9. Aug 3 - Aug 11: Implement deletion of list.

Aug 12 - Aug 19: Testing and documentation of application. Prepare automation scripts to generate binaries for different mobile OS.

Aug 19 - Aug 22: Send final evaluation forms and do some final modifications if necessary.

## **Deliverables**

A fully tested Cordova application for multiple platforms. Support will be provided as a community member post GSoC period.

## **More on Personal details and motivation**

### **Short bio:**

I am Bhargav Golla, a Masters student in Computer Science from Clemson University, SC. I am an avid mobile app developer. I worked on Phonegap apps during GSoC 2012 and 2013 with Apache Software Foundation's PhotArk project[1] and Isis Project[6]. I am also well versed with native android app development. I have developed Android app for Exotel Techcom Pvt. Ltd.[2] and it is being used by its clientele of over 2000 firms. I have developed many Windows Phone apps[7]. My github account[3] will provide much more details about my developer expertise.

### **Motivation:**

I am a student of Computer Science who firmly believes that my passion towards Computers can only be satisfied through practical experience, which can be gained through Open Source Development. After getting into undergraduation, I learnt about web apps and began interested in them. During my sophomore year, I was chosen to a Design Innovation workshop organized by **MIT Media Lab**, where I was introduced to Mobile Application development. My interest in Mobile app development grew manifold since then and have developed many applications which won laurels at Technical Fests organized in India.

I chose Python Software Foundation's Mailman as my mentoring organization for GSoC 2014 owing to the kind of projects that are offered at this organization. I chose this particular project because I am interested in Mobile Application Development and am good at it. My experience with Android development is discussed in further sections. My experience with GSoC during the year 2012 and 2013 made me aware of how useful an opportunity like GSoC is for a developer like me, and this would result in more dedicated work from my end. I feel that these qualities in me makes me a strong candidate who can successfully complete this project.

## **Experience**

### **(Open Source) software development experience**

I was introduced to Google Summer of Code in my junior year and I started looking out for projects in Mobile Applications category. I found a right one in PhotArk Mobile[1] at Apache Software Foundation. With my dedication, I successfully completed GSoC 2012 and was

recruited as Code Committer with PhotArk Project. Since the community became inactive after that, project had to be retired and thus my plans for PhotArk dissolved.

I have also worked on native mobile app development. The android app I developed for Exotel Techcom Pvt. Ltd. [2] during my internship there proves my Android developer skills. During this internship, I have gained lots of insights into Android Developer Strategies and have specifically worked on building an android app sticking to latest Android design and developer principles. I have also developed lot of Windows Phone apps [7],[5].

I have worked with Apache Isis during GSoC 2013[6] and have developed a generic JS Viewer for the RESTful interface exposed by Isis.

### **Programming level**

Well versed with Java, Android App Development, HTML/CSS, JavaScript, jQuery, PHP, Java (for Android), C# (for Windows Phone), PhoneGap.

Moderately skilled with Photoshop.

### **Work experience**

Details of my work experience can be found on my LinkedIn Profile [8]

### **Reference links**

[1]

<http://www.google-melange.com/gsoc/project/google/gsoc2012/bhargavgolla/6385413778309120>

[2] <https://play.google.com/store/apps/details?id=in.exotel.mobile>

[3] <http://github.com/bhargavgolla>

[4]

<http://wiki.list.org/display/DEV/Google+Summer+of+Code+2014#GoogleSummerofCode2014-AndroidiOSUbuntuPhoneCordovaappforMailmanadministration>

[5] <https://github.com/bhargavgolla/WindowsPhoneApps>

[6] <https://github.com/bhargavgolla/isisJavaScript>

[7] <http://www.windowsphone.com/en-US/store/publishers?publisherId=bhargavgolla&appId=68f7afd5-0d71-4006-87da-4d75b4d919a8>

[8] <http://linkedin.com/in/bhargavgolla>

[9] <http://www.html5rocks.com/en/features/storage>

[10] <https://github.com/monday-consulting/ContactChooser>

[11] <http://software.intel.com/en-us/html5/tools>

[12] <http://build.phonegap.com>