EE533s Project 4 – IEEE GeoUnit Reporting System

1. Basic Project Statement

The purpose of the development effort for the fourth project is to architect, design and potentially partially implement an IEEE Report System for Geographic OUs. The reporting system will accept information directly from users filling in forms as well as completing Excel Spreadsheets. The existing system is a mixture of small systems and manual processes.

OU Officers will make submissions using the system. Staff and automation will process the submissions. Volunteers will monitor status.

IEEE is an international not-for-profit organization incorporated in Piscataway, NJ. IEEE is a volunteer led organization with a staff in Piscataway, NJ. IEEE has a strong geographic organization consisting of 10 Regions, Councils, 311 Sections, and 1570 Chapters managed by the IEEE Regional Activities Board.

2. Interfaces (may be incomplete or over-specified)

2.1. OU Reporting Officer

2.2. Volunteer Oversight

2.3. SMTP – to send mail

2.4. LDAP – to access IEEE WebAccounts

2.5. BMS – IEEE Business Management System (who are the OU officers?)

2.6. API to allow meeting management system to submit meeting report

3. (Possible) Features (also incomplete)

3.1. Accept meeting report from OU (L31, typically 5-20 per year)

3.2. Accept end of year financial report from OU (L50, one per OU, Excel Document)

3.3. Acknowledge receipt (and reflect action by staff) of bank signature cards

3.4. Report status of OU Audits

3.5. Report status of process flow of

3.6. Accept end of year individual compensation reports (for 1099)

3.7. Allow appropriate volunteers and staff to review submissions

3.8. Allow appropriate volunteers to review summaries of submissions
3.9. Send mail informing submitting OUs of processing status

3.10. Transfer data to IEEE systems from submitted information

4. Constraints on process

4.1. Produce at least 20 scenarios for system

4.2. Architect the entire system with well-defined boundaries between components.

4.3. Develop an evolutionary development plan.

4.4. Identify appropriate subsystems and express in object oriented terms.

4.5. Develop a proof of concept prototype (software or screen show)

4.6. Work in a group.

5. References


5.2. http://www.ieee.org/organizations/rab/scs/Required_Reporti ing/index.html (also has suggested reporting)

6. Grading

6.1. 20% Status Report / Risk Document (due 4/7)

6.2. 20% Scenarios (or Use Cases)

6.3. 20% Architecture

6.4. 20% Evolutionary Development Plan

6.5. 20% Prototype (and its demonstration)
**Limitations of Current L31 Reporting System (as example)**

**Reporting**

Need increased flexibility in sorting / filtering such as

- By region (Geo-Code R0* is Region 10, R1* is Region 1, ...)
- By section
- By date of meeting
- By society
- Add Affinity Groups to query report
- By multiple societies
- By submission order

Look for general approach for sorting / filtering

Export to Excel for End User

**Form submission**

- Review legal characters in each field while still not avoiding SQL injection or HTML tag attack issues
- Ability to edit form after submission (prior to download into master file?)
- Add Comment field to reporting form, to be included in on-line DB, in mail, but not downloaded into Access system
- Put unit/subunit field on subject line of mails

**Authentication**

- Use IEEE web account

**Other**

- Auto-send to Section Secretary and other appropriate people
- Grow to “reporting subsystem” for L50, 1099, etc.
- Become subsystem of OU management system