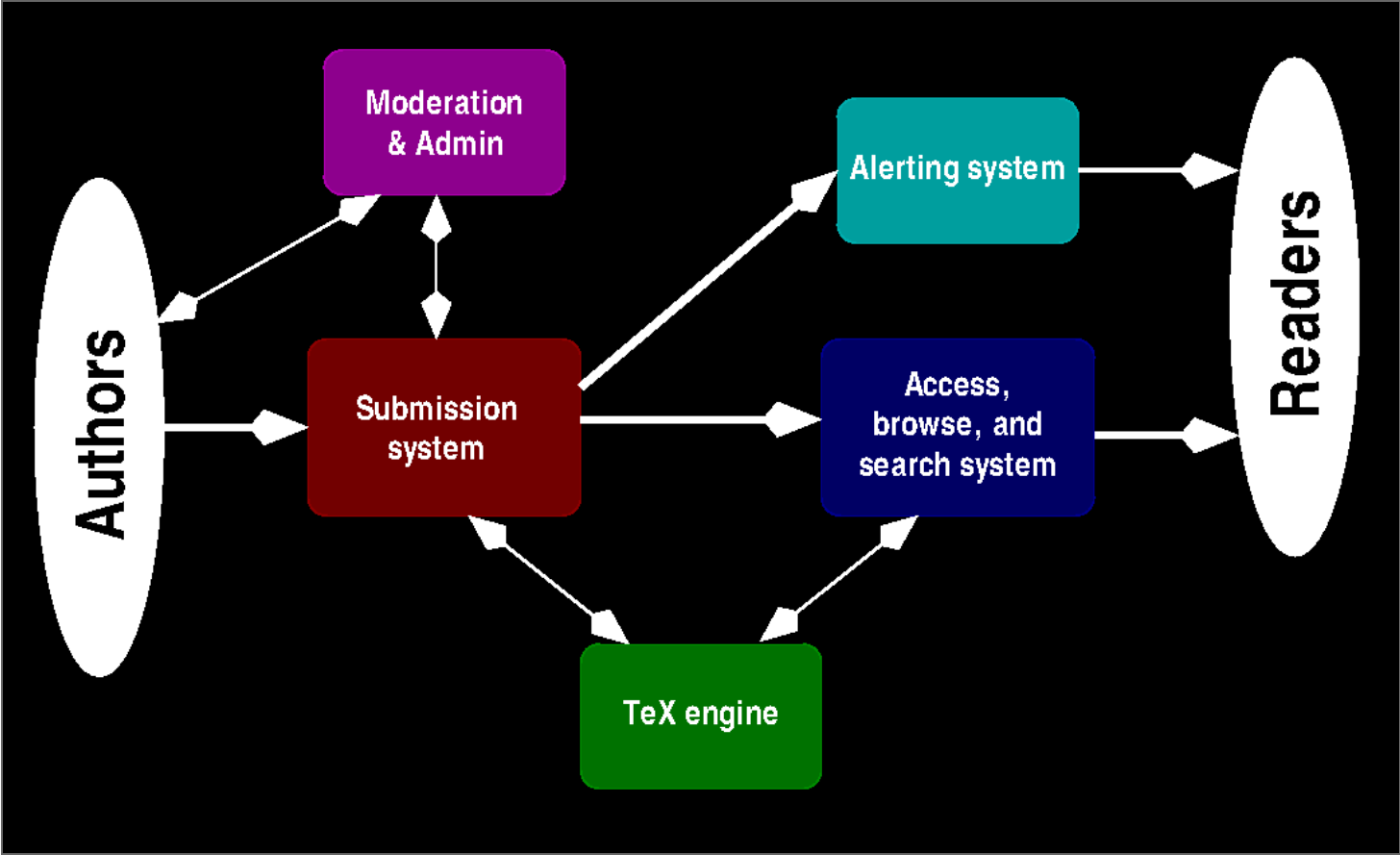


# arXiv IT update for MAB

Simeon Warner (CUL-IT), 2013-09-17 10mins

1. Developer effort and proposal
2. Status report on IT projects (arXiv IT Roadmap)
3. Directions from SAB

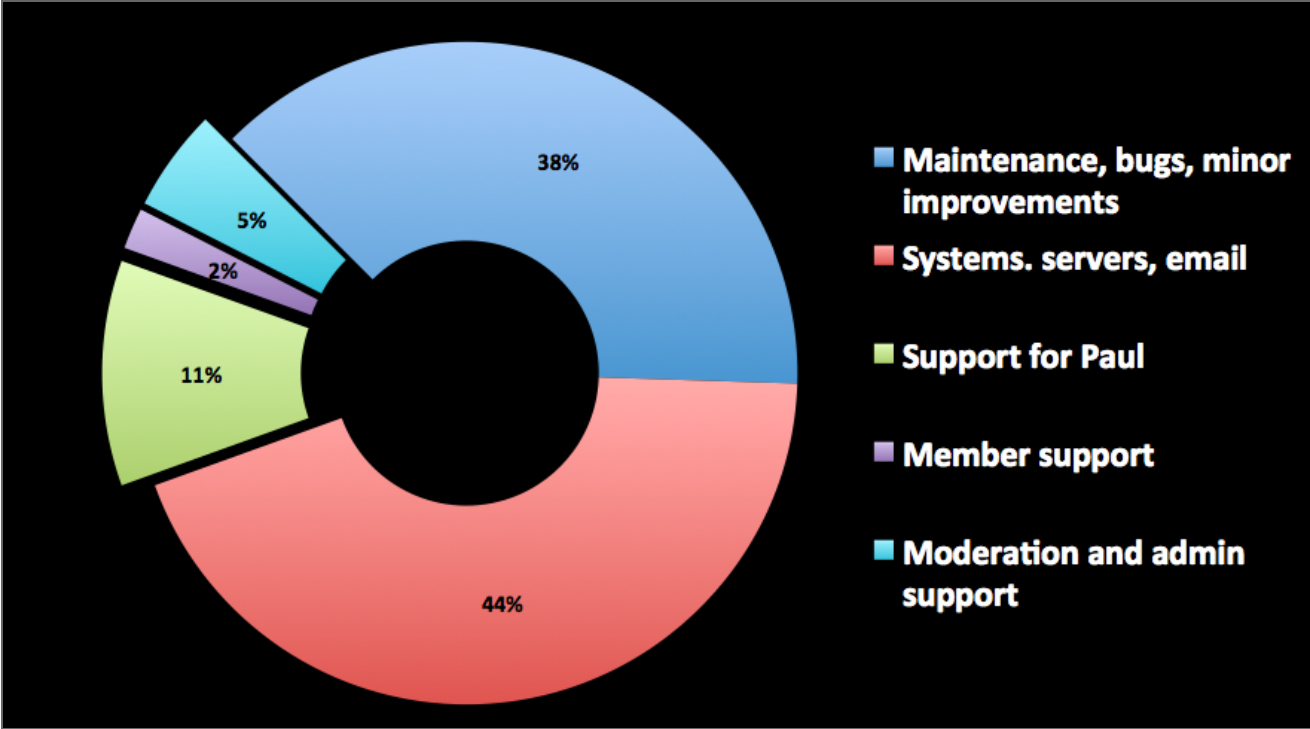


# 1. Developer effort and proposal

## Developer Effort

- Budget projected 2.25 FTE for CY2013
- 2 staff departures (May & July)
- Q1,Q2 avg 1.93 FTE
- Q3,Q4 avg 1.13 FTE without hire or contract work
- Hope to have new hire soon, 100% arXiv through CY2013
- Investigating use of contract programmer
- May make second hire if CY2014 developer budget increased to 2.5 FTE (1.5 FTE in 2012 business model document)

# Jan-Jun 2013 Developer Effort (1.93 FTE)



arXiv requires 1.0 to 1.5 FTE developer to "keep the lights on", more to make progress

Propose increase from 1.5 FTE budgeted CY2014 to 2.5FTE

## 2. Status report on IT projects (arXiv Roadmap)



2013 arXiv Roadmap - CUI x  
https://confluence.cornell.edu/display/culpublic/2013+arXiv+Roadmap

## Technical

**Complete development issues from 2012-09-21 Scientific Advisory Board meeting** - The SAB agreed to a number of changes in the way arXiv should send emails to moderators and control user selection of categories. Changes also add the ability for moderators to comment on and put submissions on "hold" without the need for arXiv admin interaction, a first step toward empowering moderators through more direct facilities. Work was started in 2012 and will be completed in early 2013. **Status as of 8/13: Done**

**Complete move of servers to virtual machine (VM) infrastructure** - In 2012 we migrated two out of three of arXiv's server machines to new VMs. We will complete the move by migration our main web server to pair of load-balanced VMs managed by IT@Cornell. This arrangement will support scaling to additional web front-ends as necessary. As part of this transition we will formalize the update and maintenance process for these machines, and remove access by non-CUL or IT@Cornell staff. **Status as of 8/13: Done**

**Change email handling to support arXiv admin and moderation ticketing system** - The "Request Tracker" software has been selected and we will rework email filtering software to use this instead of the current email-based arXiv admin workflows. **Status as of 8/13: Partially complete. Have moved help mailbox, not yet moderation mailbox. After discussion with SAB and moderators it is clear that discussion with moderators should not move to Request Tracker at this stage**

**Add automatic classification checks to submission system** - We will use classifier software developed by Paul Ginsparg to classify incoming submissions according to our category scheme. Where these automatic classifications differ significantly from the user-selected classifications we will add a warning to the moderator alerts. **Status as of 8/13: In discussion with Paul Ginsparg to get software**

**Improve tools and interfaces to support moderators** - We will work with the SAB and moderators to define and develop better tools that allow moderators to interact more directly and efficiently with the arXiv system and administrators. The overarching aim is to make best use of available moderator effort by making the work of moderators as quick and convenient as possible, consistent with achieving the quality goals and following policies set out by the SAB. **Status as of 8/13: Good discussion with SAB and moderators, currently refining list of tasks generated**

**Implement new category aliases for cs/math/stat and add a new category for q-fin** - In the past the creation of category aliases (e.g. math.IT/cs.IT) and associated recategorization of articles has required a mix of manual DB edits and one-off scripting. We will develop tools to safely do bulk edits of this sort. Testing is also required to ensure that having articles where the primary classification does not match the old-style id as a result of these new aliases is handled correctly everywhere. **Status as of 8/13: Not done**

**Improve author identifier support and data export** - Add basic support for ORCID and other author identifiers associated with arXiv accounts. Add periodic data dumps for all public authorship data. **Status as of 8/13: Not done**

**Improve dataset support** - Review use of and experience with the Data Conservancy pilot and then either discontinue or improve interaction. Decide on a medium-term strategy for data and consider assigning DataCite DOIs for ancillary files. **Status as of 8/13: The Data Conservancy pilot was discontinued ([http://arxiv.org/help/data\\_conservancy](http://arxiv.org/help/data_conservancy)) experience reviewed. We will continue to support modest sized datasets and other materials using the existing ancillary files mechanism ([http://arxiv.org/help/ancillary\\_files](http://arxiv.org/help/ancillary_files)), and will ingest data from the pilot as ancillary files to support it long-term. We have subscribed to the EZID service and will assign DataCite DOIs to ancillary files.**

**Security and login, email privacy** - There are significant deficiencies which should be addressed. Issues include: all password entry and authenticated interactions should occur via https; domain based cookies should not be sent to mirror sites; and user email addresses should be more carefully protected. **Status as of 8/13: Not done**

**Alerting system** - The email alerting system remains popular but the mechanisms for subscription management are outdated. Users should be able to see and control their subscriptions from their user account page. New software will be developed to replace the extremely old and hard to maintain software implementing the current email subscription system. **Status as of 8/13: Not done**

## Roadmap issue: Complete development issues from 2012-09-21 Scientific Advisory Board meeting

The SAB agreed to a number of changes in the way arXiv should send emails to moderators and control user selection of categories. Changes also add the ability for moderators to comment on and put submissions on "hold" without the need for arXiv admin interaction, a first step toward empowering moderators through more direct facilities. Work was started in 2012 and will be completed in early 2013.

- **Status as of 2013-09: Done**

## Roadmap issue: Complete move of servers to virtual machine (VM) infrastructure

In 2012 we migrated two out of three of arXiv's server machines to new VMs. We will complete the move by migration our main web server to pair of load-balanced VMs managed by IT@Cornell. This arrangement will support scaling to additional web front-ends as necessary. As part of this transition we will formalize the update and maintenance process for these machines, and remove access by non-CUL or IT@Cornell staff.

- **Status as of 2013-09: Done**

## Roadmap issue: Change email handling to support arXiv admin and moderation ticketing system

The "Request Tracker" software has been selected and we will rework email filtering software to use this instead of the current email-based arXiv admin workflows.

- **Status as of 2013-09: In progress, note scope change**
- After discussion with SAB and moderators it is clear that discussion with moderators should not move to Request Tracker at this stage
- Moved help mailbox to Request Tracker (3000+ tickets so far)
- Still to move moderation mailbox

## Roadmap issue: Add automatic classification checks to submission system

We will use classifier software developed by Paul Ginsparg to classify incoming submissions according to our category scheme. Where these automatic classifications differ significantly from the user-selected classifications we will add a warning to the moderator alerts.

- **Status as of 2013-09: In progress**
- Discussion with Paul Ginsparg to get software
- Working on how to store and integrate with moderator emails, and moderator and admin web interface

## Roadmap issue: Improve tools and interfaces to support moderators

We will work with the SAB and moderators to define and develop better tools that allow moderators to interact more directly and efficiently with the arXiv system and administrators. The overarching aim is to make best use of available moderator effort by making the work of moderators as quick and convenient as possible, consistent with achieving the quality goals and following policies set out by the SAB.

- **Status as of 2013-09: Plan to be approved**
- Good discussion with SAB and moderators, currently refining list of tasks generated

## Roadmap issue: Implement new category aliases for cs/math/stat and add a new category for q-fin

In the past the creation of category aliases (e.g. math.IT/cs.IT) and associated recategorization of articles has required a mix of manual DB edits and one-off scripting. We will develop tools to safely do bulk edits of this sort. Testing is also required to ensure that having articles where the primary classification does not match the old-style id as a result of these new aliases is handled correctly everywhere.

- **Status as of 2013-09: Not done**
- cs.NA/math.NA and cs.DM/math.CO requested in 2004!
- a number of changes now in place to facilitate

## Roadmap issue: Improve author identifier support and data export

Add basic support for ORCID and other author identifiers associated with arXiv accounts. Add periodic data dumps for all public authorship data.

- **Status as of 2013-09: Not done**



## Roadmap issue: Improve dataset support

Review use of and experience with the Data Conservancy pilot and then either discontinue or improve interaction. Decide on a medium-term strategy for data and consider assigning DataCite DOIs for ancillary files.

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- **Status as of 2013-09: Not done**

## Other issues...

- Revamp mirror installations
- Better metadata (author ids, affiliation, grants,..)
- TeX system
- Id overflow
- ...

### 3. Directions from SAB

## SAB input

- Focus on moderations tools
  - Follow action items from modsys-l discussion with moderators
  - Run production versions of Paul Ginsparg classification and overlap detection tools
- Understanding of infrastructure needs but secondary
- Work with committee chaired by David Morrison to review priorities and communicate progress with SAB

