

# Developments and Innovations in the Vireo 4.x ETD Submittal System

**Stephanie Larrison: Co-Chair - Vireo User Group, Texas State University**

**Gad Krumholz: Software Developer/ Analyst, Texas Digital Library**

James Creel, Jeremy Huff, William Welling, Jason Savell,  
Rincy Mathew, and Simon Frazier - Software Developers, Texas A&M

Douglas Hahn - Project Manager, Texas A&M

Michael Bolton - Assistant Dean of Digital Initiatives, Texas A&M

Ryan Steans - Assistant Director, TDL



# Agenda

---

1. Vireo Users Group
2. Framework Changes
3. Foundations for Vireo 4
4. Current Status

# VIREO

## USERS GROUP



# Vireo @TDL

---



University  
of Houston  
Clear Lake



# Vireo open source deployments

---



# Driving Features of Vireo 4 development

## Customizable Workflow

- Total re-imagining of underpinnings of Vireo from a single-workflow to multi-workflow system

## Controlled Vocabulary

- Re-develop database
- New user interface features on Student and Admin sides

---

## 2. Framework Changes

# Framework Changes

---

Spring-Boot framework (v1.3.3)

- <http://projects.spring.io/spring-boot/>

AngularJS (v1.4.9)

- <https://angularjs.org/>

Utilizing Texas A&M Weaver toolkits

- <https://github.com/TAMULib/Weaver-Webservice-Core>
- <https://github.com/TAMULib/Weaver-UI-Core>

More uniformity within code

- Larger open-source community behind Spring
- Easy to extend
- Easy to ramp up new developers



# Vireo 4 Development Process

---

2-week sprint cycles:

Monday	Tuesday	Wednesday	Thursday	Friday
			Sprint Planning	Development
Development	Development	Development	Development	Development
Development	Merging Code	Demo	Sprint Planning	Development

TDL JIRA

- <https://jira.tdl.org>

Vireo GitHub

- <https://github.com/TexasDigitalLibrary/Vireo>

# Jira Backlog

**Texas Digital Library** Dashboards Projects Issues Tempo Capture Boards Tests Git **Create** Search

Vireo  
**Backlog**

QUICK FILTERS: Only My Issues Recently Updated

**EPICS**

- All issues
- Defaults System Loading
- Implement Application Settings
- Create End-To-End validation
- Organization/Workflow
- Admin Submission Action Log Tab
- Admin Submission List Tab
- Admin Submission Item Tab
- Student Submission
- Admin System Tab
- Dynamic Exporters/Depositors
- Vireo 3 Upgrade Tool
- Re-Write Vireo 3 as a Spring Boot + AngularJS Application -- Vireo 4
- Implement Features from old epic into Vireo 4 re-write
- Future Improvements

**Sprint 11 - 05-25-16** 5 issues

Start Sprint

- VIR-176 Edit Workflow Steps Panel 4.x Organization/Workfl... 1
- VIR-142 As a Manager, I want to add, remove, and configure the fields on each Workflow Step 4.x Organization/Workfl... 13
- VIR-214 Organization triptych doesn't show the first created organization unless you refresh the browser page 4.x Organization/Workfl... 1
- VIR-199 AngularJS Front-End field validation 4.x Create End-To-End... 3
- VIR-203 Front-End Cosmetics when receiving error/info/warning from API response 4.x Create End-To-End... 5

+ Create Issue

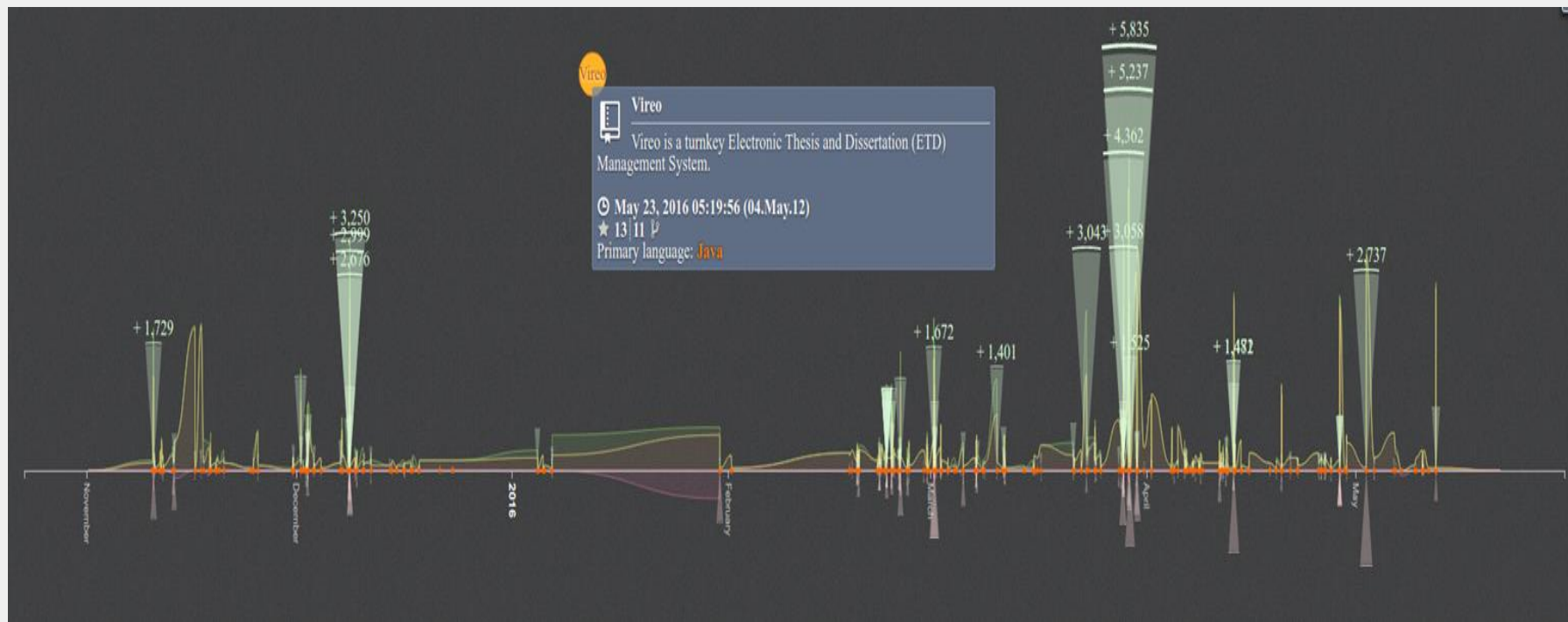
5 issues Estimate 31

**Backlog** 58 issues

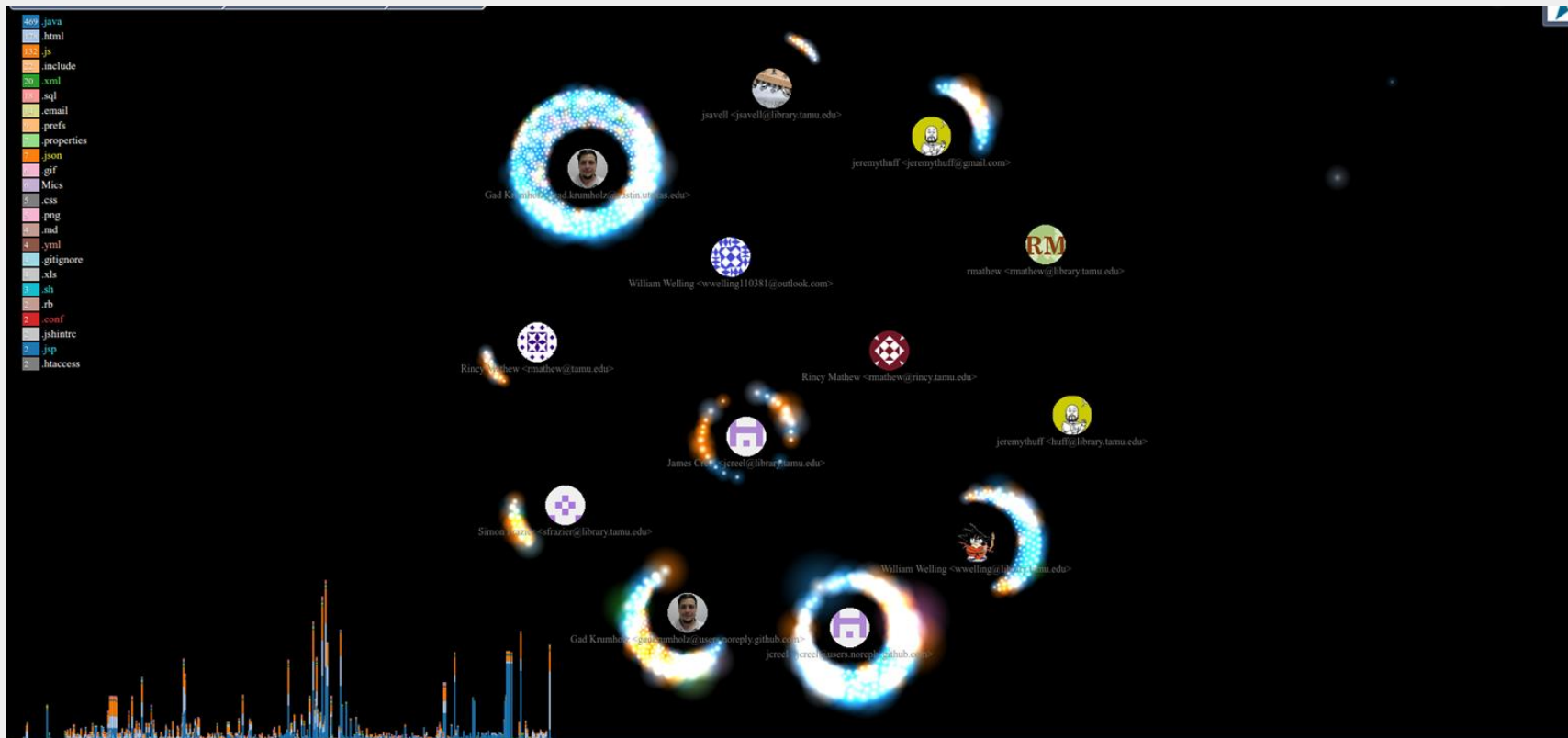
Create Sprint

- VIR-178 Make sure that custom email templates and custom embargos don't get overridden by the default system loader 4.x Defaults System Loa... S
- VIR-198 Email Workflow Rules settings per organization 4.x Organization/Workfl...
- VIR-130 Committee Members 4.x Implement Applicat...
- VIR-110 Implement Administrator System Page 4.x Admin System Tab 3
- VIR-112 Create a Vireo3 to Vireo4 migration tool/upgrader/installer 4.x Vireo 3 Upgrade Tool
- VIR-170 As a User, I want the CSS dynamically populated via WRO so that I can enjoy the custom theming and branding. 4.x Re-Write Vireo 3 as ... 3
- VIR-143 Filter Options Sidebar Module 4.x Admin Submission L... 3
- VIR-144 Further Filter By Sidebar Module 4.x Admin Submission L... 4
- VIR-145 Now Filtering By Sidebar Module 4.x Admin Submission L... 2
- VIR-146 Advanced Features Sidebar Module 4.x Admin Submission L... 4
- VIR-147 List ETDs 4.x Admin Submission L... 3
- VIR-148 Active Document Sidebar Module 4.x Admin Submission It... 3
- VIR-149 Submission Status Sidebar Module 4.x Admin Submission It... 2
- VIR-150 Custom Actions Sidebar Module 4.x Admin Submission It... 2
- VIR-151 Personal/Document/Degree Info Tabs 4.x Admin Submission It... 2

# Git history for Vireo 4.0.x since Nov 2015



# Git commits for Vireo 4.0.x since Nov 2015



---

## 3. Foundations for Vireo 4

# Vireo 3 vs Vireo 4 Organizations/Workflows/Fields

	Vireo 3	Vireo 4
<b>Organizations</b>	Static organizations: College, Degree, Department, Major, Program, Administrative Group	Dynamic organizations: <i>Will be pre-configured to have the same organizations as Vireo 3 all inheriting their workflow and steps from the top-level Institution Organization</i>
<b>Workflow Steps</b>	One static workflow for all with 4 steps	One dynamic workflow for all and/or one dynamic workflow for each organization: <i>Will be pre-configured to have the same workflow steps as Vireo 3 in the top-level Institution Organization</i>
<b>Fields</b>	One static list of fields for each of the 4 static workflow steps	Dynamic list of fields per each dynamic workflow step for the whole institution and/or for each organization: <i>Will be pre-configured to have the same fields as Vireo 3 in the top-level Institution Organization's workflow</i>

# Vireo 3 vs Vireo 4 Field Profiles

---

Vireo 3 field profile properties	Vireo 4 field profile properties
<ul style="list-style-type: none"><li>• Enabled/Disabled</li><li>• Optional/Required</li><li>• Display Label</li><li>• Help Text</li></ul>	<ul style="list-style-type: none"><li>• Enabled/Disabled</li><li>• Optional/Required</li><li>• Field Gloss(es)</li><li>• Help Text</li><li>• Usage</li><li>• Predicate</li><li>• InputType</li><li>• Repeatable</li><li>• Controlled Vocabulary(ies)</li></ul>

# Organizations in Vireo 3

Available Colleges

AVAILABLE COLLEGES

Remove all colleges

Alphabetize all colleges

Name	Emails	Action
College of Information	COI@unt.edu	Edit
College of Engineering	kristipark@yahoo.com, kayellipark@gmail.com	Edit
College of Fine Arts	123fakest@shsu.edu, 1234notreal@shsu.edu	Edit
College of Law		Edit
College of Liberal Arts	rsteans@gmail.com	Edit
College of Medicine		Edit
School of Business		Edit
School of Information		Edit
School of Medicine	masweene@utmb.edu	Edit
ANM Young School of Music	anmyoungsom@uh.edu	Edit
Hilton College	dwolf-taylor@uh.edu, threecatdawn@esoce.com	Edit
College of Natural Sciences		Edit
School of Social Work		Edit

[ADD NEW]

[BULK ADD]

Available Programs

Available Departments

Available Administrative Groups

Available Majors

Available Degrees

AVAILABLE DEGREES

Remove all degrees

Sort degrees

1. Ph.D. (DOCTORAL)

2. Masters of Clinical Psychology (MASTERS)

3. Doctor of Education (Ed.D.) (DOCTORAL)

4. Master of Arts (MA) (MASTERS)

5. Doctor of Medicine (DOCTORAL)

6. Master of Business Administration (MBA) (MASTERS)

7. Master of Science (MS) (MASTERS)

8. Honors Undergraduate (BS) (UNDERGRADUATE)

9. Master of Eating (ME) (MASTERS)

Remove items by dragging them to the trash can

This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

16



# Organizations Triptych in Vireo 4

## ORGANIZATIONS AND WORKFLOWS

Vireo Institution / College One (College)  
/ Department One (Department) ↓

Major

Major One ⓘ

Degree

Degree One ⓘ

Program

Program One

⚙️ [MANAGE ORGANIZATION](#) 📅 [MANAGE WORKFLOW](#) ✉️ [EMAIL WORKFLOW RULES](#)

### Manage Program One

Name

Program One

Category

Program ▼

Cancel

Save

# Workflow and Fields in Vireo 3

## SUBMISSION SETTINGS

Customize the student submission forms using the form below by expanding each page and specific fields. There are a set of predefined fields for each page which you may configure along with the helpful sticky notes shown on the list pages.

Page 1) Verify Personal Information

Fields (expand all)

Reset fields

First Name \*

Middle Name

Last Name \*

Email \*

ORCID author identifier

Birth Year

Grantor

College \*

Program \*

Department \*

Degree \*

Major

Permanent Phone \*

Permanent Address \*

Permanent Email \*

Current Phone

Current Address

Usage:

The mailing address where the author is reachable. This field may be configured to be locked if supplied by the authentication plugin.

Enabled:

Disabled

Optional

Required

Display Label:

Current Address

Help Text:

Enter an address where you can be reached.

close

Sticky Notes

Reset sticky notes

Your name should appear as it does on your title page. You can use Unicode characters, if your computer supports them.

Select the degree and major that are listed on your title page.


You must enter a permanent, long-term address. If your present address is different, use the Current Address field.

Add stick note


Page 2) License

Page 3) Document Information

Page 4) Upload Files



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

 18

# Workflows and Fields in Vireo 4 (wip)

MANAGE ORGANIZATIONMANAGE WORKFLOWEMAIL WORKFLOW RULES

Manage Department One Workflow

Add Workflow Step

VERIFY PERSONAL INFORMATION

Workflow Step is Overridable:

YesNo

Workflow Step Name:

Verify Personal Informa

'My Workflow Step's name'

Add Field Profile

1. firstName

2. middleName

3. lastName

4. email

5. orcidId

6. birthYear

7. school

8. college

9. program

10. department

11. degree

12. major

13. permanentPhone

14. permanentAddress

15. permanentEmail

16. currentPhone

17. currentAddress

LICENSE AGREEMENT

DOCUMENT INFORMATION

# Controlled Vocabulary in Vireo 4

## Preparing CSV Uploads Vocabulary

ORG  
PRO  
SUB  
CUS  
DEP  
WH  
LOC  
EMA

### Upload Controlled Vocabulary

Upload to:  
test

Browse test.csv

Updating Vocabulary Words

Word	Definition	Identifier
dsfgsd	fdgh → fdhg	dghdfrgh

Export CSV Cancel Confirm Upload

Sort Controlled Vocabulary by name

1. guarantor
2. type
3. test

Upload Controlled Vocabulary

Remove Items by dragging them to trash can

Begin import by dropping csv into drop zone

# Flexible Exports (wip)

---

ProQuest zip file

SWORD DSpace Deposit

MARC Export

DSpace REST API Deposit

---

## 4. Current Status

# Current Development Team

---

2 Developers from Texas A&M (rotating)

1 Developer from TDL (Gad)

1 Product Owner (Stephanie)

Project Management support from Texas A&M and TDL (Doug & Ryan)

# Development Underway

---

1. Began in late September, 2015
2. A few breaks to work on other responsibilities at Texas A&M and TDL
3. Began public demo's in Spring 2016
4. Current deadline is for August 2016



# Coding and infrastructure challenges

---

Complexity of Vireo 4 Development greater than originally estimated

Many consequences of breaking up “single workflow” vision for Vireo

- Ex: Dynamic and Customizable Metadata per field
- Ex: Dynamic and Customizable Exports from Vireo

Undergoing review of remaining points, application of resources

# Remaining Work

---

1. Complete Beta Coding
2. Testing of application - You can help! (Contact Stephanie or Ryan)
3. Develop Upgrade Application
4. Roll-Out, Outreach and Training

# Contacts

---

**Ryan Steans**

[rsteans@austin.utexas.edu](mailto:rsteans@austin.utexas.edu)

**Stephanie Larrison**

[larrison@txstate.edu](mailto:larrison@txstate.edu)