

Standardized Administration Tools Web Application

Presented by: Daniel Allen

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CSCF (Computer Science)



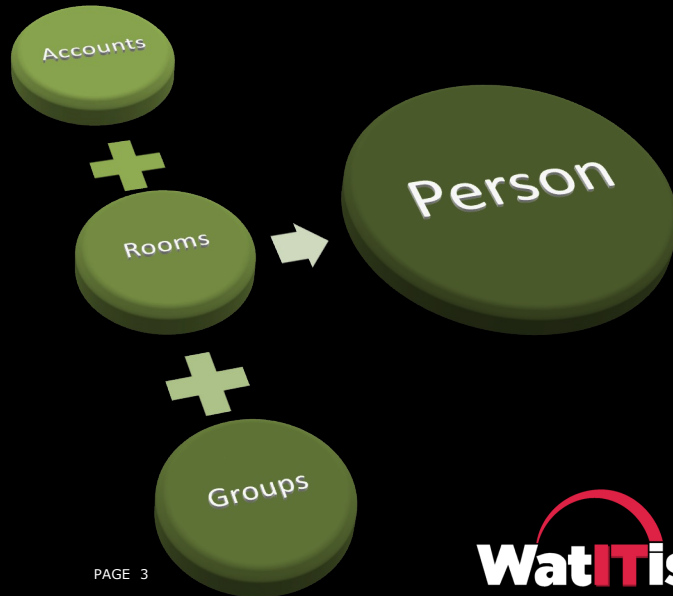
In this talk

- Why SAT?
- App tour (What's SAT?)
- Roadmap for the future

This has three parts.

Why?

- In the School of Computer Science
- Long-standing support need for
 - *integrated*
 - *"people"-related*
 - *administrative data*



Standardized Administration Tools (SAT) Web Application

PAGE 3

WatITis

Long-standing = We've been looking at this problem for over a decade. It took until 2018 to have the resources to commit.

Looking at this diagram, you'll see some of the people-related administrative data we are integrating.

Why? SAT Goals

- Improve clients' experience of computing support
- Improve onboarding and offboarding processes
- Connect useful data from multiple sources

Why? Example one

- Improving computing support in Computer Science
- *"What do we know about this person who just showed up at my door?"*
 - 97 regular faculty; also 34 lecturers, 66 adjunct and cross-appointed professors
 - Dozens of visiting scholars, post-docs, ...
 - 64 full-time support staff
 - 400 graduate students
 - 4000 undergraduate students

Why? Example two

- Onboarding 100+ incoming grad students every Fall
 - Requires an admin identifying free offices and desks to allocate
 - CSCF staff coordinate their computing needs
 - Laptops
 - specialized computing environments according to supervisor / research group

Onboarding data flows

- One CS person handles staff and faculty HR (in Workday database)
- A Graduate office handles CS graduate onboarding (their own database)
- One CS person handles assigning desks (in a separate spreadsheet)
- A group (in CSCF) deploys computers onto desks (from emailed spreadsheet)

Let's talk about onboarding for a bit. CS has an admin person responsible for HR and workday data, relating to all employees.

We have an office which handles graduate onboarding and data.

We have one admin person responsible for assigning offices and desks, including faculty, staff, and grad students. And a group of technical staff deploys computers onto desks for all incoming people in CS.

Onboarding- All of these involve duplicate and possibly stale data :(

- One CS person handles staff and faculty HR (in **Workday database**)
- A Graduate office handles CS graduate onboarding (**their own database**)
- One CS person handles assigning desks (**in a separate spreadsheet**)
- A group (in CSCF) deploys computers onto desks (**from emailed spreadsheet**)

New onboarding process

- One CS person handles staff and faculty HR (Workday is authoritative)
- A Graduate office handles CS graduate onboarding (their database is authoritative)
- One CS person handles assigning desks (into SAT database)
- A group (in CSCF) deploys computers onto desks (from grad and SAT databases)

Now that SAT is deployed, we have the authoritative information more easily accessed within a web application and reduced redundancy.

SAT database

- Is driven by odyssey.uwaterloo.ca
- SAT additions by Isaac Morland and Daniel Allen
- Odyssey has access to Quest and WatIAM data, among other sources

... SAT database is built upon odyssey.uwaterloo.ca, which is an ongoing project chiefly by my colleague Isaac. ... We have added some data ... and have connected the app to odyssey's Quest and WatIAM data feeds.

A note about grouper

- We investigated *grouper.private.uwaterloo.ca* for access control and group definitions.
- Many common features: data from HR, Quest class data, group memberships
- Many disjoint requirements: data models for rooms and desks, our "sponsorships"
- We didn't want to try and force this app into grouper
- Happy to keep looking at grouper for possible future integration

... ... Disjoint requirements: courses need course instructors and coordinators; odyssey has both; we have discussed adding those to grouper

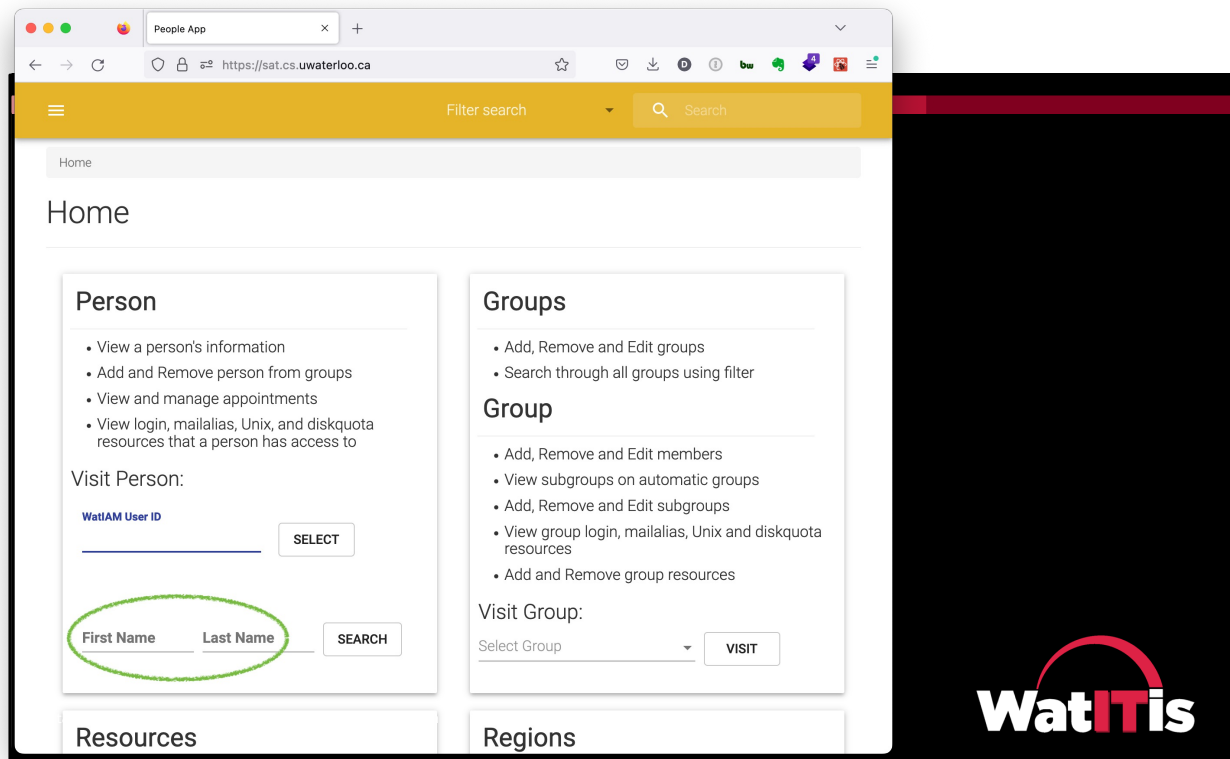
Unclear how rooms and desks would fit into grouper.

Unclear how we would fit our current definitions for "sponsorship" of account privileges.

App Tour

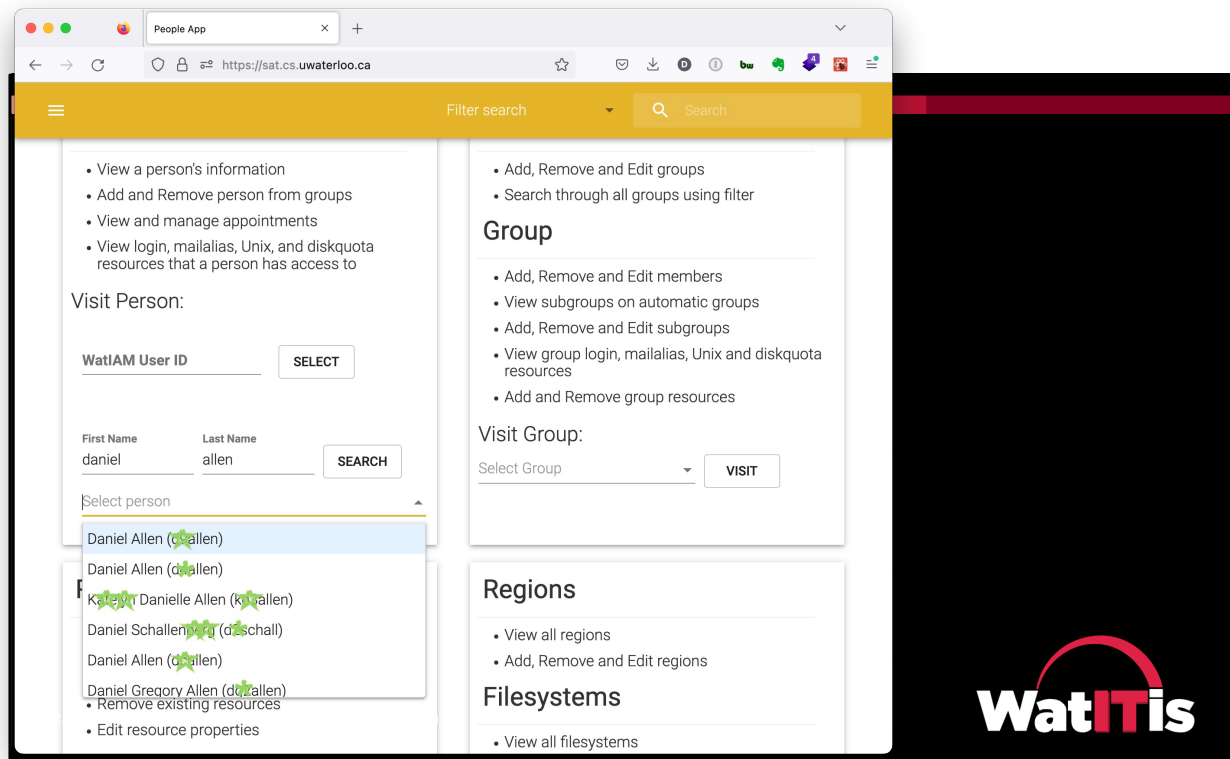
- Built on React and Flask
- Developed with a series of co-ops over the last five years
 - 10 or so work terms
- User-centered development
 - Three administrative areas within Computer Science plus discussions with admins in other areas outside CS

... OK, let's look at the app, to discuss both of the examples I mentioned earlier.



This tour is not a live demo, for security and recording reasons

- front page wizard for the most frequently used areas
- let's look at the common use-case of "what can I learn about someone?"



I have typed in my own name. The search results include all current and past watiam identities, with wildcards. I pick one and we then go to...

The screenshot shows the 'People App' interface for Daniel Allen. The browser address bar displays the URL `https://sat.cs.uwaterloo.ca/person?person_id=3005`. The app's navigation bar is orange with a 'Filter search' dropdown and a search input field. Below the navigation bar, there are tabs for 'INFO', 'ROOMS', 'GROUPS', 'APPOINTMENTS', and 'RESOURCES'. The 'INFO' tab is selected, showing the name 'Daniel Allen' and a 'TAB VIEW' button. The profile information is organized into two columns. The left column contains details such as Organization Units, User ID, UW ID, HR ID, Email, Phone, and creation/activation dates. The right column contains information about expiration, authority, graduate supervisors, program, expected graduation term, completion term, research subscriptions, inventory, and service tickets. A 'University of Waterloo' crest is displayed on the right side of the profile. Below the profile information, there is a section titled 'Rooms' with a sub-header 'Assigned room and desk'. This section contains a table with columns for Room, Desk, and Dates, showing an assignment for room DC2621, desk 1, from 2022-04-25 onwards, with an 'EDIT' button next to it.

People App -- Daniel Allen

Filter search

Search

INFO ROOMS GROUPS APPOINTMENTS RESOURCES

Daniel Allen

TAB VIEW

Organization Units: People, Academic, Math, Computer science, Users
 User ID: drallen
 UW ID / Student ID: 3242
 HR ID: 15
 Email: drallen@connect.uwaterloo.ca
 Phone: 519-888-4567 x35448
 Created: 2016-01-06
 Activated: 2005-01-04

Expires: N/A
 Authority: Human Resources
 Graduate Supervisors (effective): N/A
 Program (effective): Science Non Degree/PD (2009-12-31)
 Expected Graduating Term: N/A
 Completion Term: N/A
 Research Subscriptions: [Profile](#)
 Inventory: [drallen](#)
 Service Tickets: [RT](#)

University of Waterloo

Rooms

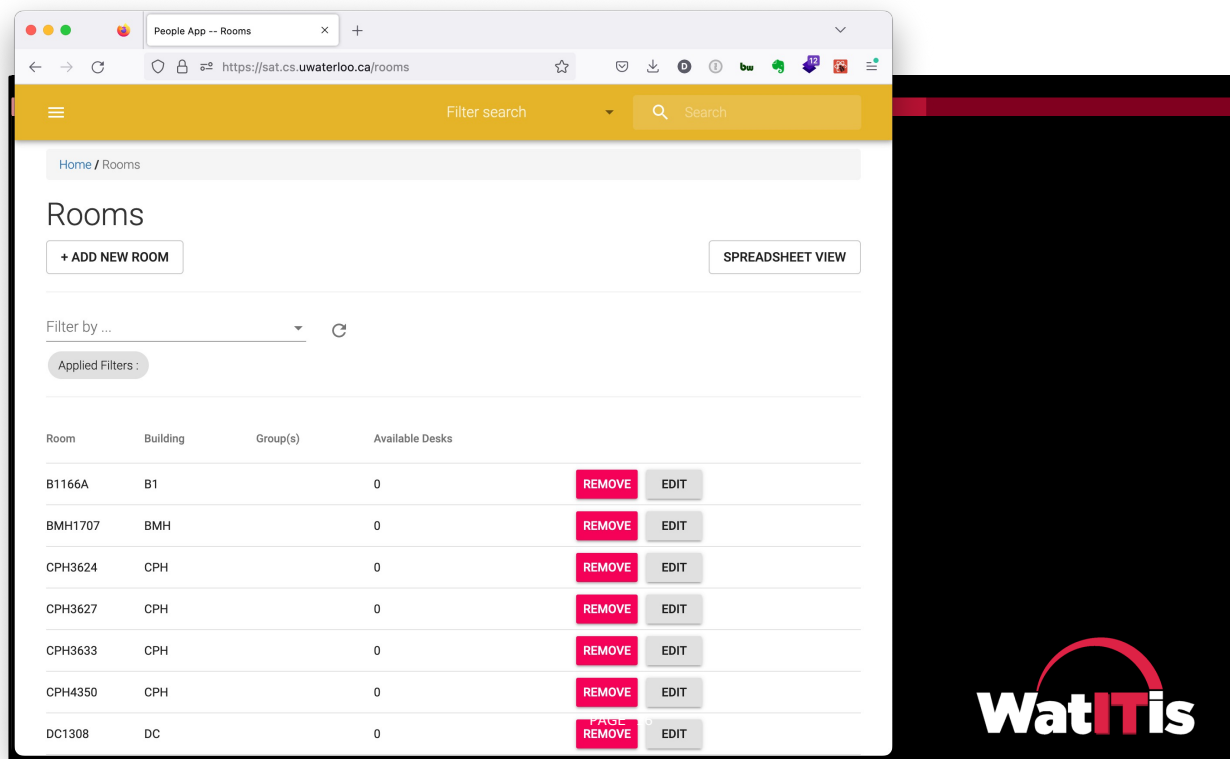
Assigned room and desk

Room	Desk	Dates
DC2621	1	2022-04-25 -

EDIT

WatITis

The user view, which includes a variety of requested available data from watiam and quest. If I were a student, where the UW crest is, you'd see my watiam photo. If I were a grad student, it would have my supervisor history. If I had completed my degree, that would be visible. We can jump from this page to other systems looking up this person. ... And lastly, rooms and desks are SAT data, which I'll describe on the next few slides.



We built the rooms pages to meet the needs of the admin staff person who handles all room and desk allocations across computer science.

Let's take the example of needing to find an available desk for a visiting post-doc who is coming next Fall. Here we see some rooms, and if I click to re-sort by Available Desks...

The screenshot shows a web application interface for managing rooms. The page title is "Rooms". There is a "+ ADD NEW ROOM" button and a "SPREADSHEET VIEW" button. A "Filter by ..." dropdown is present, with "Applied Filters:" below it. The main table has the following columns: Room, Building, Group(s), and Available Desks. The "Available Desks" column is circled in green. The table lists the following rooms:

Room	Building	Group(s)	Available Desks	REMOVE	EDIT
DC2115	DC		2	REMOVE	EDIT
B1166A	B1		0	REMOVE	EDIT
BMH1707	BMH		0	REMOVE	EDIT
CPH3624	CPH		0	REMOVE	EDIT
CPH3627	CPH		0	REMOVE	EDIT
CPH3633	CPH		0	REMOVE	EDIT
CPH4350	CPH		0	REMOVE	EDIT

You'll see the desks that are currently empty.

A useful feature is being able to filter at any particular date, such as next Fall, to plan for future availability.

When this is fully in operation, the "Groups" column can identify particular labs or researchers who should be clustered together, and you can search by those as well.

The "Spreadsheet View" gives additional information...

People App -- Spreadsheet View

https://sat.cs.uwaterloo.ca/spreadsheet-view

Filter search

Search

Room and Desk Spreadsheet View

ROOMS VIEW

Filter by ...

Applied Filters:

Desks +

Download CSV Download XLSX

Room	Building	Groups	Desk	Current Occupant	Occupied Start	Occupied End	Desk Note
B1166A	B1		1	Andrew K. (m)	2022-04-25	N/A	UPDATE OCCUPANT
BMH1707	BMH		1	James R. (m)	2022-04-25	N/A	UPDATE OCCUPANT
CPH3624	CPH		1	Matt S. (m)	2022-04-25	N/A	UPDATE OCCUPANT
CPH3627	CPH		1	Oliver S. (m)	2022-04-25	N/A	UPDATE OCCUPANT
CPH3633	CPH		1	Nathan S. (m)	2022-04-25	N/A	UPDATE OCCUPANT

WatITis

To display all desks and their occupants if any. This view is designed to be helpful for batch onboarding. Let's try and update one desk, by clicking on Update Occupant...

People App -- B1166A, Desk 1

Filter search Search

RT# Comments

CLEAR COMMENTS X

B1166A Desk 1

WatIAM User ID SELECT

First Name Last Name SEARCH

Start Date 2022-12-01 End Date +

Associated Groups: None

Occupant Dates

Andrew 2022-04-25 - EDIT

WatITis

And you can pick a new occupant for this desk, with a start date of now, or any date in the future such as Fall 2023.

The green arrow at the top points to a comment feature- any update to the system can have optional tickets and comments which are available and searchable within the app.

Noting the start and end dates, I'd like to show you another feature...

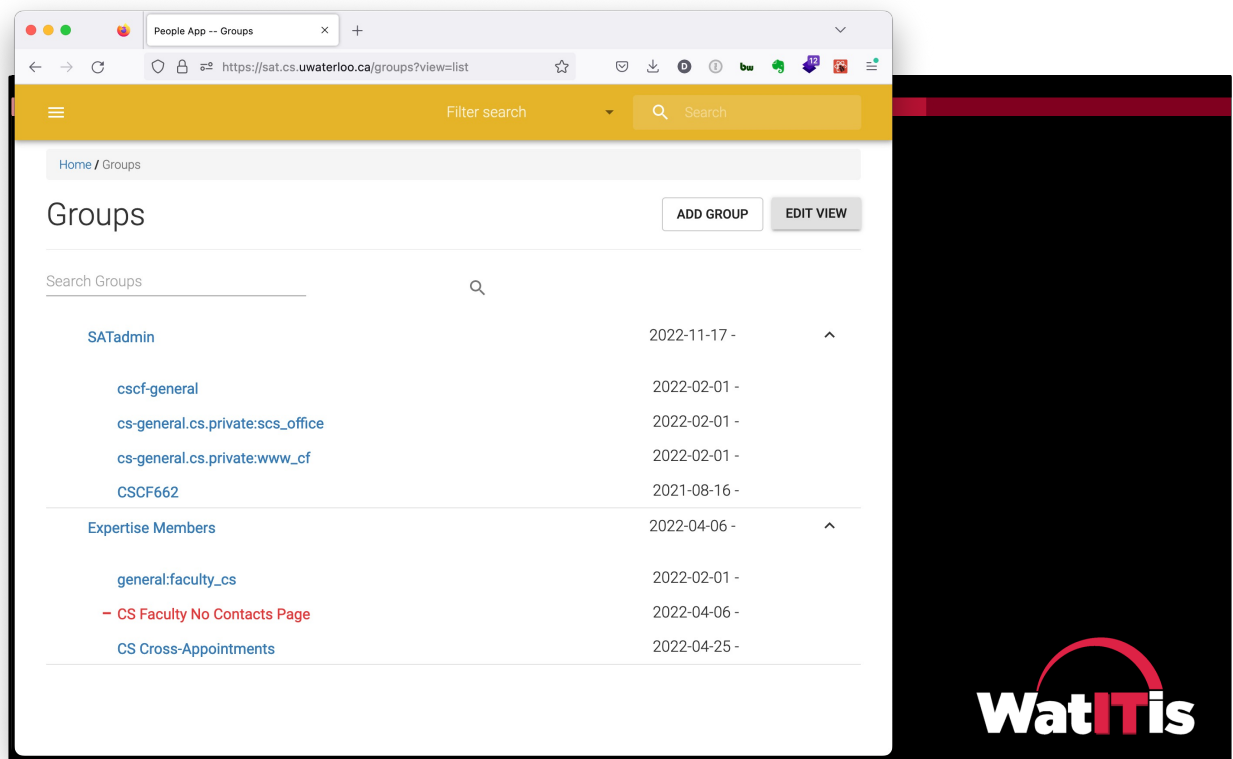
Date auto-completion

Start Date	End Date
S2023	S2023
2023-05-01	2023-08-31

Throughout the app, the date-pickers are UW Term aware. If you type "S2023" into the start-date and hit return, it returns the first day in the term, and if you type it into the end-date, it returns the last day in the term. It also works with UW term IDs like 1129.

This idea came out of discussion with one of our co-op employees, and it took a lot of effort to get it right.

OK. We've covered a lot of ground here, and I'd like to show you just one more thing.



Groups are very flexible, and similar to grouper if you are familiar.

Groups can be manually updated, or can be automatically updated and depend on other groups, as addition or subtraction.

Here we see a tree view of two sets of groups. The first set, SAT Admin, is composed of the groups who have access to the SAT application. The second set, Expertise Members, depend on the members of three groups, and one of them is subtracted. And groups can nest with many levels, and using active start and end dates, the group dependencies can automatically expire when no longer needed.

People App -- cscf-general

[←](#)
[→](#)
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[https://sat.cs.uwaterloo.ca/group?id=203119](#)

Filter search

Search

cscf-general

Description: CS General access

Active: 2022-02-01 -

Maintainer: Manual

CREATE AUTOMATIC VER.

DEACTIVATE GROUP

EDIT GROUP

Date as of

YYYY-MM-DD

📅

🔍

Groups That Depend on cscf-general






































































+ ADD THIS GROUP AS SUBGROUP

Name	Description	Group Active	Subgroup Active	Source	Direct Subgroup	Edit
SATadmin	SAT Administrative users	2022-11-17 -	2022-11-17 -	Automatic	CSCF662 cs-general.cs.private:scs_office cs-general.cs.private:www_cf cscf-general	REMOVE

Members:

EDIT EXISTING MEMBER

+ ADD NEW MEMBER

User ID	Full Name	Associated Group/s	Active Date	
	                     	cscf-general SATadmin	2022-11-17 -	REMOVE
	                     	cscf-general SATadmin	2022-11-17 -	REMOVE
	                     	cscf-general SATadmin	2022-11-17 -	REMOVE



Here we see the components of a group, laying out what depends on this group, what this group might depend on, members, and date ranges.

We think these will make our administrative work much more flexible and automated, as we figure out what we can control with these groups.

OK. That completes the tour of just some of the features that fulfil our user requirements.

Roadmap

- Fall 2022: first deployment ✓
- Winter 2023: testing, finish integration with CS “accounts sponsorship” system
 - Hopefully including rest of Math Faculty's accounts sponsorship system
- Spring 2023: refine automatically loaded groups
 - Hopefully including automatically loaded Workday details to support automatic access rights
- Spring 2023+: revise privileges models
 - Currently, access controlled by group memberships
 - Currently, one level of app privileges and access to all data.
 - Goal: restricted per-department access, broaden number of departments

Standardized Administration Tools (SAT) Web Application

PAGE 23



... So, as of this term, we have deployed the app for initial use by selected CS Admin staff, and will be gathering feedback on the many required improvements.

... Next term will include finishing integration with our "accounts sponsorship" system, which is tricky to describe but a very annoying text-based privilege system we want to deprecate, and it's used in both CSCF and MFCF so perhaps we can solve it for the whole faculty of Math.

... The following term, we'd like to integrate groups contained in workday. And we want to revamp privileges. Currently...

Wrap-up

- Various people-related data
 - Including groups, accounts, rooms and desks – and other areas I didn't cover!
- Built to meet administrative users' needs
 - From user discussions within CSCF, admin groups in Computer Science and Math faculty, and other faculties
- Future improvements include using Workday to support access restrictions
 - To accommodate administrative use by different areas on campus

To summarize what we've been though in this talk ... we have built this app to include various people-related data, ... in a user-centered development environment to meet our user's needs, and also discussing with administrators in other faculties. ... Lastly, we foresee this being more useful once we build in multiple levels of data access, and hope to accommodate use by different areas of campus.

Any questions?

Daniel Allen

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