

Designing and Evaluating Community-Based In-Application Help for Feature-Rich Software

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about me



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HOME VITA RESEARCH GROUP PUBLICATIONS TEACHING

Human-Computer Interaction

Computing Science, Simon Fraser University



Parmit Chilana

Students



Nathaniel Hudson



Laton Vermette



Anson Ho



We specialize in Human-Computer Interaction (HCI) and tackle challenging problems in understanding, designing, and engineering technologies that are social, usable, and interactive.

In addition to Computing Science, we welcome students from a variety of backgrounds, including Engineering, Design, Arts, Business, Psychology, among others.

Lowering the Barriers to Learning and Using Complex Software

Millions of end users struggle to learn how to use and configure software to meet their needs, but most forms of software help are simply not helpful. We study users' interactions with software help and learning resources and invent new systems and techniques for users to locate relevant information from the web and from other users.



today's lecture

overview and example of HCI research in our lab
potential research opportunities for undergrads
beyond CMPT 363: what would you like to see?

inventing novel software help and learning tools



UIST'15



AnswerDash
Answers where your customers need them.

understanding different contexts of help-seeking and learning

facebook

```
public class Example {  
    public static void main(String [] args){  
        System.out.println("Hello world!");  
    }  
}
```

CHI' 16



Microsoft

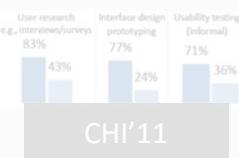
AUTODESK



understanding human and collaborative aspects of designing software



CHI'11

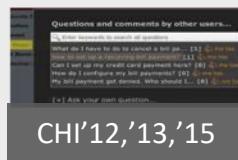


CHI'12



CHI'10

inventing novel software help and learning tools



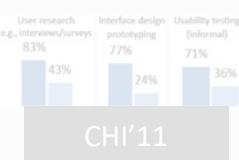
understanding different contexts of help-seeking and learning



understanding human and collaborative aspects of designing software



CHI'11



CHI'11



CHI'12



CHI'10



Online Banking

Help · Sign Off

How do I set up a recurring bill payment?

Accounts Overview

Transfers

Interest

Bill Payer

Text Banking

Customer Service

Merchant Directory

To set-up Bill Payer, add a merchant from the Merchant Directory.

Search

To add a merchant to your Merchant Listing follow these steps.

1. Start by gathering the address used to mail your payment and your account number with the merchant.
2. Enter at least 3 characters of the merchant name in the field provided and click on the Search button.
3. Review the merchant name and address fields to find the correct merchant, and then click on the appropriate merchant name.
4. Enter your account number with that merchant as it appears on your statement, then click the submit request button. The new merchant will be available for payment processing in one business day.



Online Banking

Locations • Mail • Help • [Sign Off](#)

45% will abandon an online interaction if their questions or concerns are not addressed quickly (Forrester '13)

71% expect some assistance within 5 minutes (eConsultancy '13)

1. Start by gathering the address used to mail your payment and your account number with the merchant.
2. Enter at least 3 characters of the merchant name in the field provided and click on the Search button.
3. Review the merchant name and address fields to find the correct merchant, and then click on the appropriate merchant name.
4. Enter your account number with that merchant as it appears on your statement, then click the submit request button. The new merchant will be available for payment processing in one business day.

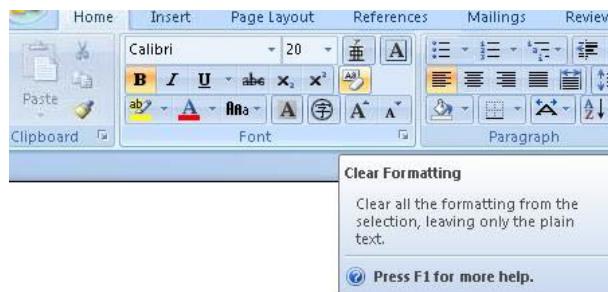
About Apple Guide

Show Balloons

Macintosh Tutorial

Macintosh Guide ⌘?

Shortcuts



Contents | Index | Search |

Printing

- Basic printing tasks**
 - Printing overview**
 - Connect to a printer on a network
 - Search for a file or folder
 - Print a document
 - View documents waiting to print
 - Cancel printing a document
 - Fix a printing problem
- Appearance of the printed page
- Print jobs: pausing, resuming, restarting
- Private printers: installing, sharing, configuring
- Network printers: installing, sharing, configuring



Groups

POST A QUESTION

Topics

Topics

Google Product Forums › Google Calendar 119

Showing 133 of 86384 topics

Colors - Summary of the color issues By Jeff Vader 124 posts - 644 views - updated Apr 30 (6 days ago)	+ 36 others
Give us your feedback on the new Google Calendar Look! By Alice PB&J 560 posts - 1447 views - updated Apr 28 (8 days ago) Answered	+ 421 others
Gentle reminders lab By Charlie 65 posts - 300 views - updated Apr 6	+ 31 others
Color code your individual events! By Adrienne 130 posts - 1200 views - updated Apr 3 Answered	+ 109 others
Labs in Calendar - try a new feature today! By Charlie 101 posts - 207 views - updated Mar 16	+ 86 others
World clock Lab By Charlie 133 posts - 258 views - updated Mar 14	+ 105 others
Event flair lab By Charlie 359 posts - 879 views - updated Mar 8	+ 297 others

bank of america

bank of america routing number

bank of america customer service

bank of america login

Bank of America® | bankofamerica.com
www.bankofamerica.com/
Apply for a Credit Card, Home Loans or Invest with Merrill Edge Online
509 people +1'd this page

Checking Invest with Merrill Edge
Home Loans Savings
Credit Card Sign In

Bank of America | Home | Personal
https://www.bankofamerica.com/
Welcome to Bank of America, the nation's leading financial institution and home for all of your personal financial needs. + Show stock quote for BAC

Online Banking
Online Banking from Bank of America lets you manage your ...
Careers
Main page of the careers site. From this page you can listen to ...
Contact Us
Contact Bank of America customer service any time, day or night ...
Auto Loans
With Bank of America auto loans, you'll get fast online decisions ...

search for help

The screenshot shows a search interface with the query "bank of america" entered into the search bar. Below the search bar is a dropdown menu with suggestions: "bank of america", "bank of america routing number", "bank of america customer service", and "bank of america login". The main search results area contains an advertisement for Bank of America, followed by links to the bank's website and various services like Online Banking, Careers, Contact Us, Locations, and Auto Loans. To the right of the search results is a map titled "Map for bank of america" showing the Seattle area with red dots indicating locations.

Search

bank of america

bank of america

bank of america routing number

bank of america customer service

bank of america login

Everything

Images

Maps

Videos

News

Shopping

More

Seattle, WA
Change location

Any time

Past hour

Past 24 hours

Past 2 days

Past week

Past month

Past year

Custom range...

More search tools

[Bank of America® | bankofamerica.com](#)
www.bankofamerica.com/
Apply for a Credit Card, Home Loans or Invest with Merrill Edge Online
509 people +1'd this page

Checking Invest with Merrill Edge
Home Loans Savings
Credit Card Sign In

[Bank of America | Home | Personal](#)
https://www.bankofamerica.com/
Welcome to Bank of America, the nation's leading financial institution and home for all of your personal financial needs. + Show stock quote for BAC

[Online Banking](#)
Online Banking from Bank of America lets you manage your ...

[Careers](#)
Main page of the careers site. From this page you can listen to ...

[Sign In to](#)
Sign In to Bank of America Online Banking. ... For your safety and ...

[Contact Us](#)
Contact Bank of America customer service any time, day or night ...

[Locations](#)
Search Bank of America Branches and ATMs. Printable Version ...

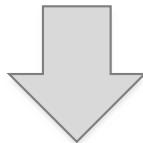
[Auto Loans](#)
With Bank of America auto loans, you'll get fast online decisions ...

[Places for bank of america near Seattle, WA](#)

[Bank of America](#)

Map for bank of america

Map data ©2012 Google, San

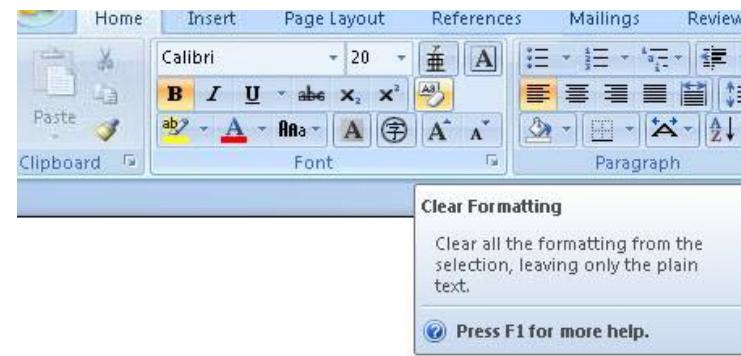


difficult to formulate queries and infer relevance of results...

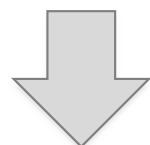
contextual help



“Balloon Help”

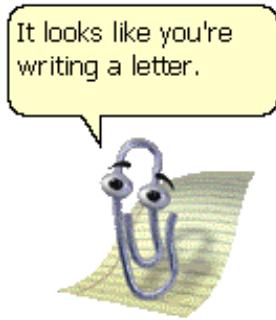


Tooltips

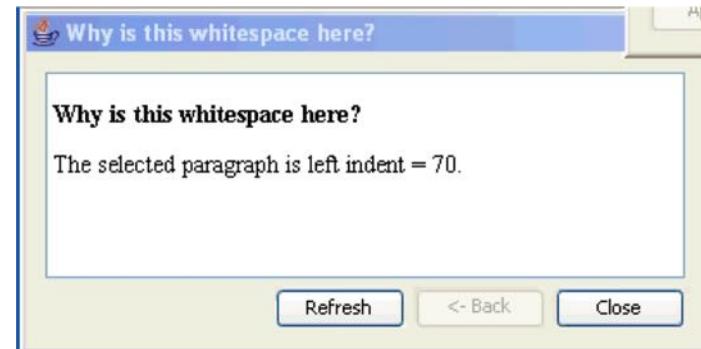


help is authored at **design-time** additional questions arise **during application-use**

adaptive and automatic help

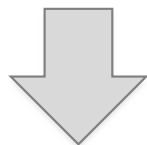


“Clippy”



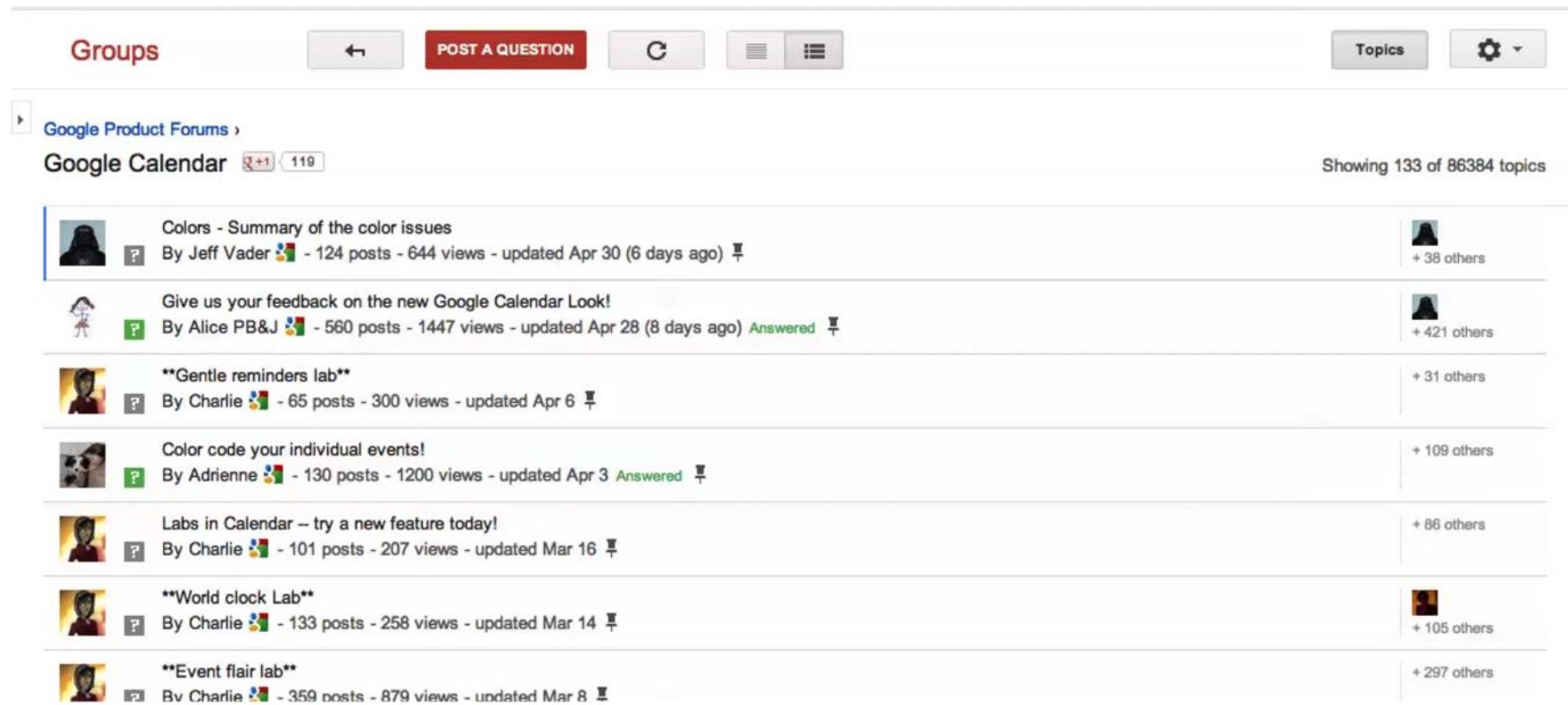
Crystal

Myers, Weitzman, Ko & Chau (2006)



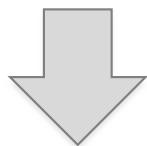
help is tied to the underlying **source code** and can address a **limited** class of questions

forums and Q&A sites



The screenshot shows a forum interface for 'Google Product Forums'. The top navigation bar includes 'Groups', 'POST A QUESTION' (in red), and various search and filter icons. Below the navigation is a breadcrumb trail: 'Google Product Forums > Google Calendar'. The main content area displays a list of 119 topics under the heading 'Google Calendar'. Each topic entry includes a user profile picture, the topic title, the poster's name, the number of posts, views, and the last update date. To the right of each entry is a small icon indicating the number of other users who have viewed or interacted with the post. The total count of 133 topics is shown at the top right.

Topic Title	Poster	Posts	Views	Last Update	Interactions
Colors - Summary of the color issues	Jeff Vader	124	644	Apr 30 (6 days ago)	+ 38 others
Give us your feedback on the new Google Calendar Look!	Alice PB&J	560	1447	Apr 28 (8 days ago)	Answered + 421 others
Gentle reminders lab	Charlie	65	300	Apr 6	+ 31 others
Color code your individual events!	Adrienne	130	1200	Apr 3	Answered + 109 others
Labs in Calendar – try a new feature today!	Charlie	101	207	Mar 16	+ 86 others
World clock Lab	Charlie	133	258	Mar 14	+ 105 others
Event flair lab	Charlie	359	879	Mar 8	+ 297 others



help is disconnected from the application, difficult to navigate and search through...

vocabulary problem...

users employ different words to describe the same phenomenon (Furnas et al., 1987)



"upload a picture"

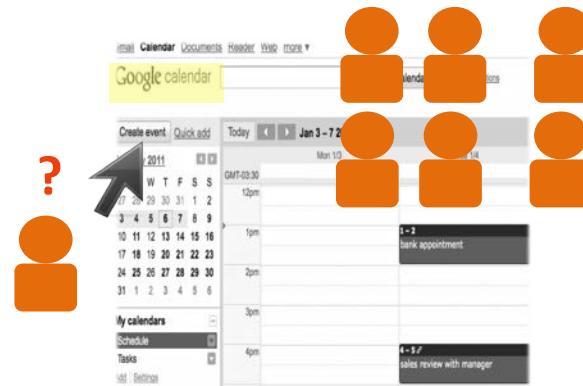
"insert an image"

"add a photo"

focus of our research

investigate and improve **software help** and **learnability** from an **HCI** perspective

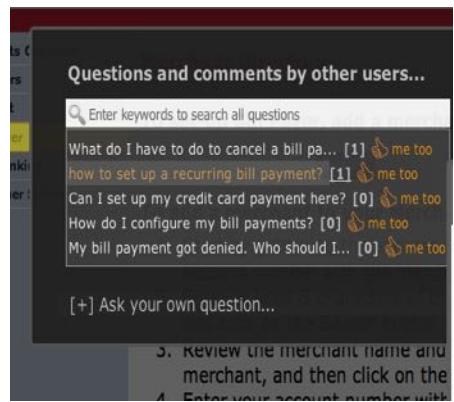
→ what if we can ***connect users*** with each other ***in context*** of their tasks?



different approaches for *connecting* users with each other *in context* of their tasks...

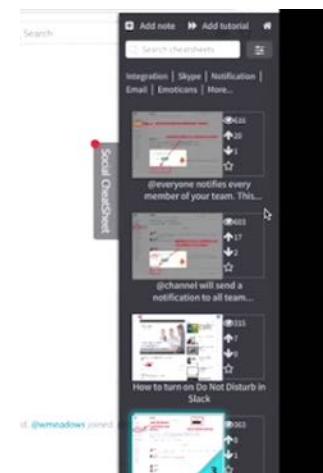
LemonAid

in-context questions & answers



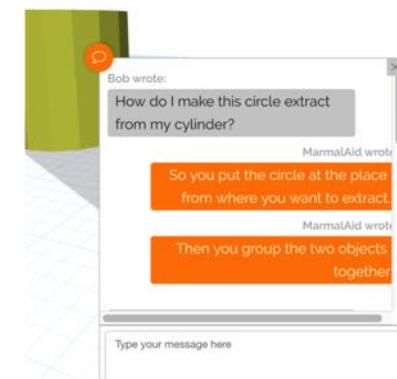
CheatSheet

in-context curated instructions, tutorials

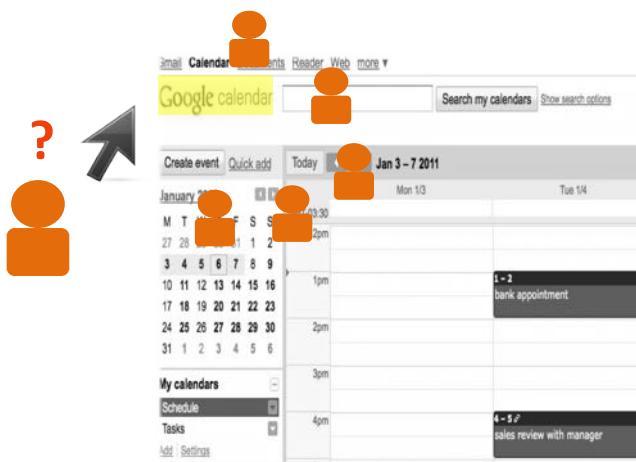


MarmalAid

in-context real-time help



LemonAid: selection-based crowdsourced contextual help



users can find relevant **Q&A** from **other users** in the ***context*** of the application by making selections in the user interface...

the help interface...

Bank of America 

Online Banking Help

Locations • Mail • About • [Sign Off](#)

[Accounts Overview](#)

[Transfers](#)

[Interest](#)

[Bill Payer](#)

[Text Banking](#)

[Customer Service](#)

Merchant Directory

To set-up Bill Payer, add a merchant from the Merchant Directory.

Search

To add a merchant to your Merchant Listing follow these steps.

1. Start by gathering the address used to mail your payment and your account number with the merchant.
2. Enter at least 3 characters of the merchant name in the field provided and click on the Search button.
3. Review the merchant name and address fields to find the correct merchant, and click on the appropriate merchant name.
4. Enter your account number with that merchant as it appears on your statement, then click the submit request button. The new merchant will be available for payment processing in one business day.



the help interface...

The screenshot shows a web browser window for Bank of America Online Banking. The header includes the Bank of America logo, 'Online Banking' in green, and a 'Help' button. Below the header is a navigation bar with links for 'Locations', 'Mail', 'About', and 'Sign Off'. A red horizontal bar spans across the page. On the left, a sidebar lists 'Accounts Overview', 'Transfers', 'Interest', 'Bill Payer', 'Text Banking', and 'Customer Service'. The main content area has a red header 'Merchant Directory'. Below it, a bold instruction reads 'To set-up Bill Payer, add a merchant from the Merchant Directory.' There is a search input field and a 'Search' button. Another bold instruction below says 'To add a merchant to your Merchant Listing follow these steps.' followed by a numbered list of four steps.

Bank of America 

Online Banking

Help

Locations • Mail • About • Sign Off

Merchant Directory

To set-up Bill Payer, add a merchant from the Merchant Directory.

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To add a merchant to your Merchant Listing follow these steps.

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4. Enter your account number with that merchant as it appears on your statement, then click the submit request button. The new merchant will be available for payment processing in one business day.

the help interface...

The screenshot shows the Bank of America Online Banking interface. At the top, there's a navigation bar with the Bank of America logo, the text "Online Banking", and a "Exit Help" button. Below the navigation bar is a horizontal menu with links for "Locations", "Mail", "About", and "Sign Off". On the left side, there's a vertical sidebar with links for "Accounts Overview", "Transfers", "Interest", "Bill Payer", "Text Banking", and "Customer Service". The main content area has a yellow header bar with the text "Merchant Directory". Below this, a large bold text says "To set-up Bill Payer, add a merchant from the Merchant Directory." There's a search input field followed by a "Search" button. Another section below it, also in bold, says "To add a merchant to your Merchant Listing follow these steps." followed by a numbered list of four steps.

Bank of America

Online Banking

Exit Help

Locations • Mail • About • Sign Off

Accounts Overview

Transfers

Interest

Bill Payer

Text Banking

Customer Service

Merchant Directory

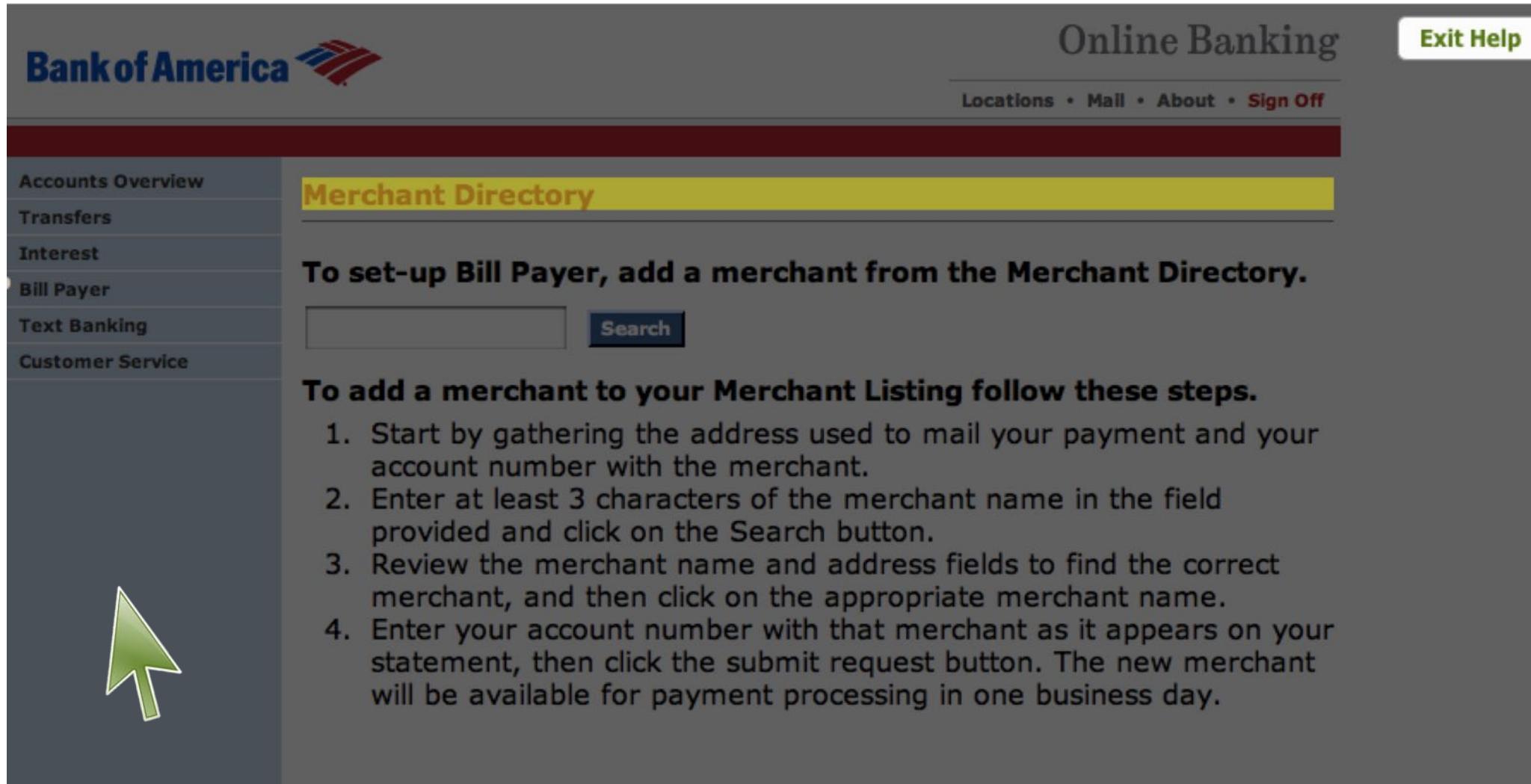
To set-up Bill Payer, add a merchant from the Merchant Directory.

Search

To add a merchant to your Merchant Listing follow these steps.

1. Start by gathering the address used to mail your payment and your account number with the merchant.
2. Enter at least 3 characters of the merchant name in the field provided and click on the Search button.
3. Review the merchant name and address fields to find the correct merchant, and then click on the appropriate merchant name.
4. Enter your account number with that merchant as it appears on your statement, then click the submit request button. The new merchant will be available for payment processing in one business day.

the help interface...



The image shows a screenshot of the Bank of America Online Banking help interface. At the top left is the Bank of America logo. To its right is the text "Online Banking". In the top right corner is a green button labeled "Exit Help". Below the header is a navigation bar with links for "Locations", "Mail", "About", and "Sign Off". On the far left is a vertical sidebar with links for "Accounts Overview", "Transfers", "Interest", "Bill Payer", "Text Banking", and "Customer Service". A large yellow arrow points upwards from the bottom left towards the "Merchant Directory" section. The main content area has a yellow header bar with the text "Merchant Directory". Below it is a bold instruction: "To set-up Bill Payer, add a merchant from the Merchant Directory." There is a search input field and a "Search" button. Another bold instruction follows: "To add a merchant to your Merchant Listing follow these steps." This is followed by a numbered list of four steps:

1. Start by gathering the address used to mail your payment and your account number with the merchant.
2. Enter at least 3 characters of the merchant name in the field provided and click on the Search button.
3. Review the merchant name and address fields to find the correct merchant, and then click on the appropriate merchant name.
4. Enter your account number with that merchant as it appears on your statement, then click the submit request button. The new merchant will be available for payment processing in one business day.

the help interface...

The screenshot shows the Bank of America Online Banking interface. The top navigation bar includes the Bank of America logo, "Online Banking", "Locations • Mail • Help • Sign Off", and a red horizontal bar. On the left, a sidebar lists "Accounts", "Transfers", "Interest", "Bill Payer" (which is highlighted in yellow), "Text Banking", and "Customer". The main content area has a dark grey background. A sidebar on the left contains the heading "Questions and comments by other users..." and a search bar with the placeholder "Enter keywords to search all questions". Below the search bar is a list of user questions with "me too" links:

- What do I have to do to cancel a bill pa... [1] me too
- how to set up a recurring bill payment? [1] me too
- Can I set up my credit card payment here? [0] me too
- How do I configure my bill payments? [0] me too
- My bill payment got denied. Who should I... [0] me too

Below this is a button "[+] Ask your own question...". The main content area features a large text block with the heading "From the Merchant Directory." and a question "how to set up a recurring bill payment?". To the right of this text block is a sidebar with a checkbox "This question is inappropriate. I have the same question." and a scroll bar. At the bottom of the page are two buttons: "X Nothing Helpful" and "✓ Helpful".

search for help...

The screenshot shows a user interface for a merchant directory. On the left, there's a sidebar with links: Transfers, Interest (which is highlighted in yellow), Bill Payer, Text Bank, and Customer. The main area has a title "Merchant Directory" and a sub-section "To set up Bill Payer, add a merchant". Below this is a search bar with placeholder text "Type in keywords to search for existing questions:" and a magnifying glass icon. A button "[+] Ask your own question..." is visible. At the bottom, there's a section with steps: "1. Enter account number with the merchant." and "2. Enter at least 3 characters of the merchant name and click on the Search button".

post questions...

This screenshot shows a form for asking a question. It features a text input field containing three sample questions: "Can I set up my credit card payment here? [0] me too", "How do I configure my bill payments? [0] me too", and "My bill payment got denied. Who should I... [0] me too". Below the input field is a button "[+] Ask your own question...". At the bottom, there are two buttons: "Will I get notified when my payment is set-up?" and "Submit".

post answers...

This screenshot shows a form for providing an answer or comment. The top part asks "Can I set up my credit card payment here?" with a note "This question is inappropriate. I have the same question." Below it says "No answers have been posted yet. Submit your own!". There's a text input field labeled "Provide your answer or comment:" and a "Submit" button. At the bottom are "Close" and "Submit" buttons.

LemonAid

more targeted help using **UI selections** as queries,
reducing the need for natural language queries...

The screenshot shows a user interface for a financial service. On the left, there's a sidebar with several tabs: 'Accounts', 'Transfers', 'Interest', **Bill Payer** (which is highlighted with a red box), 'Text Banking', and 'Customer'. In the center, there's a section titled 'Questions and comments by other users...'. It includes a search bar and a list of questions with 'me too' links. One question is expanded, showing a detailed answer and options to mark it as inappropriate or helpful. The right side of the screen shows a large, semi-transparent box containing a question about setting up a recurring bill payment.

Accounts
Transfers
Interest
Bill Payer
Text Banking
Customer

Questions and comments by other users...

Enter keywords to search all questions

What do I have to do to cancel a bill pa... [1] me too
how to set up a recurring bill payment? [1] me too
Can I set up my credit card payment here? [0] me too
How do I configure my bill payments? [0] me too
My bill payment got denied. Who should I... [0] me too

[+] Ask your own question...

3. Review the merchant name and merchant, and then click on the
4. Enter your account number with statement, then click the submit will be available for payment pr

From the Merchant Directory.

how to set up a recurring bill payment?

This question is inappropriate. I have the same question.

To set up recurring payments, first select a merchant and then you can create a schedule for payments. You can select a specific date for which you want your payment to be received every week or month, etc. You can set up recurring payments up to a year in advance.

[+] Add an answer...

Nothing Helpful Helpful

insight driving LemonAid...

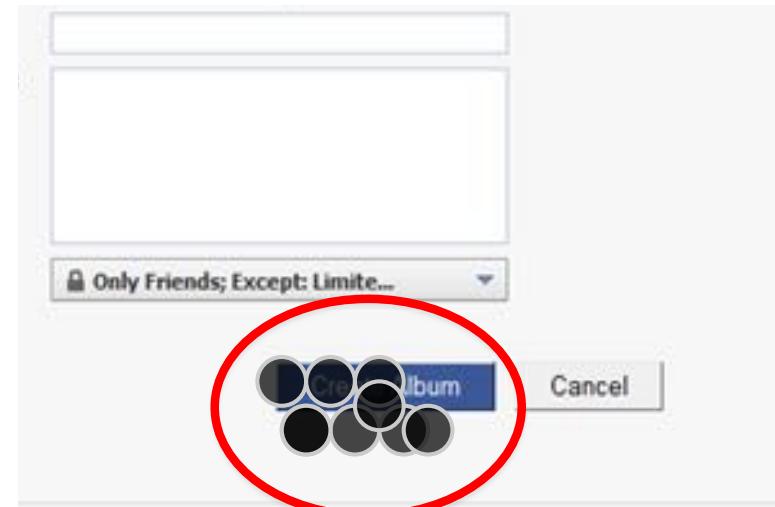
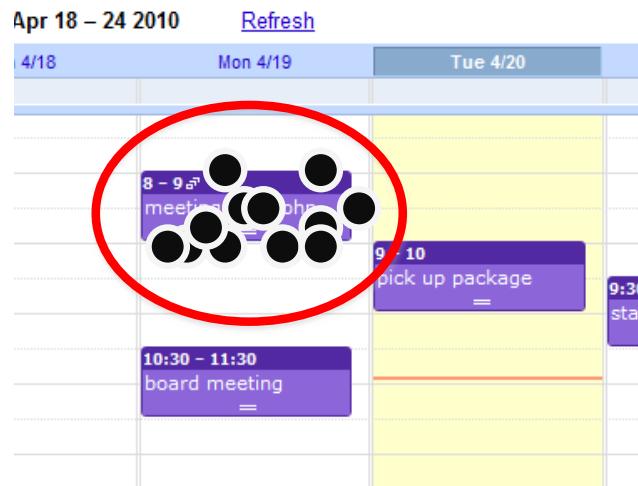
similar selections in the interface for similar help needs and different selections for different help needs...



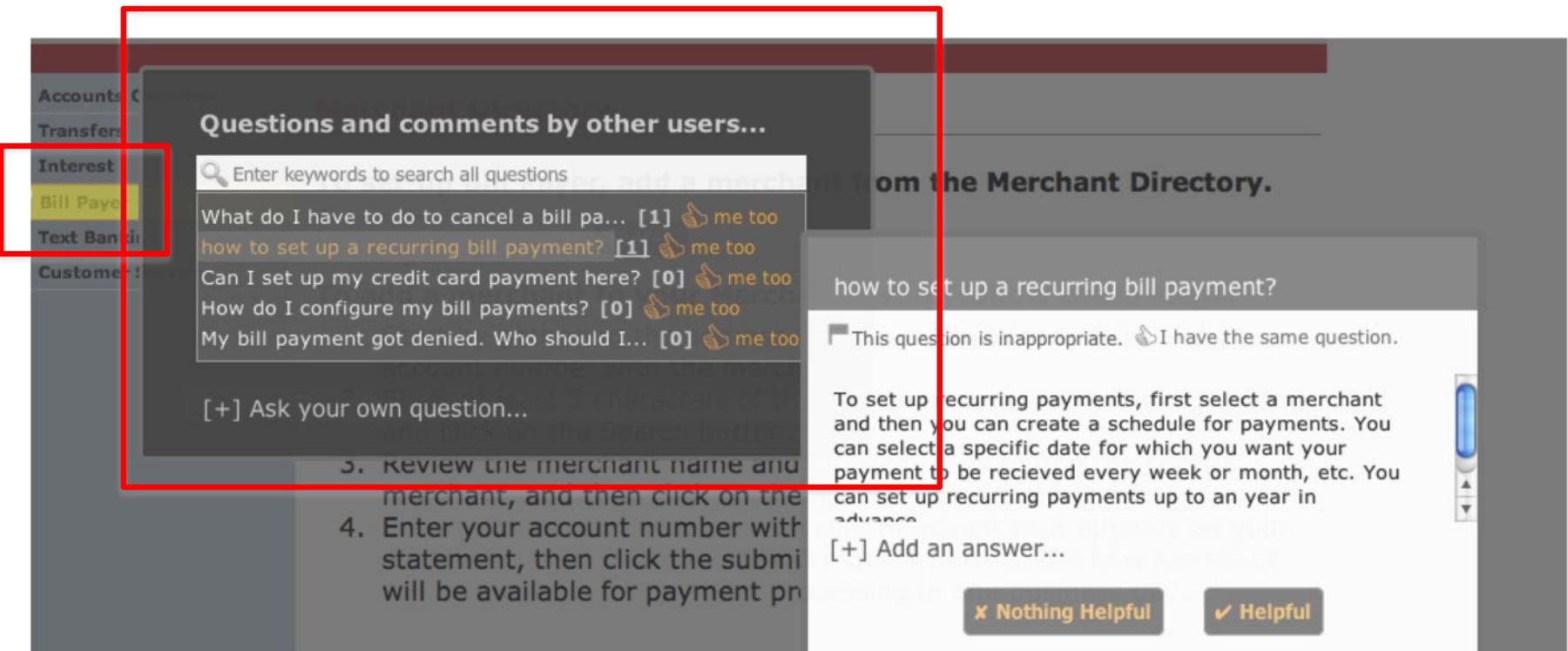
insight driving LemonAid...

coupling of help needs to UI elements

- *reduces* unnecessary variation in users' queries
- holds across different applications and UIs



using the insight to create a selection-based retrieval approach



The screenshot shows a user interface for managing accounts. On the left, there's a sidebar with a red box around the 'Bill Pay' option. The main content area has another red box around the 'Questions and comments by other users...' section. This section includes a search bar, a list of questions, and a button to ask a new question.

Questions and comments by other users...

Enter keywords to search all questions

What do I have to do to cancel a bill pa... [1] me too
how to set up a recurring bill payment? [1] me too
Can I set up my credit card payment here? [0] me too
How do I configure my bill payments? [0] me too
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[+] Ask your own question...

5. Review the merchant name and merchant, and then click on the

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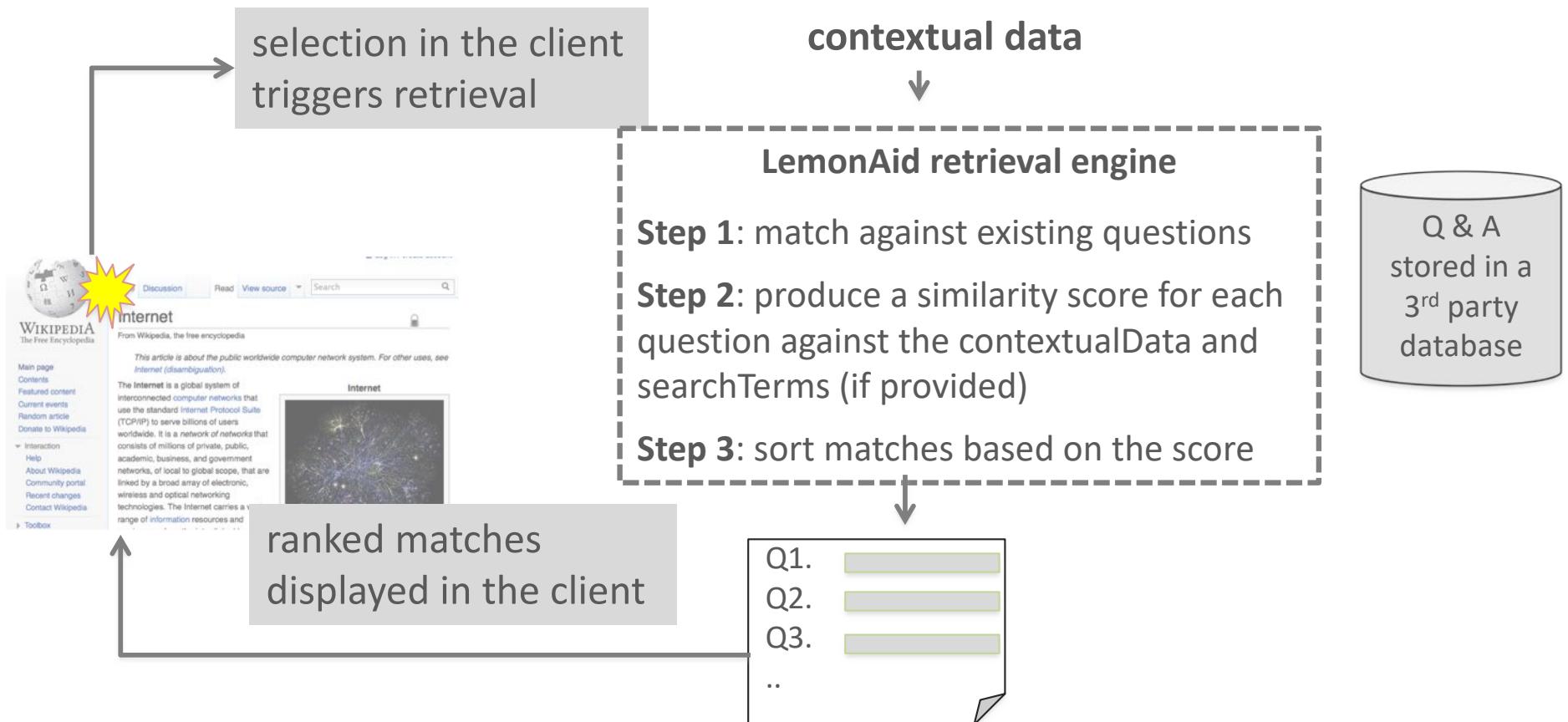
how to set up a recurring bill payment?

This question is inappropriate. I have the same question.

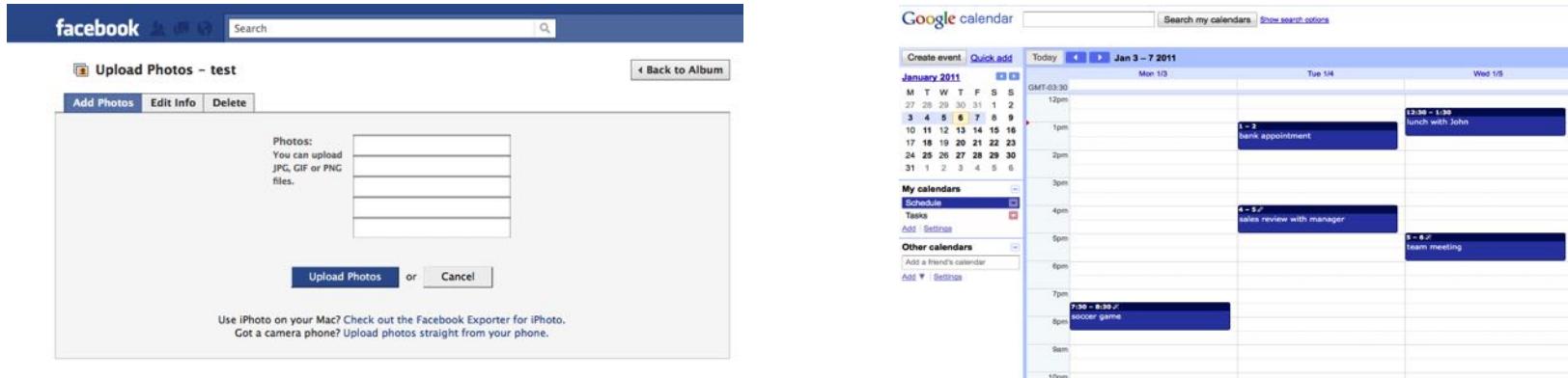
To set up recurring payments, first select a merchant and then you can create a schedule for payments. You can select a specific date for which you want your payment to be received every week or month, etc. You can set up recurring payments up to an year in advance.

[+] Add an answer...

ranked retrieval approach...



LemonAid is independent of the underlying structure and source code of the web application...



add a **JavaScript** snippet on all relevant pages

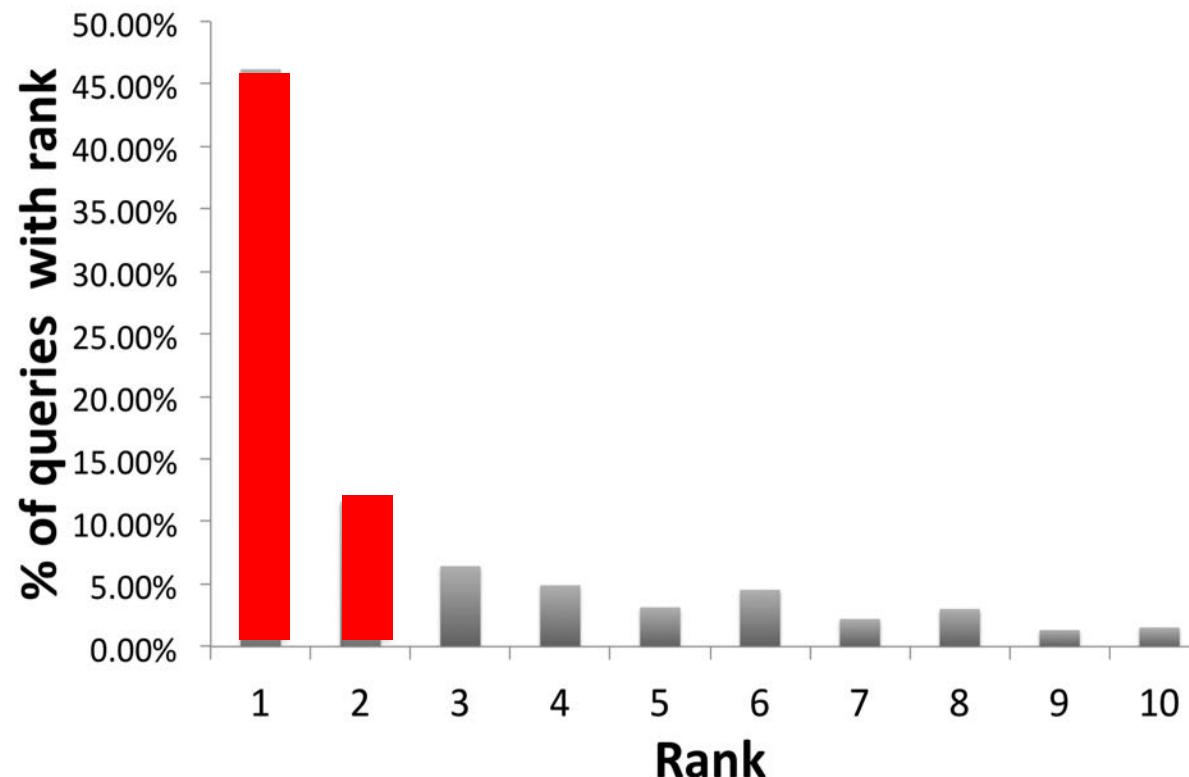
```
<script type="text/javascript"
src=".../LemonAidMain.js"></script> <script
type="text/javascript">var
applicationCode="yourSiteCode";</script>
```

how well does this work?

- effectiveness of the retrieval
- users' perceptions

retrieval evaluation results...

LemonAid retrieved results for **90.3%** of the selections.
relevant result was in the **top 2** results for **over half** of the
selections.



promising results, but...

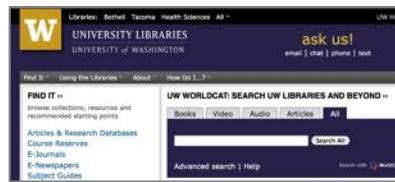
simulated community of users

tasks were real, but the breakdowns were not
how about if we test with real users and real
applications?

- is LemonAid actually **helpful** for users' tasks?

what about real users?

multi-site field deployment on 4 university websites



used mixed methods to collect data

usage logs (n=1262)

exit surveys (n=168)

follow-up interviews (n=36)

commitment from host teams

- initial effort to **integrate** LemonAid (did not have to change code on their end)
- **provide** the initial Q& A to **seed** the database
- **moderate** content, provide **answers**
- allowed us to collect data over 6-15 weeks

demo of deployed interface

?FIND IT »
browse collections, resources and recommended starting points

?Articles & Research Databases
?Course Reserves
?E-Journals
E-Newspapers
Subject Guides
[more >](#)

LIBRARY TOOLS »
[Citation Guides & Tools](#)
[Off-campus Access Tools](#)
[Mobile-Friendly Tools](#)
[Alert Services](#)
[Library Feeds](#)
[more >](#)

WORLDCAT: SEARCH LIBRARIES AND BEYOND »

Books Video ? Audio ? Articles All

Search All Advanced search | Help Search with WorldCat® Catalog

HOW DO I...?»

Getting Started with Company Research

This video will provide an overview of the best places to start your research for both private and public companies.
Time 04:29 | [Play video](#)

[more online help >](#)

Digital Collections »



Special Collections »



WELCOME to
Art Library | Built Environments Library | Drama Library
East Asia Library | Engineering Library | Foster Business Library

RARIES | SPOTLIGHT | SPOTLIGHT

SPOTLIGHT »
Spot 30-30 - Drama Dept.

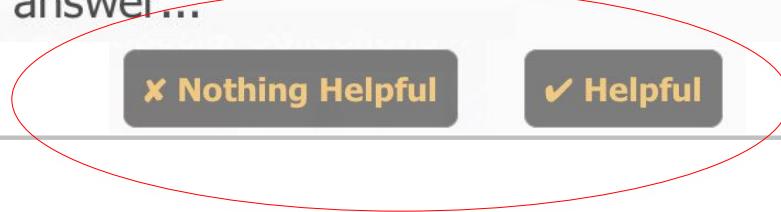
73% answers viewed by users were marked as helpful

Does the library subscribe to (X) journal?

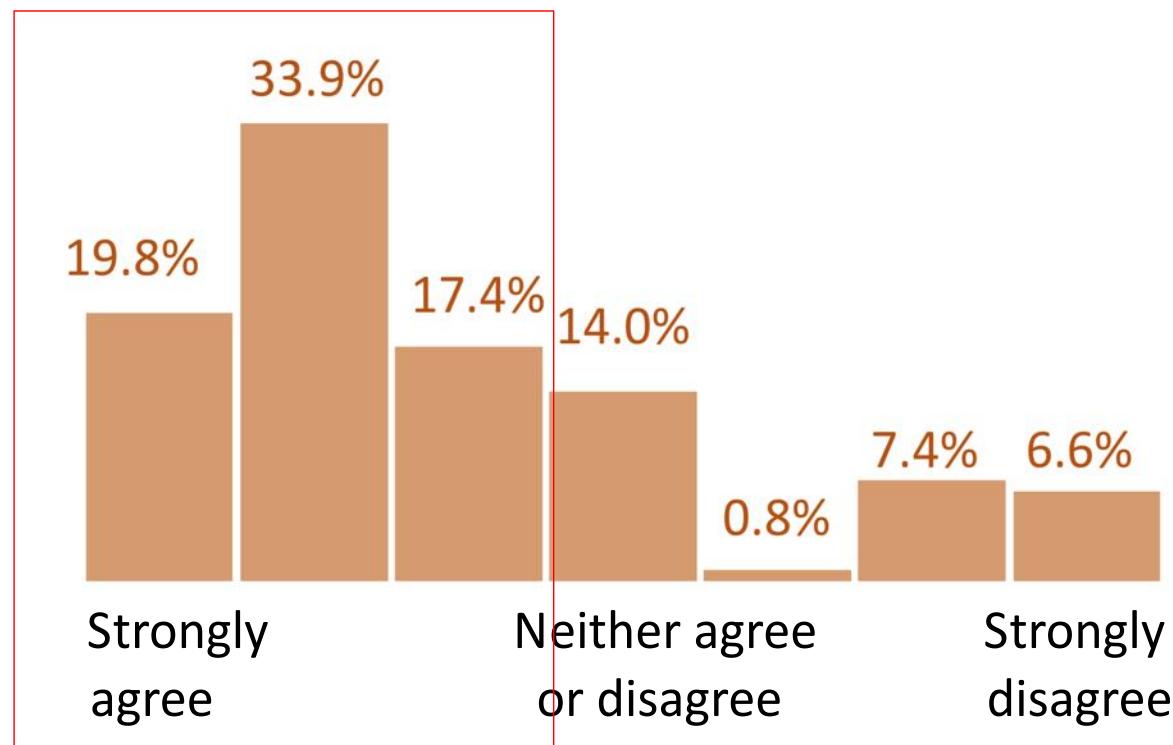
This question is inappropriate. 6 users have this question. ( me too)

Search your journal by title. Check the date of your article to see if it's available online. If not, you can request a copy through Interlibrary Loan (lib staff).

[+] Add an answer...

 x Nothing Helpful ✓ Helpful

71% of users indicated that they found something helpful in the exit survey



"I found something helpful"

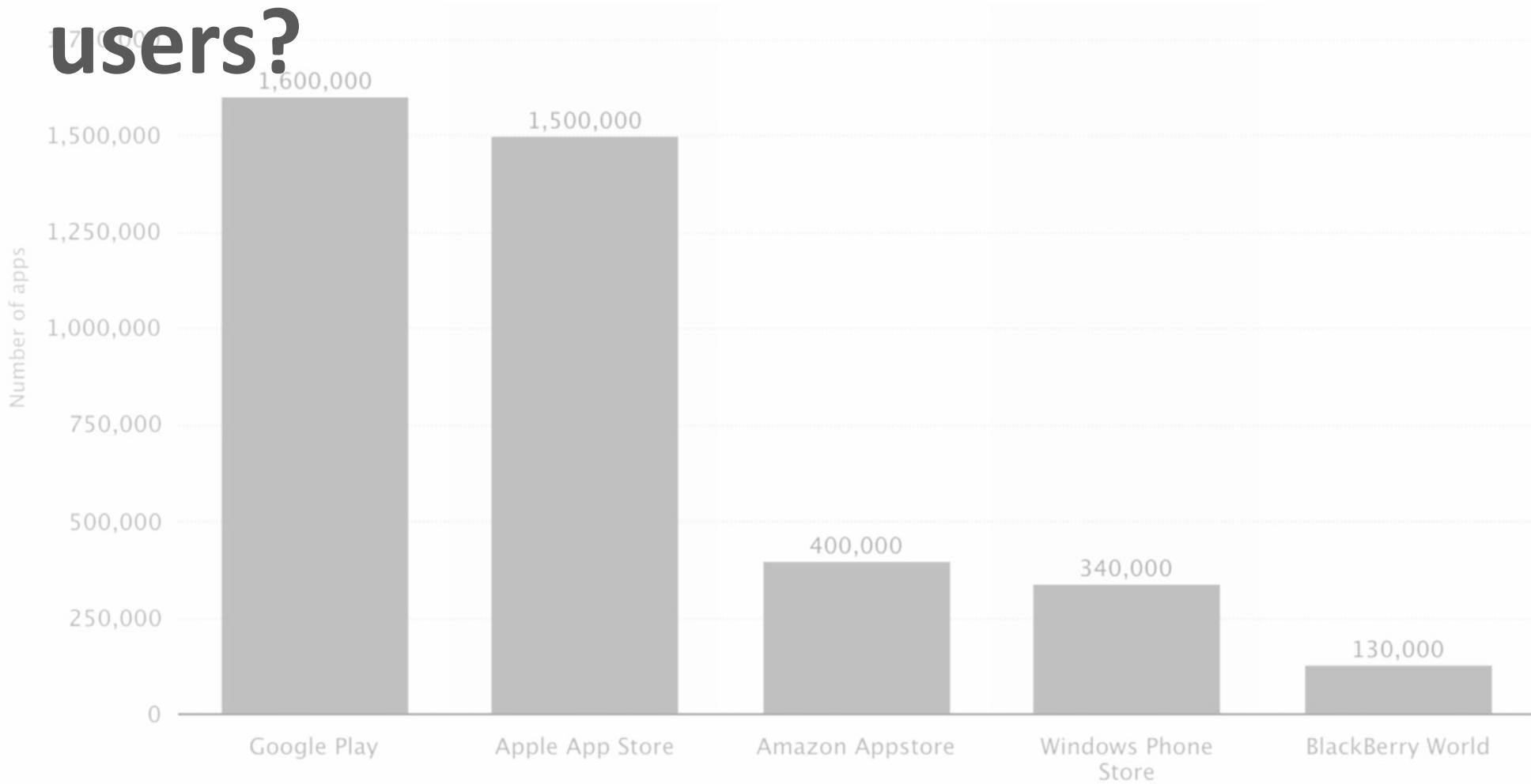
“you might find a question that you didn’t even know you had, so I like that...”

“when you don’t have a specific question or you are just looking at what other people are asking...it’s really helpful”

what we learned in designing and deploying LemonAid...

- ✓ solving a real problem for end users
- ✓ retrieval algorithm was effective at retrieving relevant Q&A using UI selections
- ✓ easy to integrate LemonAid with other sites with a couple of lines of code...
- ✓ most users found the system helpful and would want to reuse this form of help

how do we make the innovation more widely available to end users?



a lot of momentum around commercialization and startups

worked with our center for commercialization at
Washington

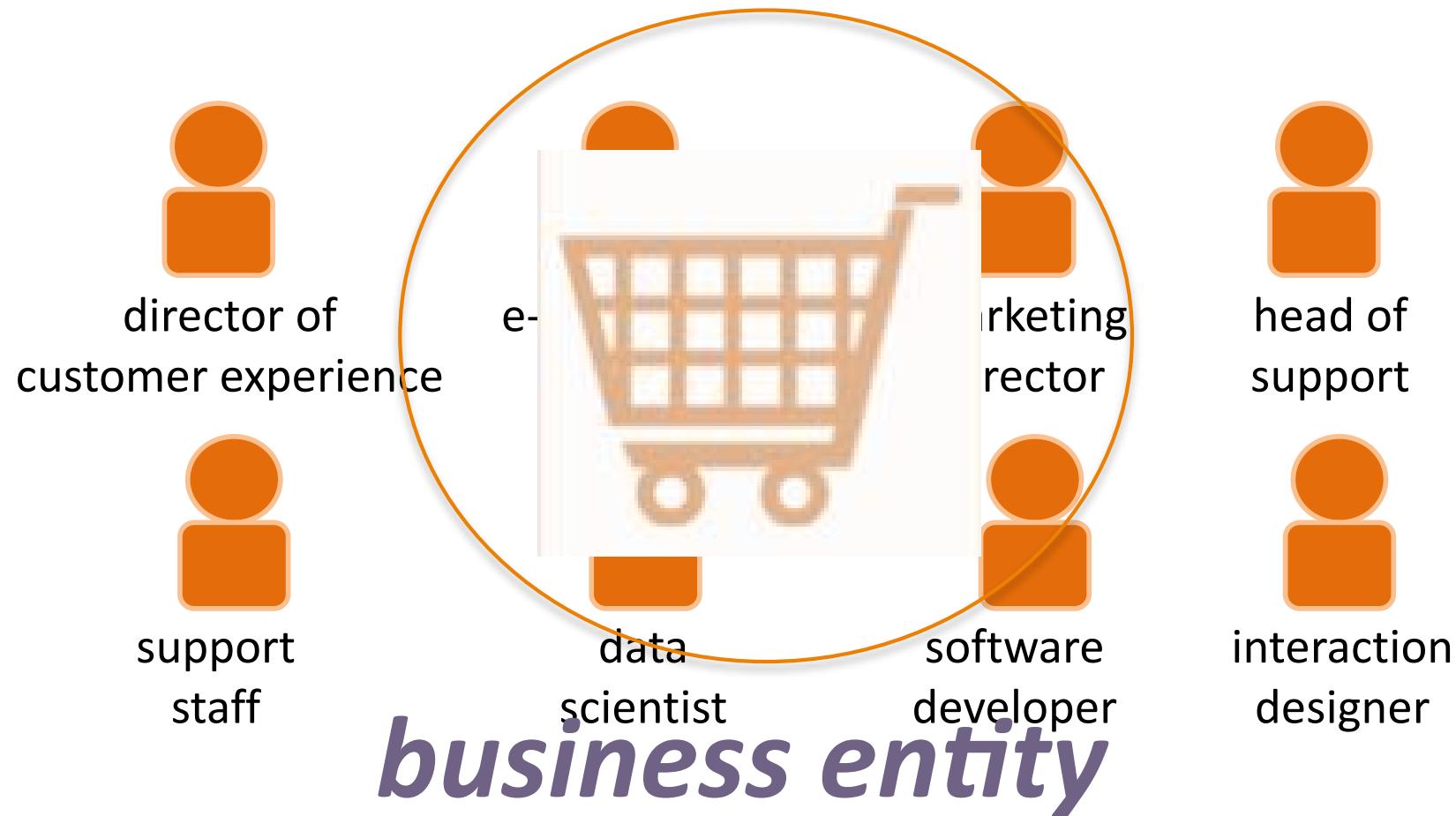


- initial seed funding
- access to local entrepreneurs, incubator space
- eventually got over \$7 million in multiple venture funding rounds

worked with many trial customers and initial adopters...

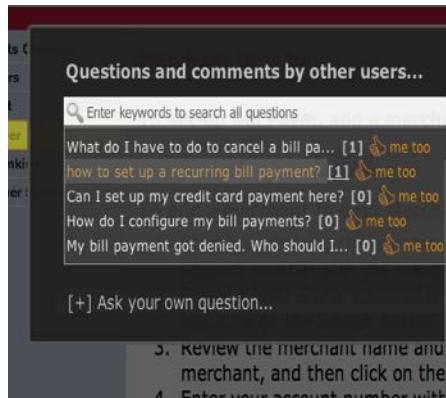


...but many **different stakeholders** within an entity who all have to approve the integration of the innovation...



connecting users with each other in *context* of their tasks...

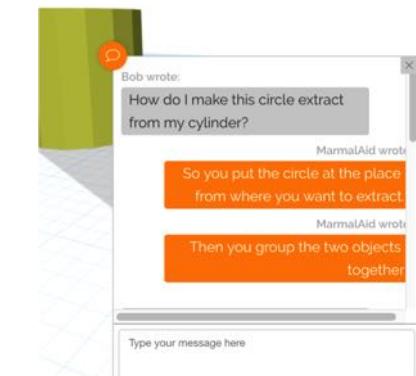
LemonAid
in-context questions & answers



CheatSheet
in-context curated instructions, tutorials



MarmalAid
In-context real-time help

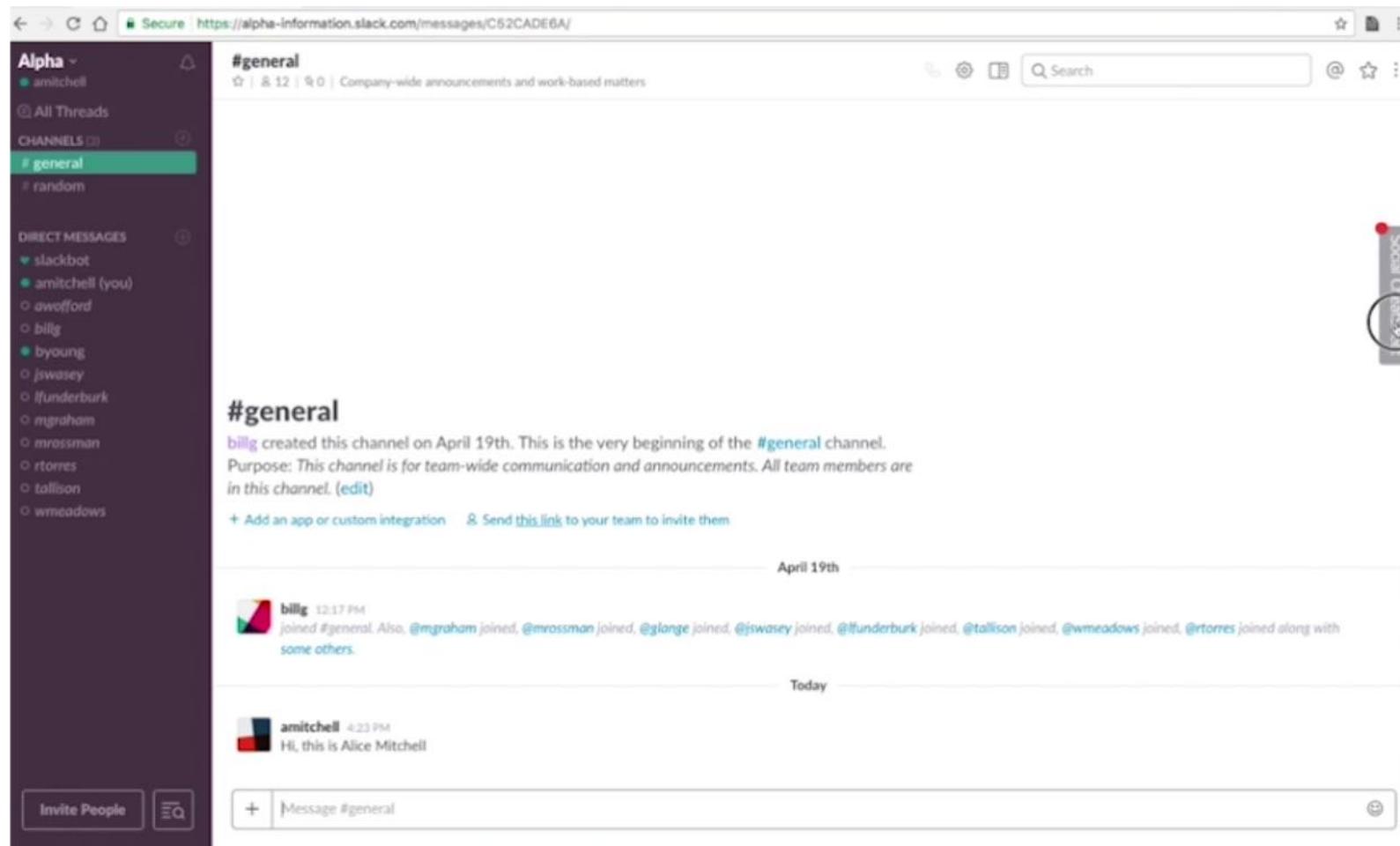


Social CheatSheet: In-Context Community-Curated Software Help

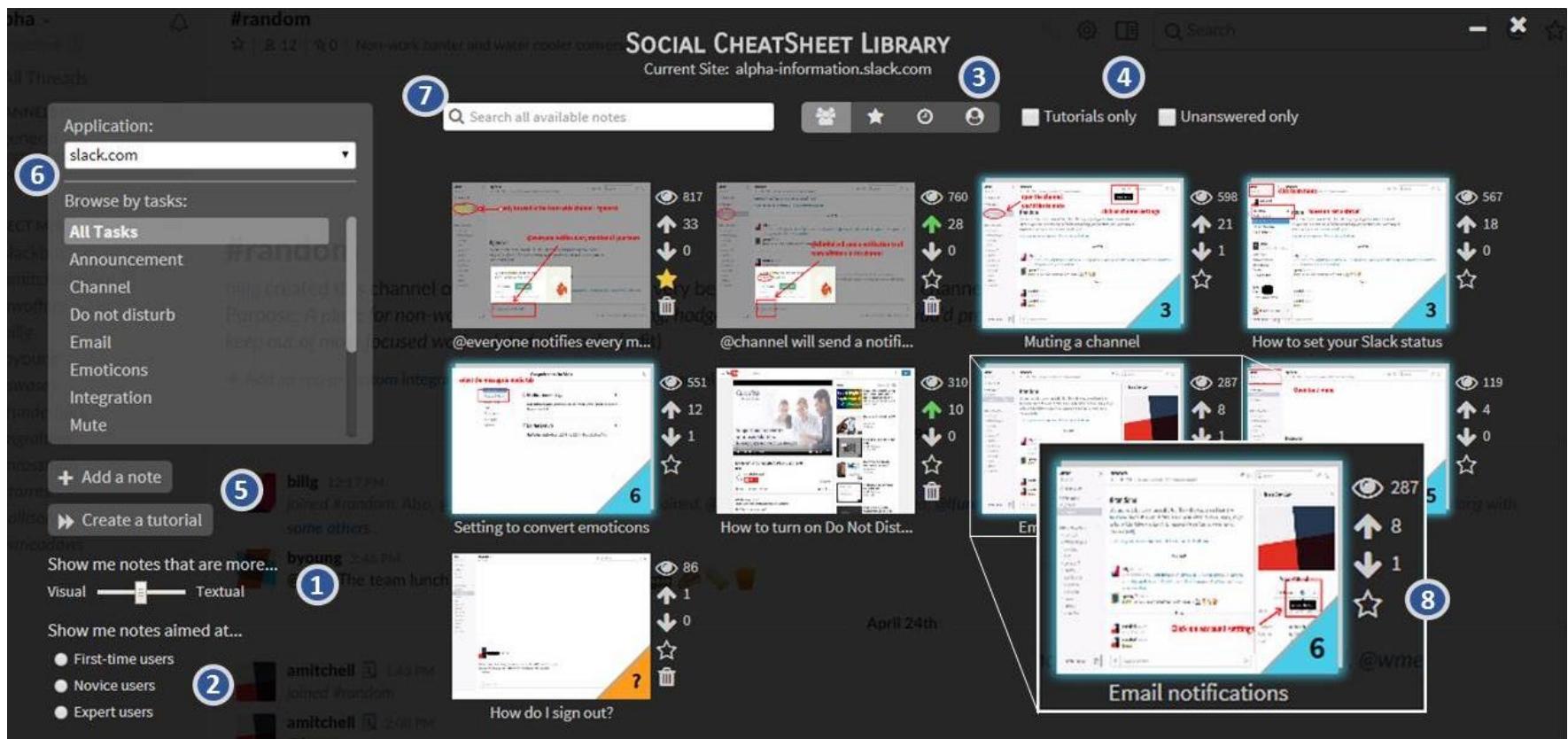


users can find visual
instructions, tips, multi-step
tutorials, and other content
curated by other users

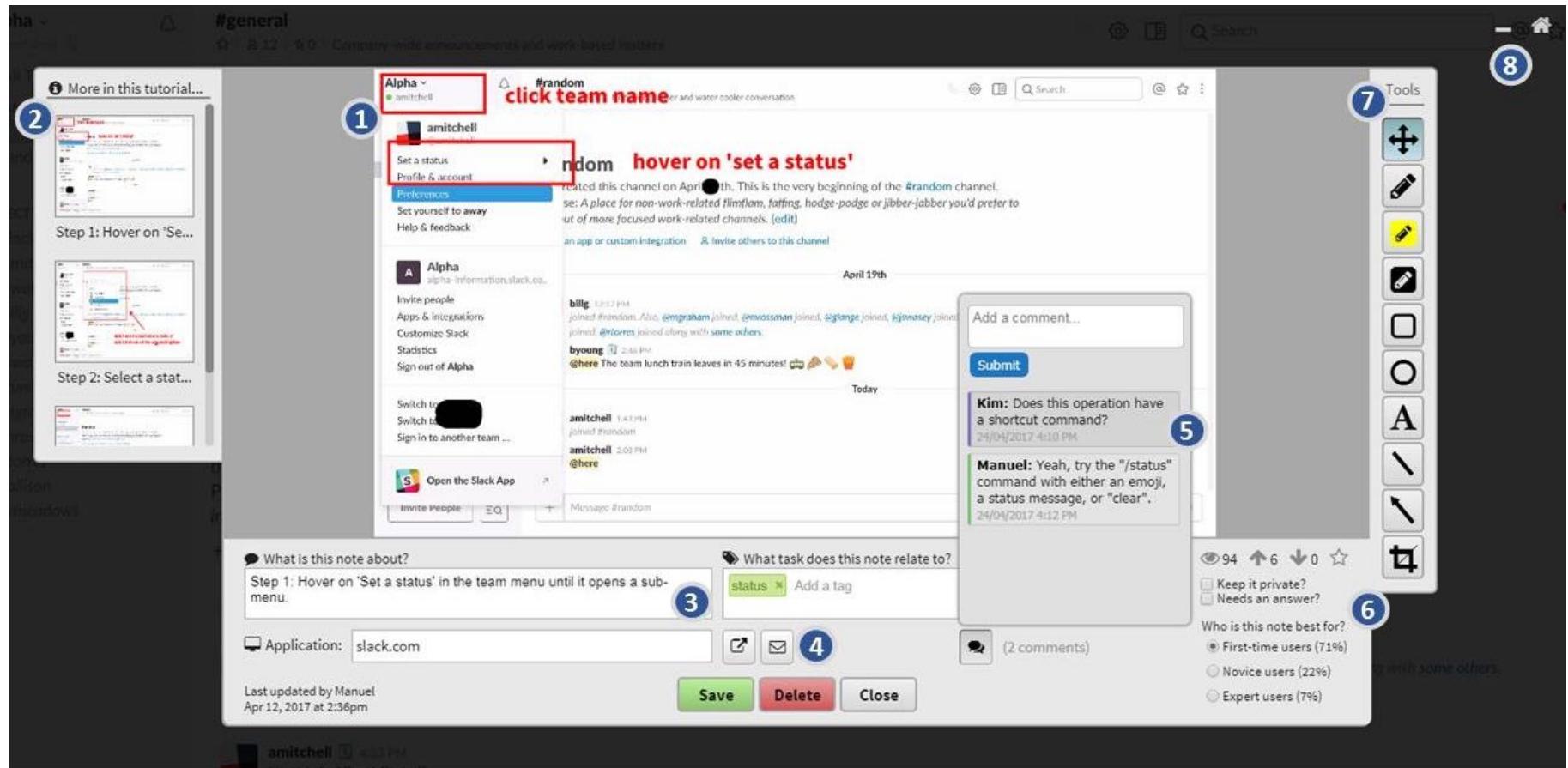
a “cheat sheet” is overlaid atop an application



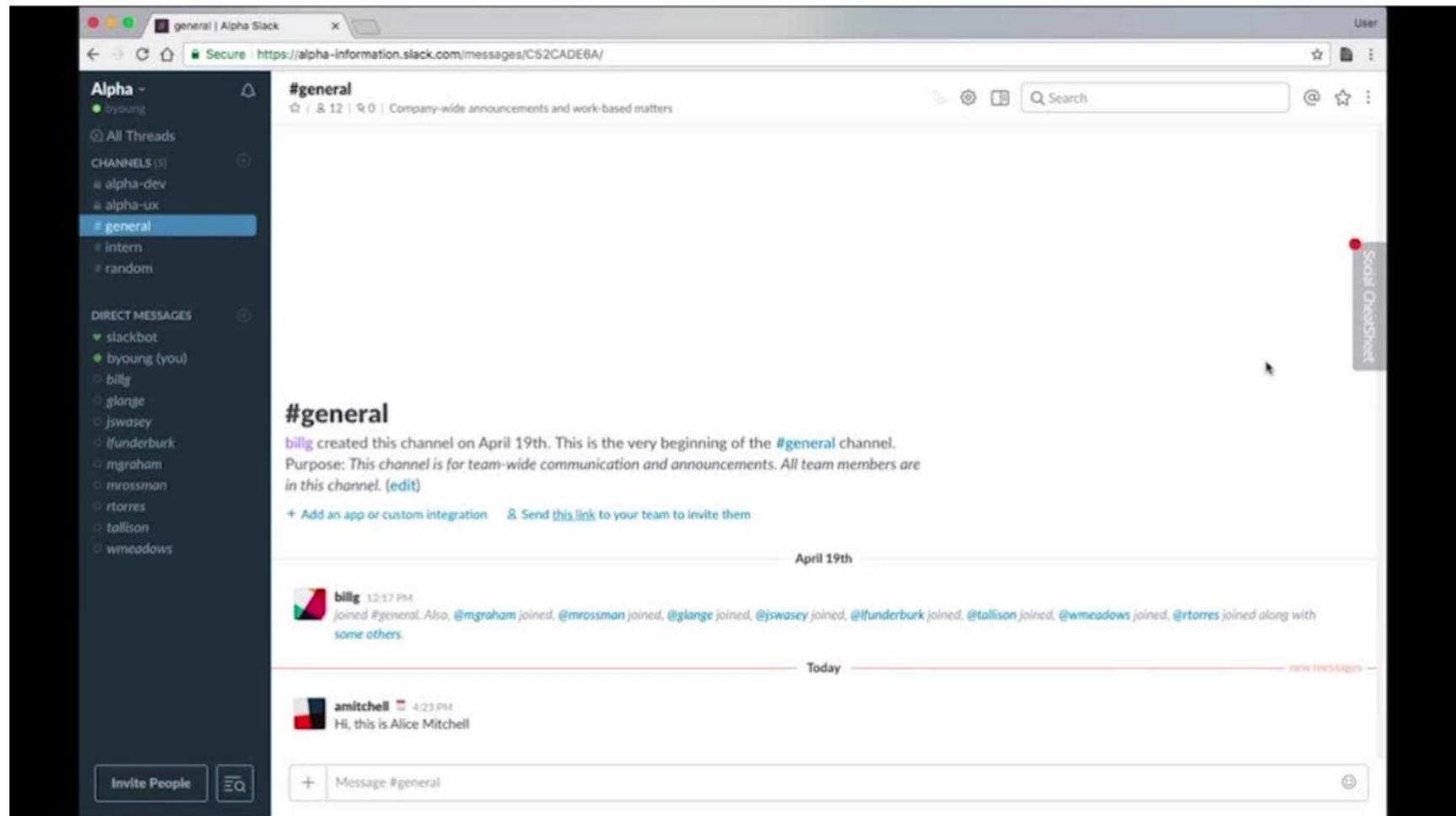
can search, browse, and filter content by task, background, learning preferences



easy to add visual annotated instructions from the relevant screen



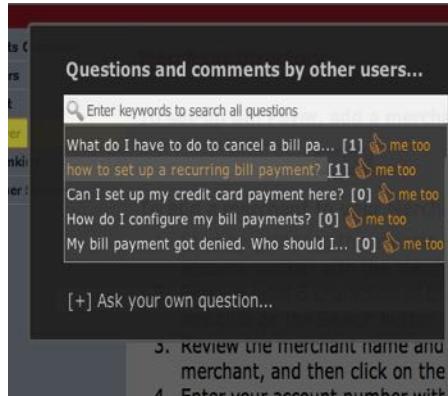
easy to add step-by-step tutorials that can be further annotated



connecting users with each other in *context* of their tasks...

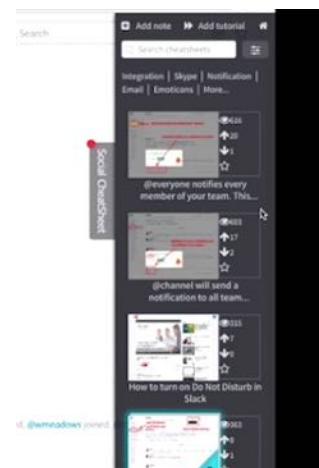
LemonAid

*in-context questions
& answers*



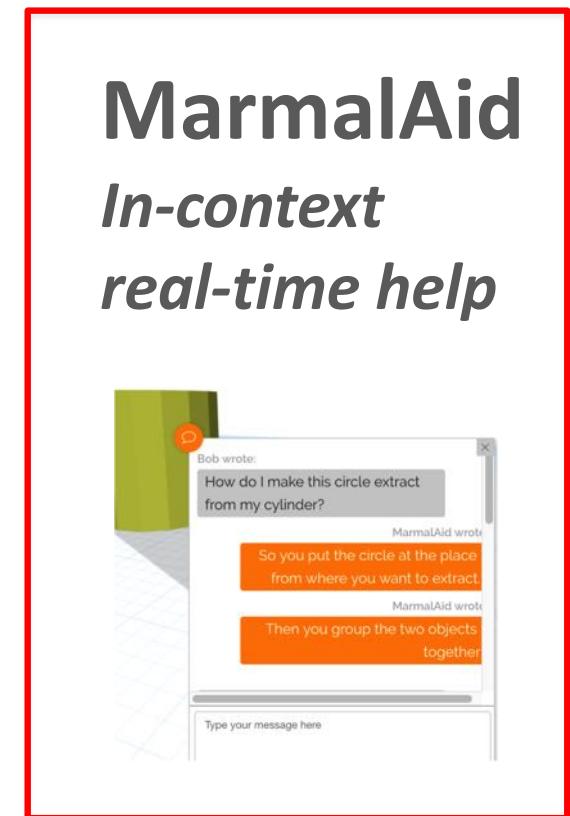
CheatSheet

*in-context curated
instructions, tutorials*

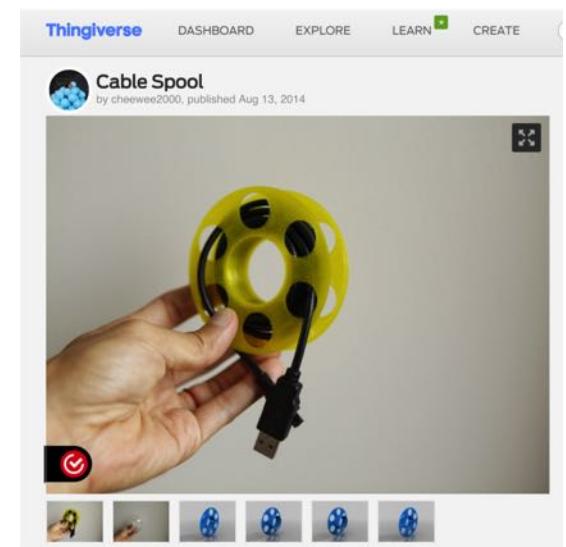


MarmalAid

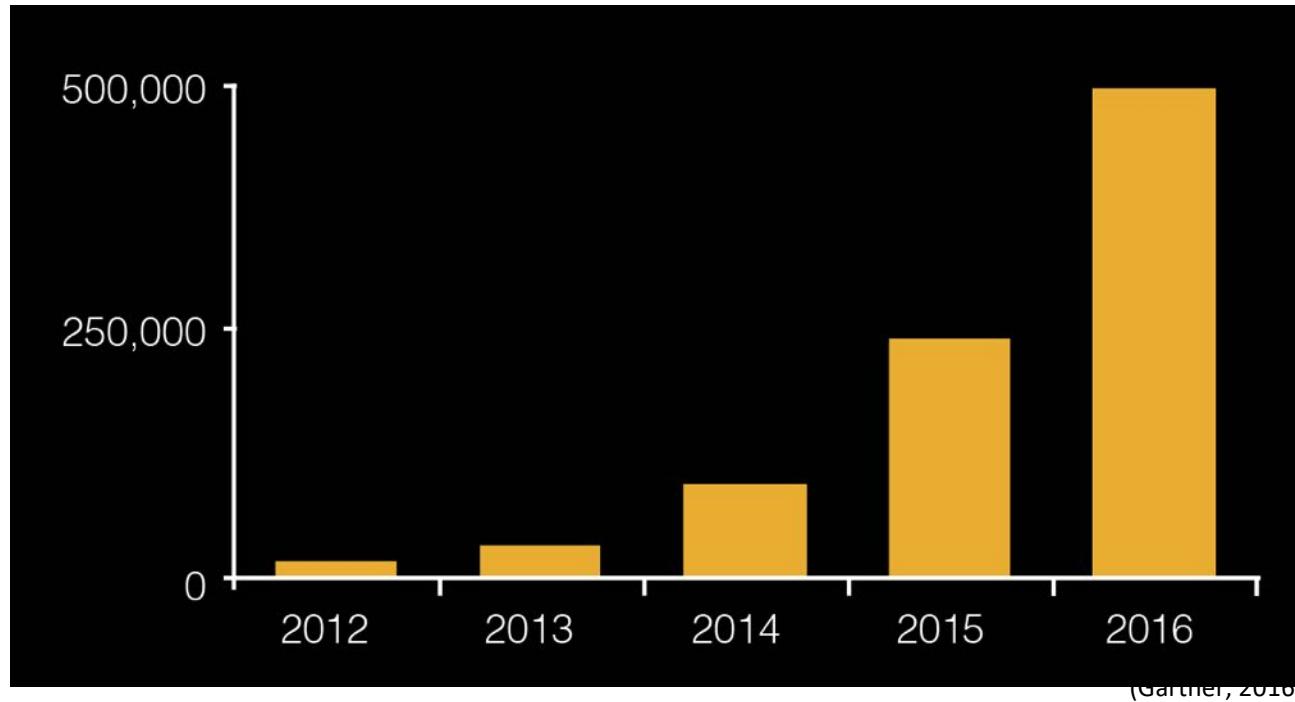
*In-context
real-time help*



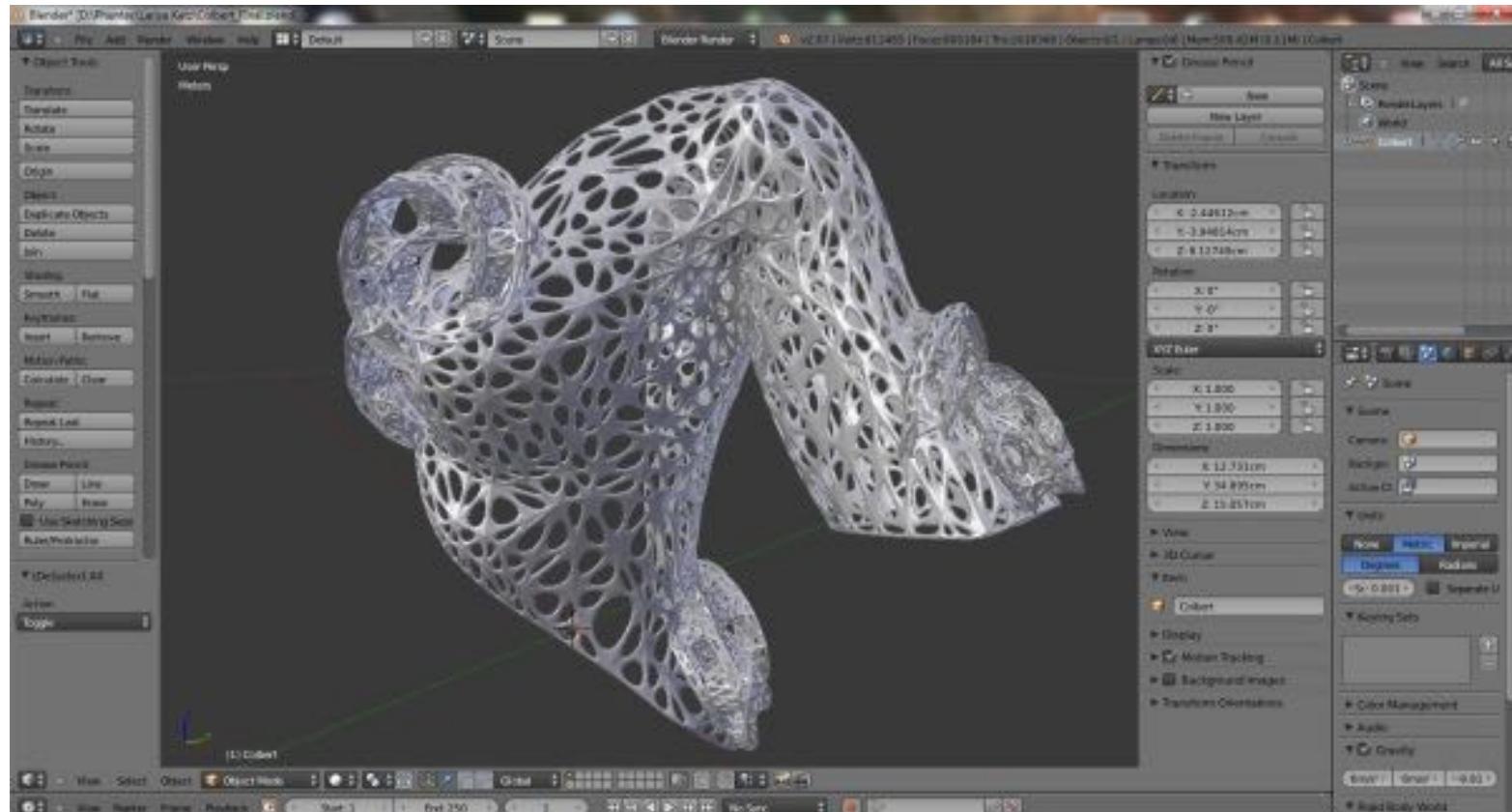
supporting newcomers to 3D design software and 3D printing



increase in consumer-level 3D printing software and hardware...



challenges in using 3D modeling software by “casual makers”

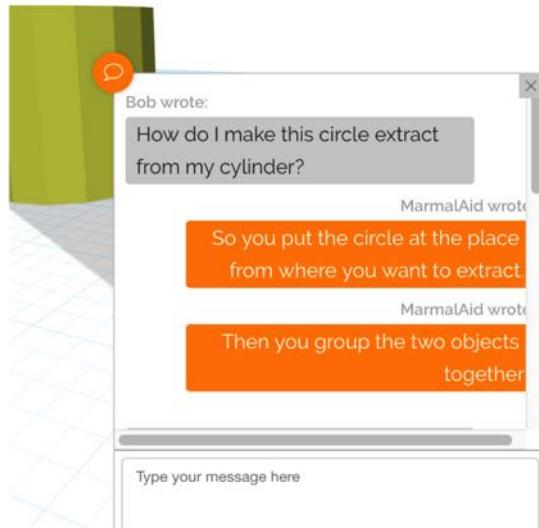


Hudson et al., CHI' 16

key insights...

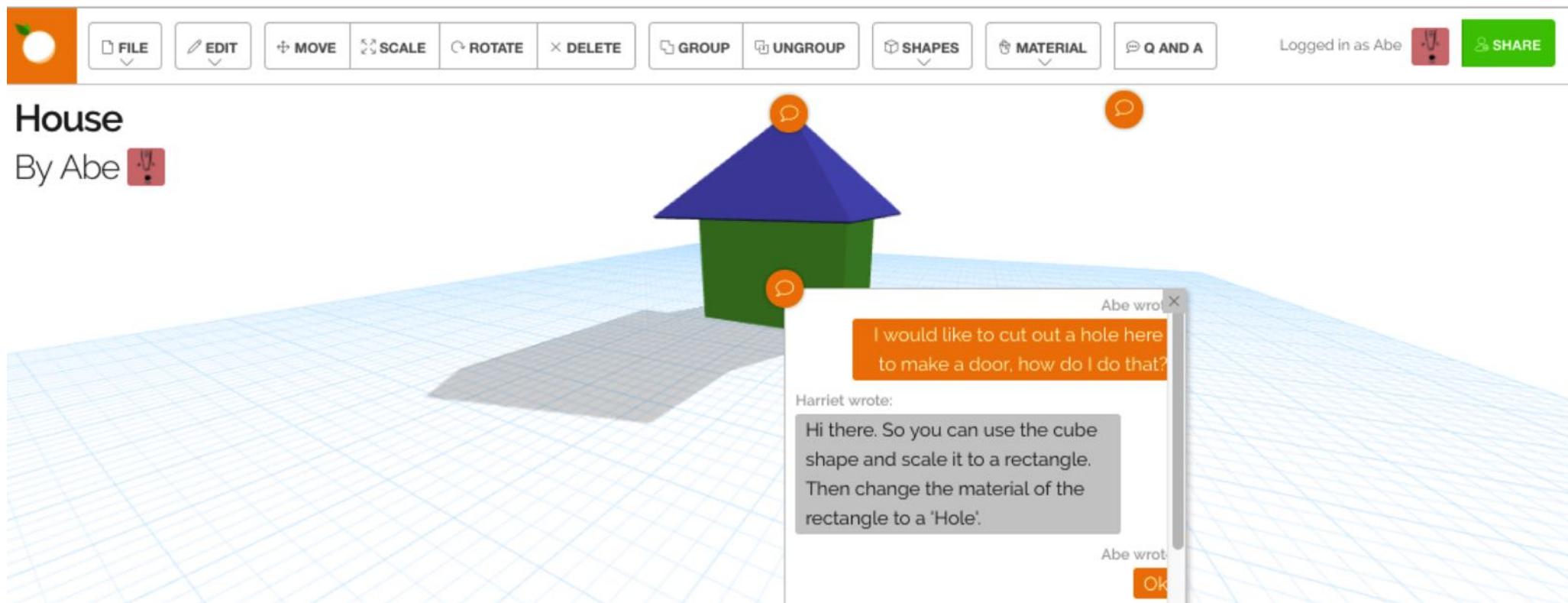
learning 3D modeling is a **social** activity
even experienced users struggle with
premade designs and rely on **social forms**
of help (e.g., on Thingiverse)
difficulty to communicate **design intent** and
articulate help needs in forums and other
online mediums

MarmalAid: In-Context Real-time Help for Web Applications

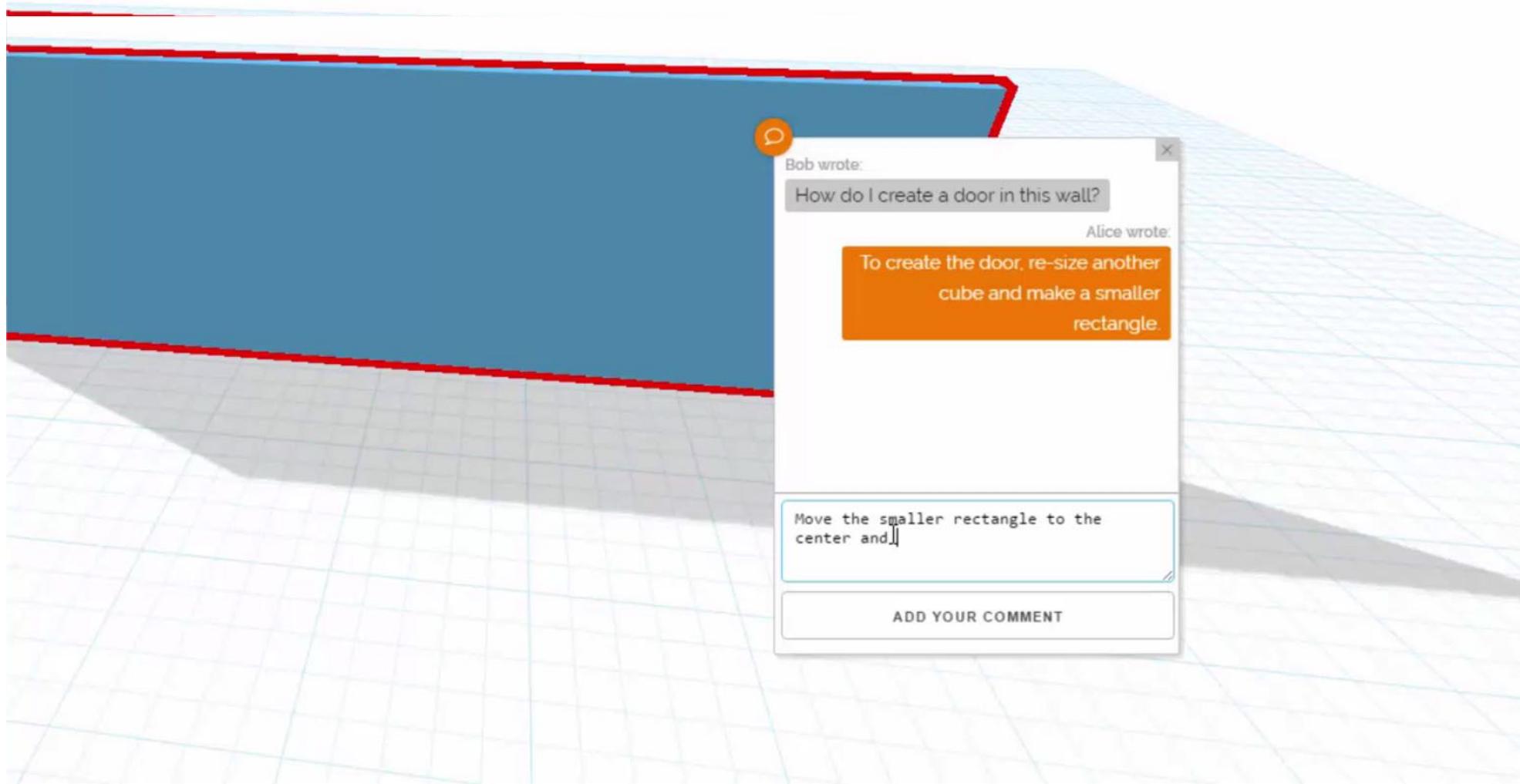


users can **share their work-in-progress**, establish a **shared visual context** and initiate **real-time one-on-one conversations**

users can have **real-time** conversations with other users at any location within their workspace and directly ask their questions



brief demo of MarmalAid



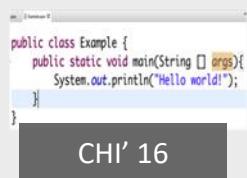
ongoing and future research

- looking more targeted, personalized recommendations for software help and learning
- investigating a wider range of software learning contexts (e.g., in education vs. medicine vs. business)
- incentivizing content creation and community involvement (consumers vs. contributors)
- supporting more informal and self-regulated software learning activities

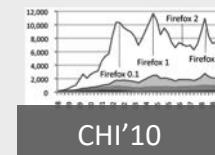
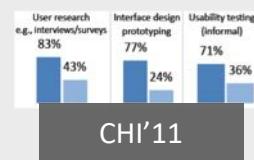
inventing novel software help and learning tools



understanding different contexts of help-seeking and learning



understanding human and collaborative aspects of designing software



HCI Research Field

Different Areas and Major Conferences

User Studies/ Interaction
Design/ Evaluations
(e.g., ACM CHI, DIS)

Collaboration /
Crowdsourcing
(e.g., ACM CSCW)

Systems, Tools,
Interaction Techniques
(e.g., ACM UIST)

Accessibility
(e.g., ASSETS)

Intelligent User
Interfaces
(e.g., IUI)

Ubiquitous Systems
(wearables, sensors)
(e.g., ACM UbiComp)

ACM CHI conference on Human Factors in Computing Systems

- top conference, covers everything HCI-related
- > 2000 submissions and growing;
- acceptance rates < 25% for full papers
- different contribution types submitted to different sub-committees

CHI subcommittees

- User Experience and Usability
- Specific Application Areas
- Interaction Beyond the Individual
- Games and Play
- Privacy, Security, Visualization
- Health, Accessibility and Aging
- Design
- Interaction techniques, Devices and Modalities
- Understanding People: Theory, Concepts, Methods
- Engineering Interactive Systems and Technologies



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Jackie Lang
(BSc, SFU)



Prashant Shashikumar
(BSc, SFU)



Ryan Mitts
(BSc, SFU)



Shruti Dembla
(BEng, Waterloo)



Celena Alcock
(BA, Waterloo)



George Cui
(BSc, SFU)



Sandesh Kumar
(BSc, IITK)

how can you get involved?

- CMPT 415/416 – independent study
- NSERC/ VPR USRA/ coop – full-time (1 semester)
- Part-time research assistant (paid/ unpaid)

beyond CMPT 363 – your thoughts?

- what types courses would you like to see?
- tentative plans:
 - start a lower-level 363-type course
 - start a more targeted 463 course (e.g., advanced prototyping and/or advanced UX research)

Thanks!

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Human-Computer Interaction
Computing Science, Simon Fraser University

Students

Parmit Chilana
Nathaniel Hudson
Laton Vermette
Anson Ho

We specialize in Human-Computer Interaction (HCI) and tackle challenging problems in understanding, designing, and engineering technologies that are social, usable, and interactive.

In addition to Computing Science, we welcome students from a variety of backgrounds, including Engineering, Design, Arts, Business, Psychology, among others.

Lowering the Barriers to Learning and Using Complex Software

Millions of end users struggle to learn how to use and configure software to meet their needs, but most forms of software help are simply not helpful. We study users' interactions with software help and learning resources and invent new systems and techniques for users to locate relevant information from the web and from other users.