

CHAPTER 11:

Communication and Collaboration



*Designing the User Interface:
Strategies for Effective Human-Computer Interaction*

Sixth Edition

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in collaboration with
Nicholas Diakopoulos

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Communication and Collaboration

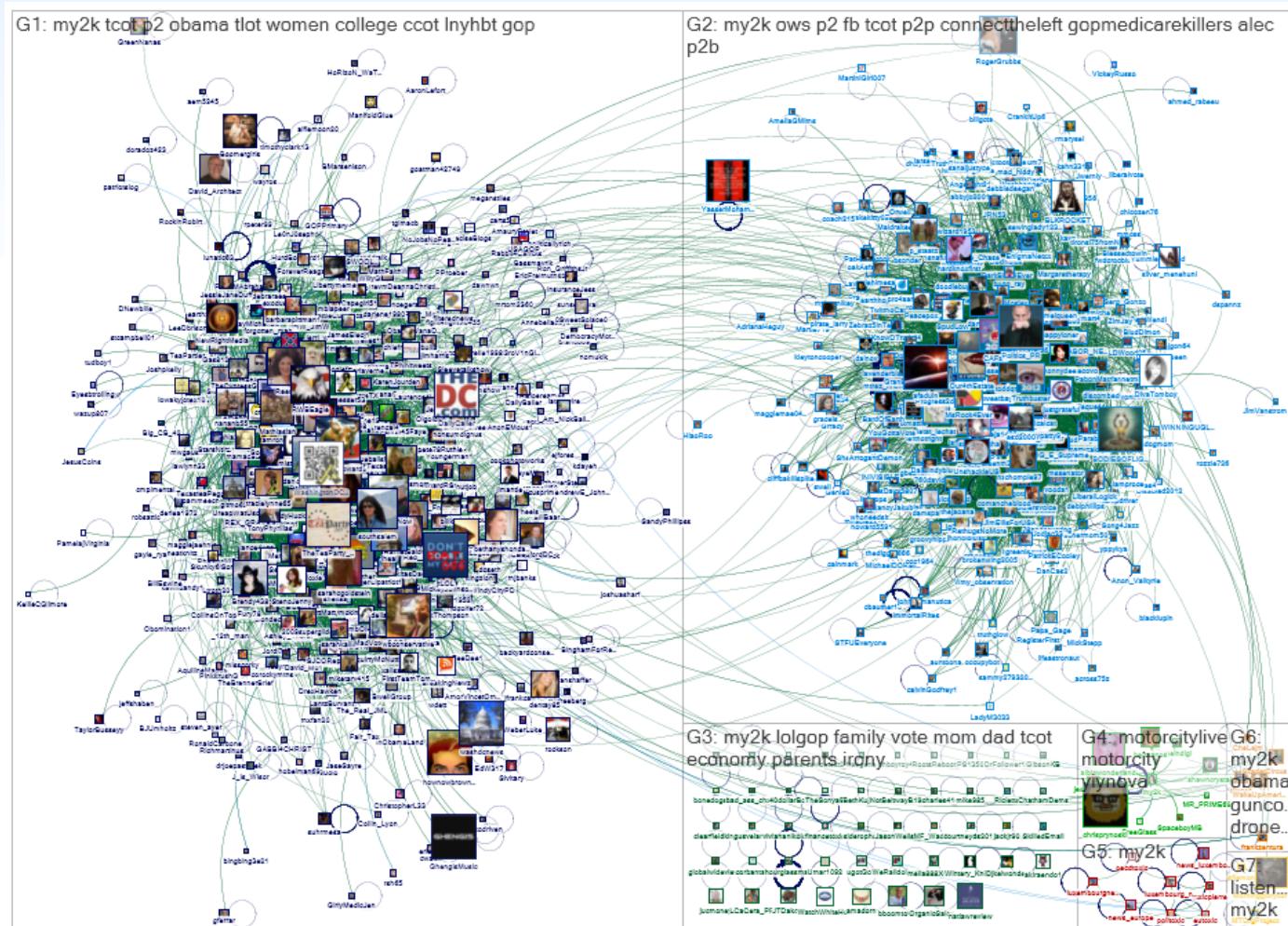
Topics

- 1. Introduction**
- 2. Models of Collaboration**
- 3. Specific Goals and Contexts**
- 4. Design Consideration**

Introduction

- Constant and immediate communication and interaction with family, friends, collaborators, colleagues, coworkers, and even pets is now commonplace in the increasingly networked world!
 - Social networks, newsfeeds, alerts and have become part of our daily lives
 - Designers need to consider the downsides and negative exigencies of such systems
 - Communication and collaboration tools shape the ability to work and accomplish shared goals with one another
 - Design for these systems can be more complex than single-user interfaces because of its far-reaching, networked, and social aspects

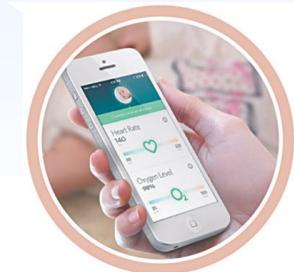
Introduction (concluded)



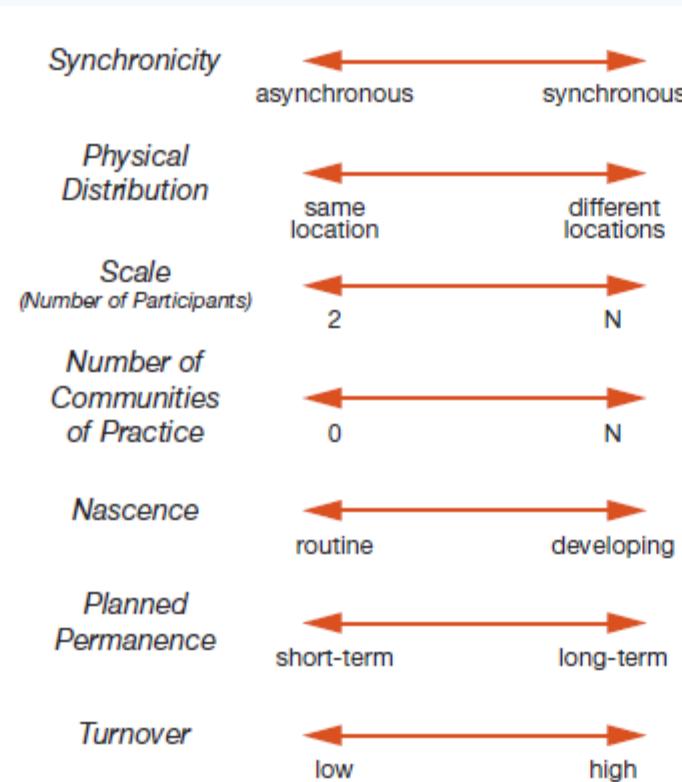
- A network map made with NodeXL software shows the polarized nature of the conversation on Twitter around the #My2k hashtag that emerge over U.S. budget struggles in 2012
<https://nodelgraphgallery.org/Pages/Graph.aspx?graphID=2272>

Models of Collaboration

- Consider a typical day for a digital native:
 - wake up
 - check social networking accounts to get the latest news
 - go to work and collaboratively edit a report
 - chat with an office colleague about the new intern
 - post a question to a Q/A site about a statistical test needed to complete the report
 - on the way out of the office text message a significant other to coordinate dinner plans
 - after dinner receive a crowd-based recommendation for a movie to watch
- Each of these activities hinges on communication
- Discussion:
 - Which of these daily activities is more similar and more different from a design point of view?



Models of Collaboration (continued)



- The seven dimensions of the Model of Coordinated Action (MoCA) model [Lee and Paine, 2015]

Models of Collaboration (continued)

The screenshot shows a Google Docs interface titled "DTUI6 Rolling agenda". The document contains two main sections: "Agenda:" and "Meeting:". The "Agenda:" section lists several items with bullet points, some of which have sub-points. The "Meeting:" section lists items for renumbering and delivery, along with specific tasks for each chapter. In the bottom right corner, there is a small chat window titled "(4) Catherine Plaisant, Maxine" with a message from "me" at 1:44 PM. The message reads: "It looks like we're converging on our Oct 16th deadline ... does anyone need any final input on figures?"

Agenda:

- calling instructions see below
- chapter status
 - 2 sets of chapters due Oct 16
- delivery
 - naming conventions
 - folders with figures
 - update table of contents
 - update spreadsheet
 - note to maxine when ready
- references dois??, sample roadmap???, quotes (no change)
- art work update
- flyer - improved, still at <http://hci2.cs.umd.edu/DTUI6/>
- figures
- publisher info
- Topics we dont cover??? robots, affective UI

Meeting:

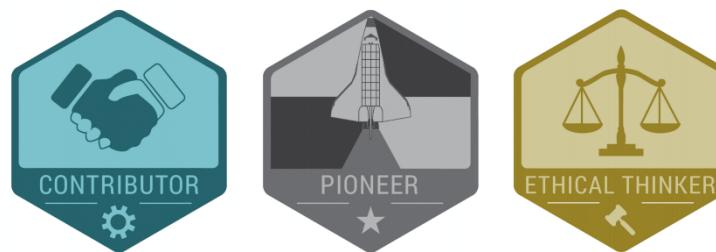
Present: Steve, Maxine, Catherine, Ben, Niklas, Nick

- Renumbering and delivery for October 16
 - Chapter 1 - ready to go (Ben)
 - Chapter 2 - ready to go (Ben)
 - Chapter 3 - ready to go (Ben)
 - Chapter 4 - ready to go (almost!) (Niklas)
 - Textbooks instead of research articles
 - New image - convergence/divergence, double diamond
 - Chapter 5 - fixing and cleaning up figures (Maxine)
 - Portable usability setup in high resolution
 - Catherine will try to help
 - Chapter 6 - almost ready to go (Steve)
 - Need new apple image (current too low res)
 - Chapter 8 - almost ready to go (Catherine)
 - Perfect! *Niklas Elmquist* well done
 - Will be

- **Synchronicity:** the Google Docs interface showing how multiple users can simultaneously be editing a document
 - Note that colored flags for different users offer concrete feedback that signals who is editing a particular part of the document
 - In the lower right corner a chat box invites users to synchronously converse with each other around the document

Models of Collaboration (concluded)

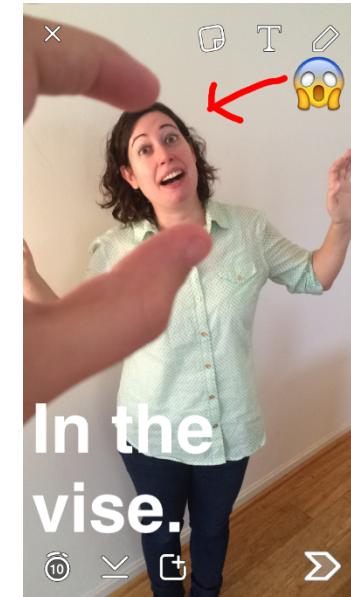
- **Nascence:** the degree to which coordinated actions are already established and routine, or if they are un-established, new, and developing
- **Planned Permanence:** some coordinated actions are shorter term, whereas others are longer term
- **Scale:** The number of participants involved
- **Number of Communities of Practice:** The types participants, e.g. multidisciplinary teams involved



- **Turnover:** Three example badges used in the DUST alternate reality game (<http://fallingdust.com>) to signal different achievements during collaborative play.

Specific Goals and Contexts

- People collaborate because doing so is satisfying or productive
- Collaboration allows individuals:
 - To reap the emotional rewards of socializing and interacting with others
 - To accomplish greater goals than they could alone
 - To meet and transact with people that they otherwise could not

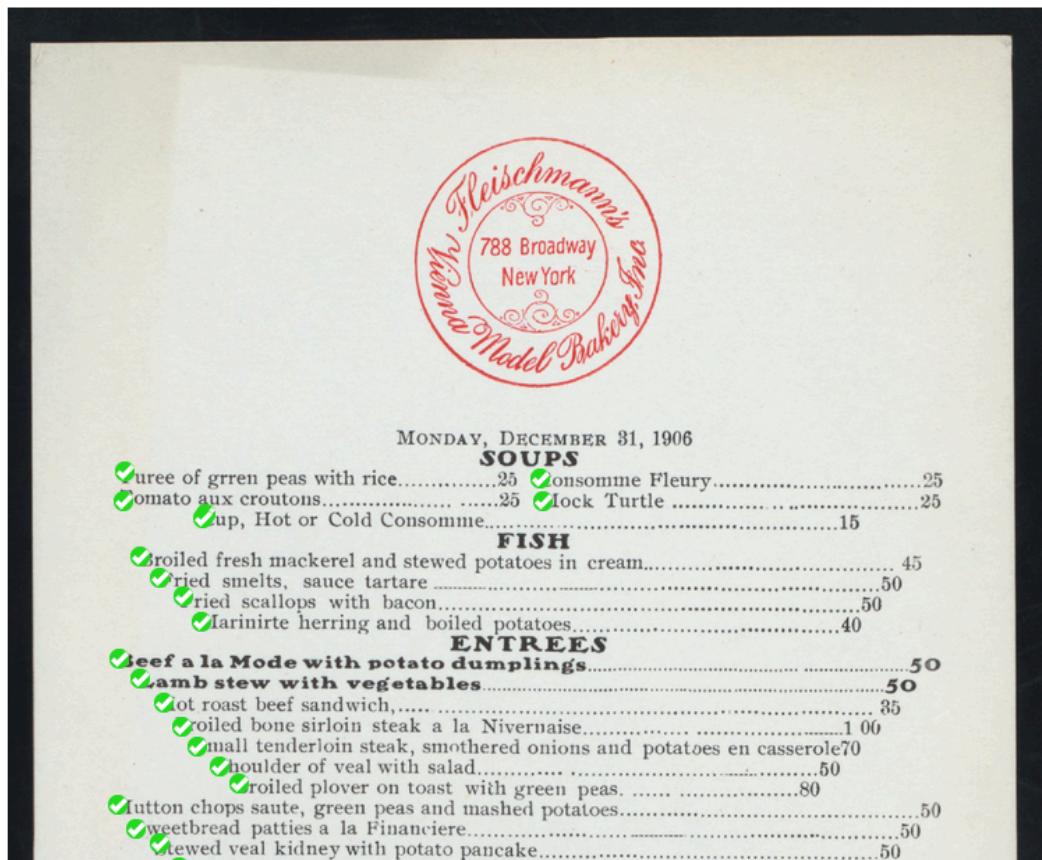


- SnapChat is an app that allows for the composition of photos, doodles, and emoji's that when sent to friends can only be viewed from 1-10 seconds as shown by the small clock with the "10" in the left corner of the composition UI

Specific Goals and Contexts (continued)

- Communication and Conversation, e.g. SnapChat
- Online Markets, e.g. eBay
- Meeting Coordination, e.g. dating web sites
- Creative Production, e.g. GitHub version control
- Crowdsourcing and Crowdwork, e.g. restaurant reviews, e.g. sites to hire contractors
- Entertainment and Gaming, e.g. Massive Multiplayer Online Role-Playing Games (MMORPG)
- Education, e.g. Massive Open Online Courses (MOOC)

Specific Goals and Contexts (continued)



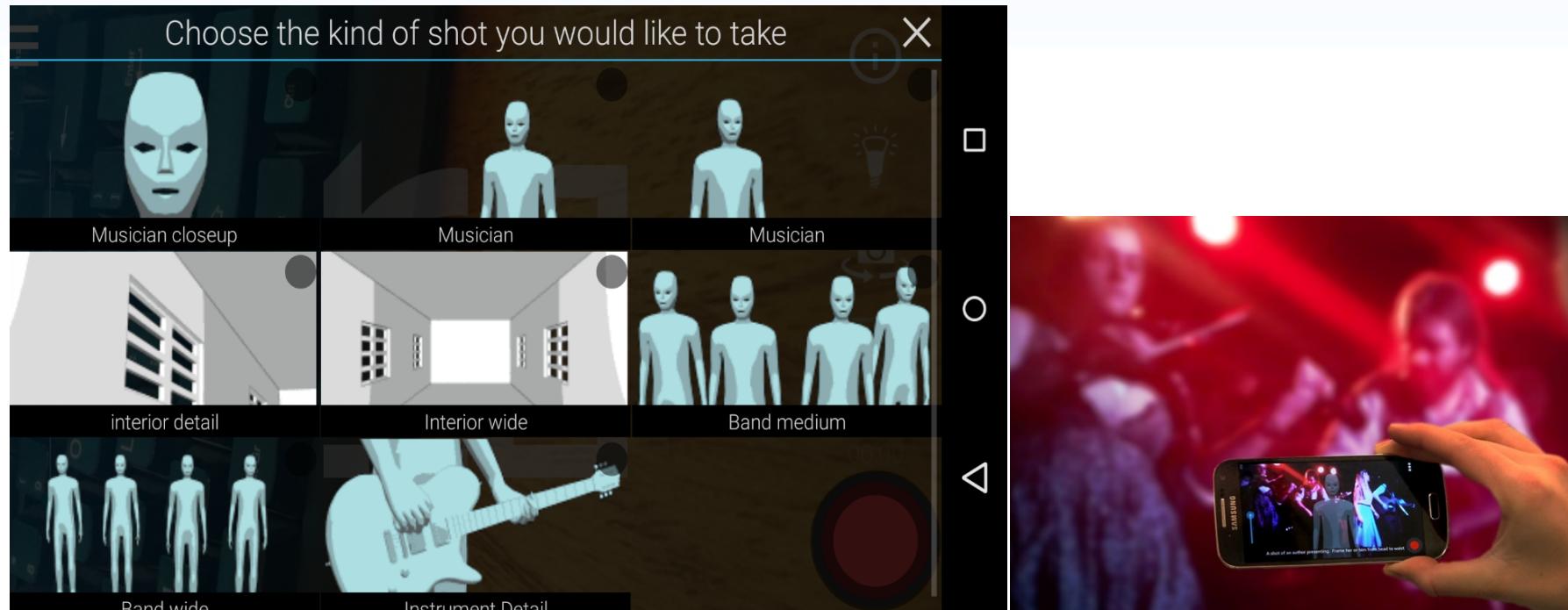
The menu is dated Monday, December 31, 1906. It includes sections for SOUPS, FISH, and ENTREES. Each item is preceded by a green checkmark.

Dish	Price
Puree Of Green Peas With Rice	0.25
Consomme Fleury	0.25
Tomato Soup Aux Croutons	0.25
Mock Turtle Soup	0.25
Cup, Hot Consomme	0.15
Cup, Cold Consomme	0.15
Broiled Fresh Mackerel And Stewed Potatoes In Cream	0.45
Fried Smelts, Sauce Tartare	0.5
Fried Scallops With Bacon	0.5
Marinirte Herring And Boiled Potatoes	0.4
Beef A La Mode With Potato Dumplings	0.5
Lamb Stew With Vegetables	0.5
Hot Roast Beef Sandwich	0.35
Broiled Bone Sirloin Steak A La Nivernaise	1.0
Small Tenderloin Steak, Smothered Onions And Potatoes En Casserole	0.7
Shoulder Of Veal With Salad	0.5

- Historical 1906 menu from Fleischmann's Bakery digitized by the New York Public Library in collaboration with thousands of crowdsource volunteers who helped type in individual menu items
 - Note the UI list at right reflects and allows for navigation of items to be digitized

http://menus.nypl.org/menu_pages/5247

Specific Goals and Contexts (concluded)



- The Bootlegger app allows users to coordinate the creative production of videos around live events

Design Considerations

- Cognitive Factors
 - Common Ground
 - Social Cues
 - Activity Awareness
 - Interruptions
- Individual Factors
 - Privacy
 - Identity
 - Trust and Reputation
 - Motivation
 - Leadership
- Collective Factors
 - Deviance
 - Moderation
 - Policies and Norms

Design Considerations (continued)



Nick Diakopoulos @ndiakopoulos · Aug 6

Very interesting computational journalism tool from @FILWD's lab

Charles Ornstein @charlesornstein

To analyze Yelp's 1.3 million health reviews, we used an amazing tool built for us by @nyupoly. Details: enrico.bertini.io/revex

RETWEETS

4

FAVORITES

7

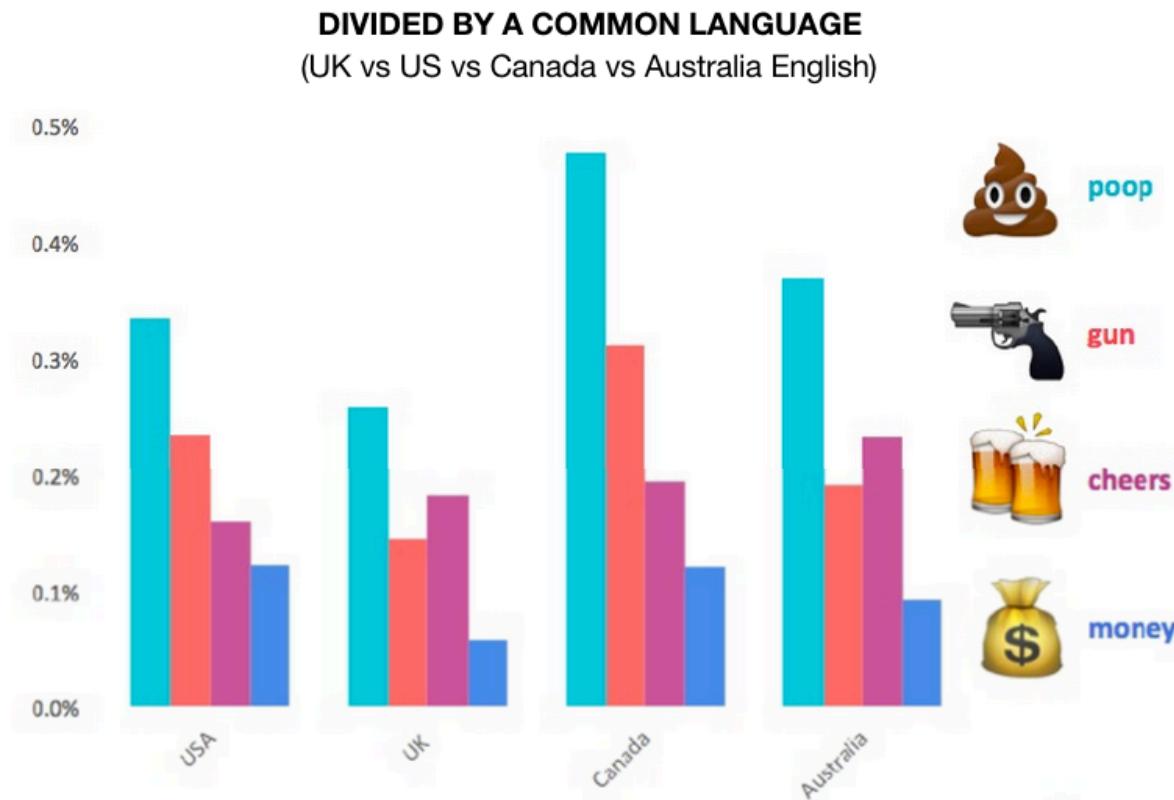


9:56 AM - 6 Aug 2015 · Details



- **Common Ground:** a tweet on Twitter can embed references in several ways, including referencing another person's account (i.e. @FILWD) as well as referencing and quoting another person's entire tweet, providing vital context and citation for the information

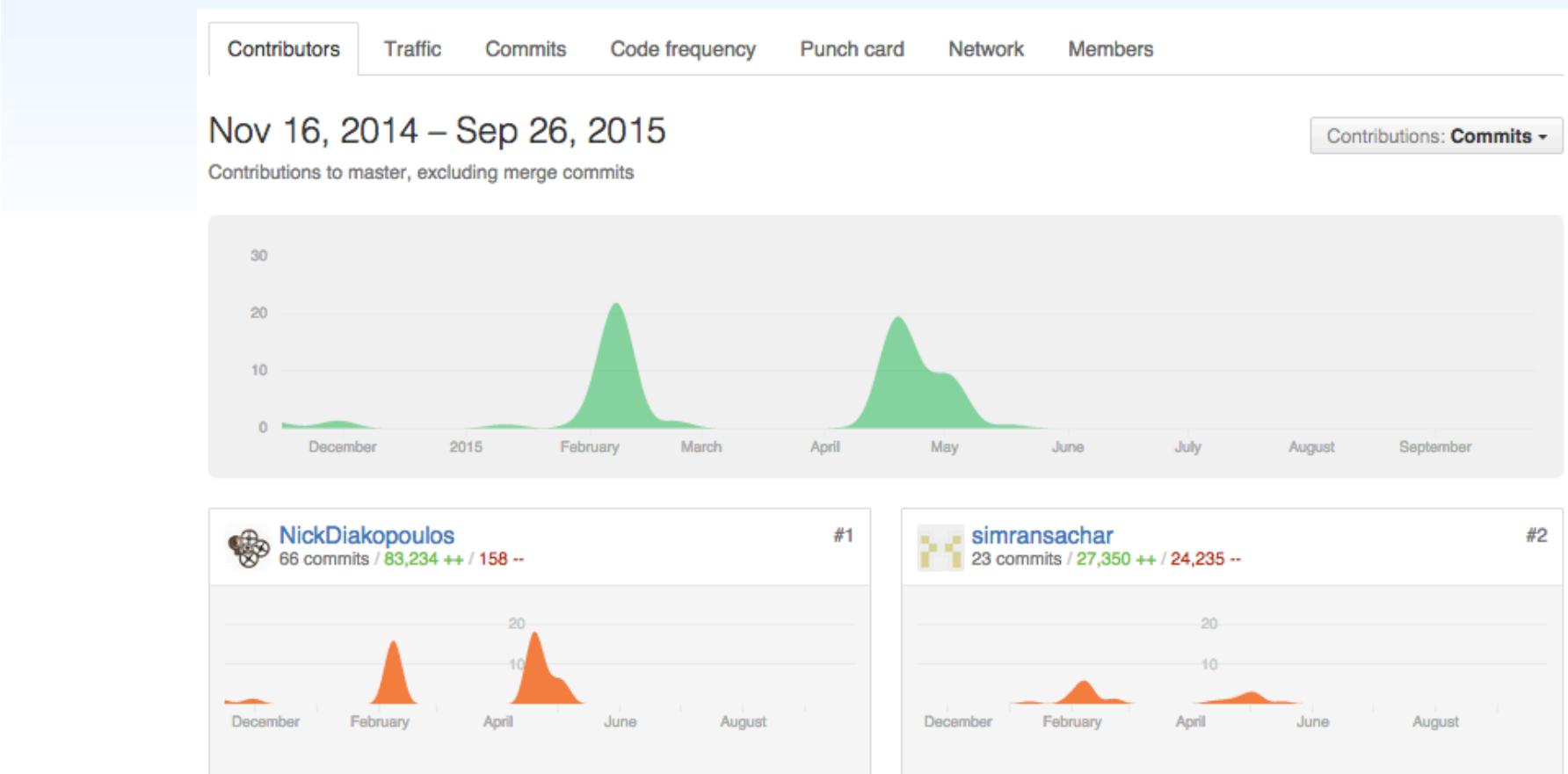
Design Considerations (continued)



- **Social Cues:** Emoji use varies across cultures

<http://www.scribd.com/doc/262594751/SwiftKey-Emoji-Report>

Design Considerations (continued)



- **Interruptions:** A GitHub dashboard charting project activity over time and indicating two users who are active in the project including their overall coding activity as well as volume over time
 - More details on activity are available by drilling into individual users

Design Considerations (continued)

David "Ayman" S.
San Francisco, CA
246 Friends | 645 Reviews | 111 Photos
Elite 2015 '14 '13 '12 '11 '10
"Place in direct sunlight, water daily."

Reviews
Sort by: Date ▾

University Cafe
££ · Coffee & Tea, British
87 Byres Road
Glasgow G11 5HN
United Kingdom
★★★★★ 7/5/2015
1 check-in
I have to do it. I have to eat fried things. I have to have the deep fried haggis here along with my fish and chips. Why? Because yes, coming from the south of the USA, I understand you can deep fry a pizza or a Mars bar...but taking haggis and frying it into some kinda incredible offal falafel log is just a next level power-up maneuver.
Was this review ...?
Useful 1 Funny Cool

The Interval At Long Now
\$\$ · Museums, Cafes, Cocktail Bars
2 Marina Blvd, Bldg A
San Francisco, CA 94123
★★★★★ 7/5/2015
1 check-in
Ok so this is a non-profit coffee shop/bar with artwork by Eno and others hanging behind the bar and friendly servers. I wish there was more than one small booth with a view of the bay but totally I'm a fan of what's happening here. Take time to look at all the artwork and installations because they are as fantastic as the food and drink here.
Was this review ...?
Useful Funny Cool

About David S.
Rating Distribution

Rating	Count
5 stars	152
4 stars	291
3 stars	132
2 stars	61
1 star	9

[View more graphs »](#)

Review Votes
Useful 568
Funny 308
Cool 220

Stats
Tips 87
Review Updates 8
Bookmarks 172
Events Submitted 2
Firsts 62
Fans 13
Lists 10

104 Compliments
1 12 21 17 8 4
9 32

Location
San Francisco, CA
Yelping Since
January 2007

- **Trust and Reputation:** A user page on Yelp showing a variety of social activity context including volume of activity like reviews and photos, an “elite” badge, a graph of ratings previously made, feedback on the user’s reviews including if they were useful, funny, or cool, and other compliments
 - This rich information can help others understand the reliability of this user

Design Considerations (concluded)

The screenshot shows a comment from a user named 'Texas' posted on September 11, 2013. The comment reads: "Say what you will about the Russians and Mr. Putin in particular. ... in peace with each other if only we would really try." A yellow 'PICK' badge is visible next to the comment, indicating it was selected by the New York Times moderation team. The interface includes navigation links for 'All 4447', 'Readers' Picks 1518', and 'NYT Picks 85'.

All 4447 Readers' Picks 1518 NYT Picks 85

Texas • September 11, 2013

Say what you will about the Russians and Mr. Putin in particular.
...
in peace with each other if only we would really try.

2196 Recommend

- **Moderation:** In the New York Times commenting system they mark some comments as “Times Picks” with a bright yellow badge, indicating it is an exceptional comment and signaling norms about what constitutes an interesting and valuable contribution to the comment thread.

http://www.nytimes.com/2013/09/12/opinion/putin-plea-for-caution-from-russia-on-syria.html?_r=0