

PROBLEM AND MOTIVATION

- Individuals accumulate huge amounts of personal data over their lifetime and have limited tools to manage this data. [3]
- Information overload is becoming more and more prominent across information domains. [3,4]
- One particularly important challenge is to really exploit all the information we have about people who are important to us. [2]
 - Have the right information ready to hand.
 - Be able to see the big picture of our connections and relationships, from the mass of **documents** and **mail** we accumulate.

RESEARCH AIMS

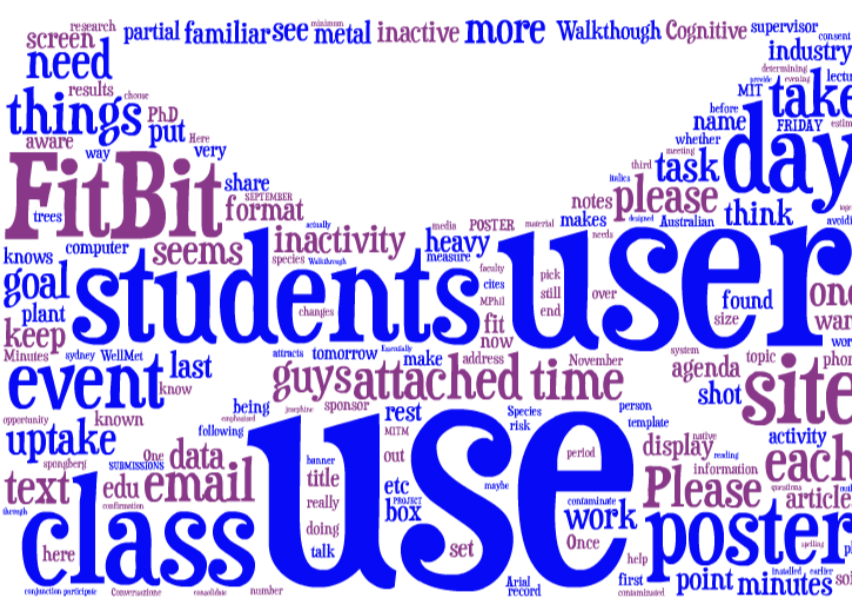
- Define **conceptual model** for a PCRM system and key **competency questions** the system must address.
- Develop a survey to inform the design and utilisation of email as a sensor.
- Develop a prototype system utilising email as a sensor.
- Evaluate visualisations of email as tools to address competency questions through user trials.

EMAIL STUDY

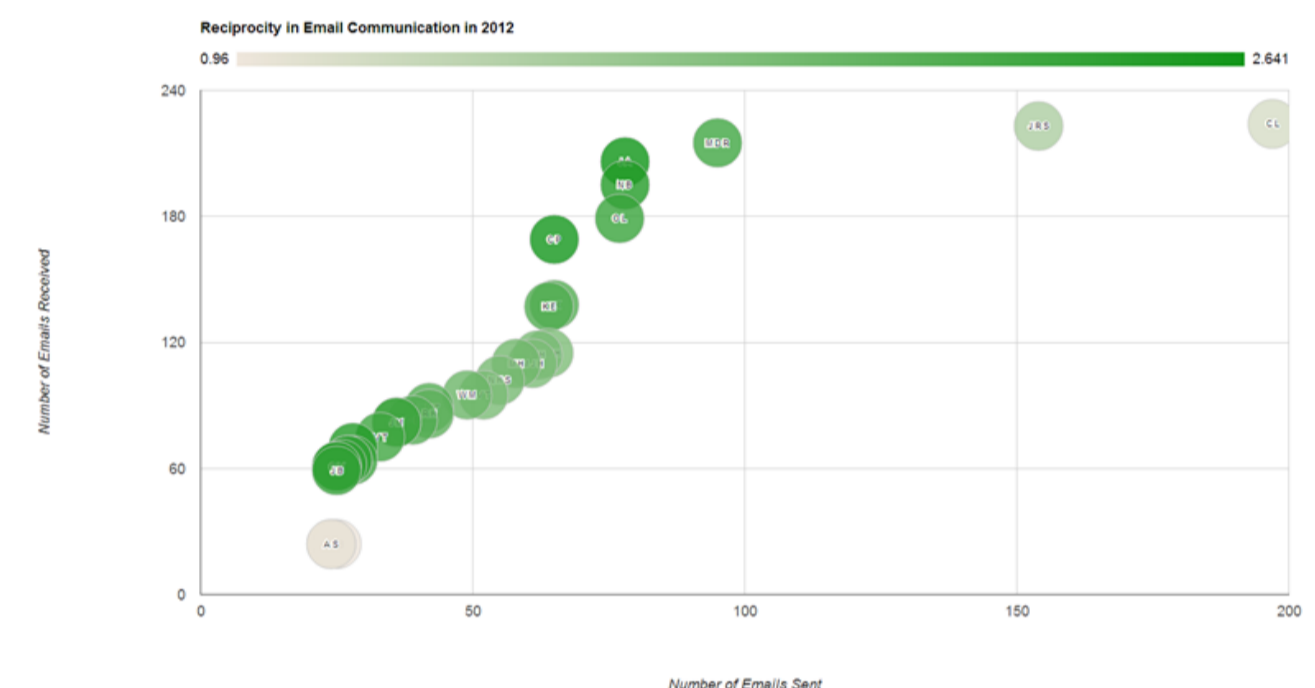
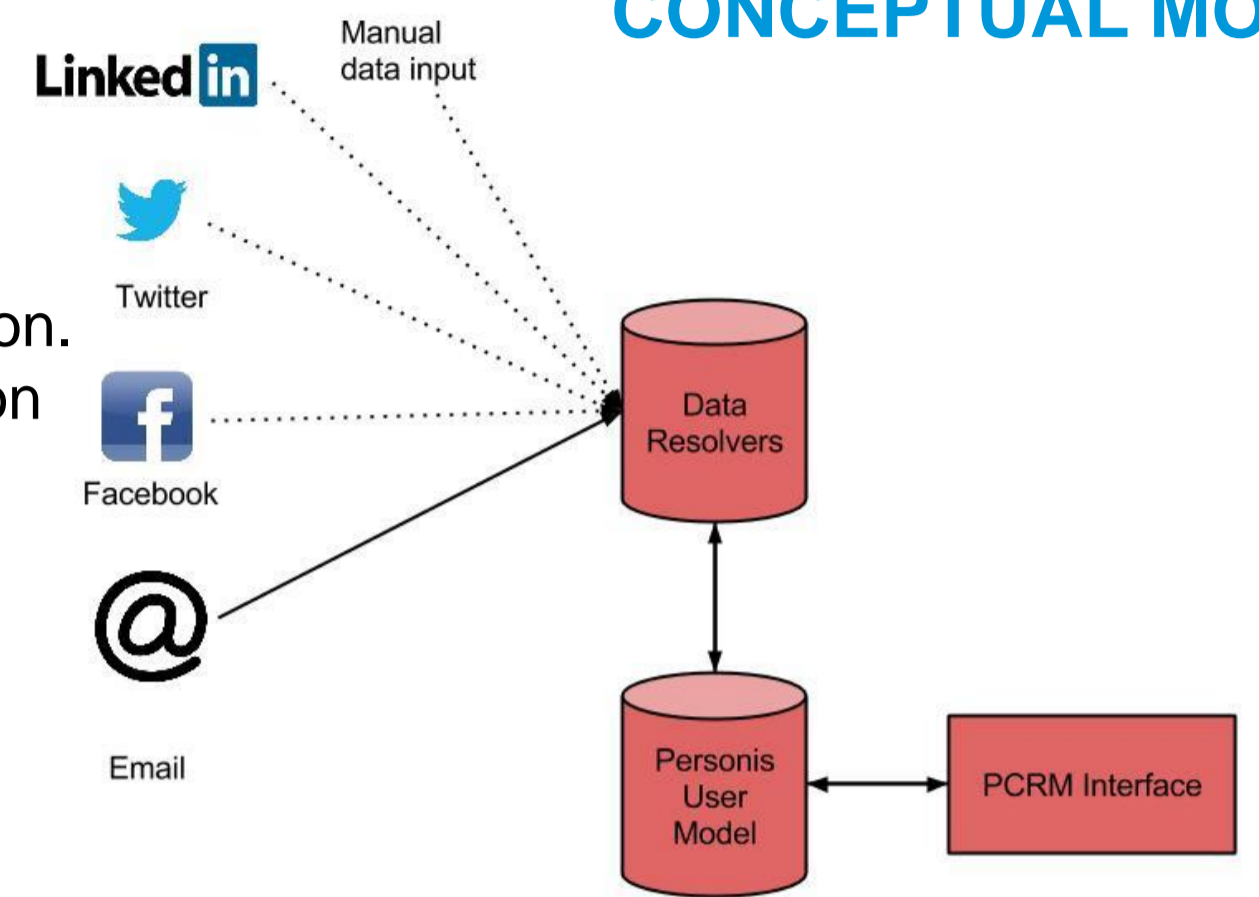
- To inform the design and utilisation of email as the primary sensor
- Provide insights into email use today.
- Report on changes from seminal paper 'Email as Habitat' [1]. Initial Hypotheses:
 - Email no longer kept entirely in inbox
 - Larger utilisation of organisational features
 - Still used for document exchange and self sent reminders

PERSONAL CONTACT RELATIONSHIP MANAGEMENT

- A way of managing all this personal information.
- Automate data collection and organisation.
- Support communication and collaboration with contacts through understanding:
 - The reciprocity of their relationship.
 - The subject material they discuss.
 - How the relationship changes over time.
 - What information there is about an individual.



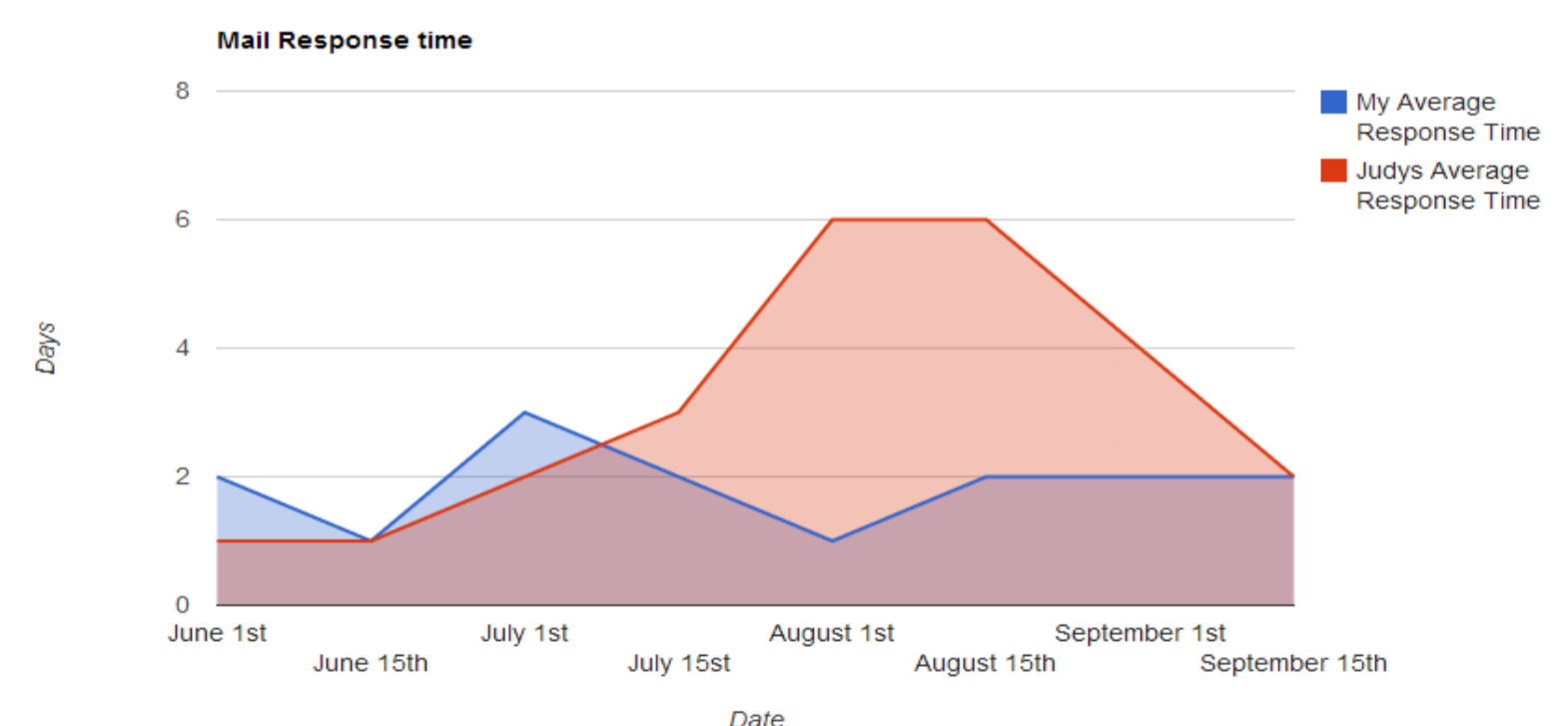
CONCEPTUAL MODEL



EMAIL VISUALISATIONS

- Visualisations aim to address the PCRM goals and
- **Bubble, line and bar charts** visualise the change in communication habits
 - Highlight reciprocity over mail communication
 - Time to send mail, time to receive mail and changes in metrics over time
- **Word Tags Clouds** visualise the email body across both select individual contacts and the entire mail archive
 - Extract the key subjects of conversation.
 - Show how these conversation change over time

Mail usage(Per Day)				
	Low (<10)	Medium (10-30)	High (30-50)	Very high (50+)
Total Number of Users (Q1,2)	12	16	15	7
Keep all mail in inbox (Q3)	83%	62.5%	40%	14%
Delete and store mail out of inbox (Q4)	17%	37.5%	60%	88%
Uses automatic filters (Q5)	10%	13%	40%	71%
Send and Receive Documents (Q6)	100%	100%	100%	100%
Use folders to organise emails (Q7)	17%	37.5%	60%	86%
Send reminders to self (Q8)	92%	94%	87%	57%
Access email on mobile client (Q9)	100%	100%	100%	100%
Access email on web/desktop client (Q10)	50%	69%	100%	100%
Dominant Desktop Clients (Q10)	Gmail Web App, Hotmail Web app	Microsoft Outlook, Apple Mail	Microsoft Outlook, Apple Mail	Microsoft Outlook
Dominant Mobile Clients (Q9)	Apple Mail	Apple Mail	Apple Mail	Apple Mail



STUDY RESULTS

- Found that there is correlations between volume of incoming/outgoing mail and the utilisations of organisation features
 - Automatic filters/rules used more widely, up to 71% of users.
 - Folder use is widespread up 86% of users.
 - Document transfer still heavily utilised.

REFERENCES

- [1] Ducheneaut, N., & Bellotti, V. (2001). E-mail as habitat: an exploration of embedded personal information management. *interactions*, 8(5),
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- [3]William Jones. 2007. Personal information management. *Annual Review of Information Science and Technology*, 41(1):453-504.
- [4] Roman Soucek and Klaus Moser. 2010. Coping with information overload in email communication: Evaluation of a training intervention. *Computers in Human Behavior*, 26(6):1458-1466.