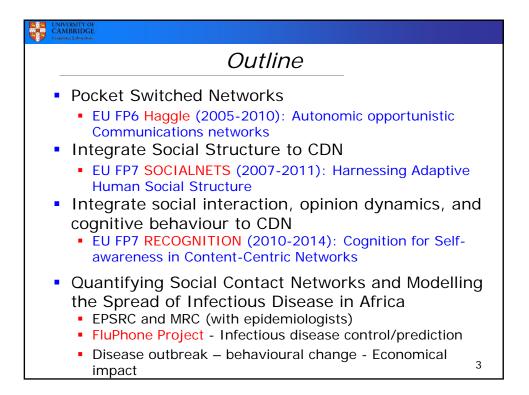
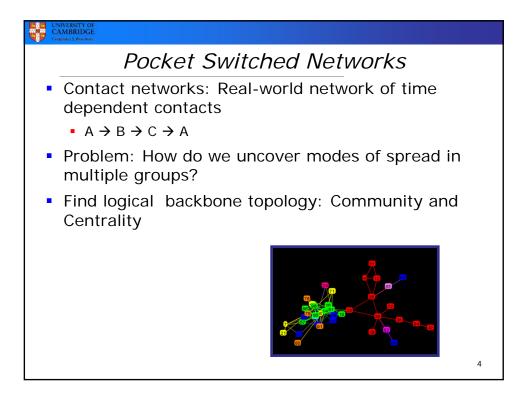
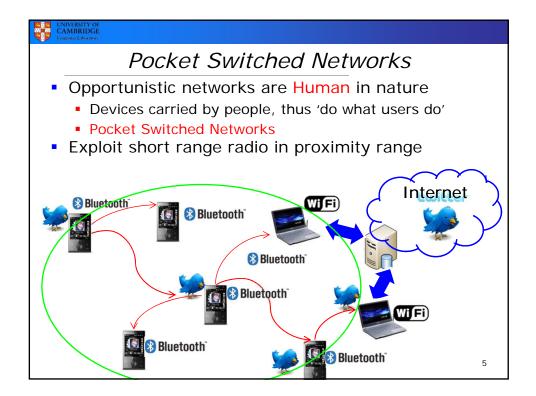
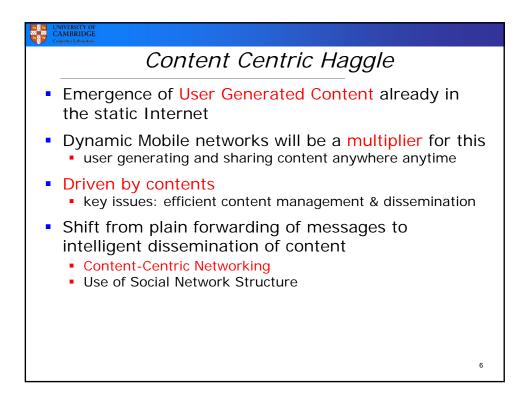


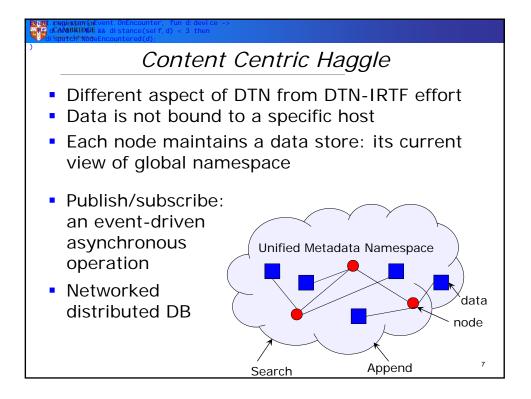
CAMBRIDGE Gampa Liberary
Current Research Projects
 Network modelling for Epidemiology (EPSRC) Infectious disease control/prediction systems Data driven complex network research
 Data Driven Declarative Networking (with MSR) Intersection of networking and programming Programming distributed and parallel computation over
 Crowd+Cloud Quantifying Social Contact Networks and Modelling the Spread of Infections (MRC with LSHTM) Disease outbreak – behavioural change
Economical impact
 Content Distribution Networks (EEU FP7 SCIALNETS, EU FP7 RECOGNITION) Understanding human behaviour for building content centric networking
 Opinion dynamics - rumour propagation - prediction Using psychological and cognitive sciences

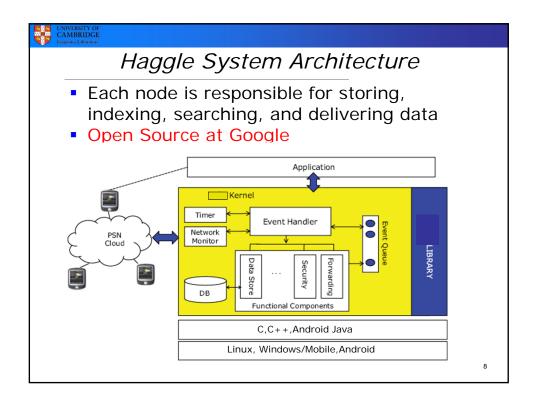


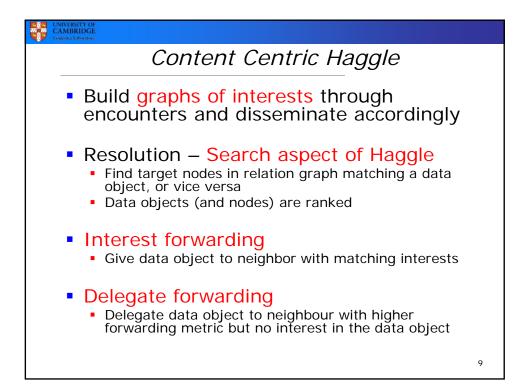


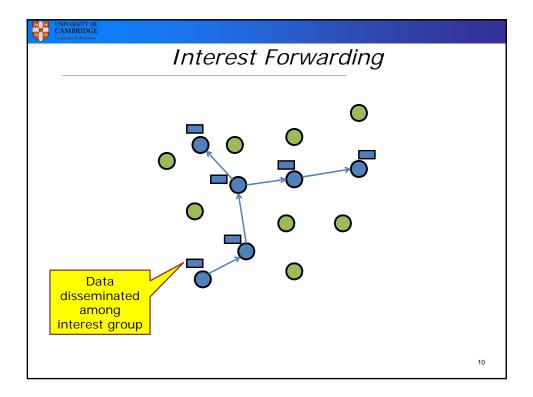


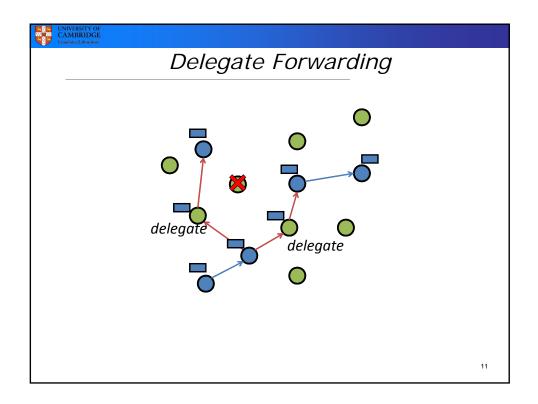


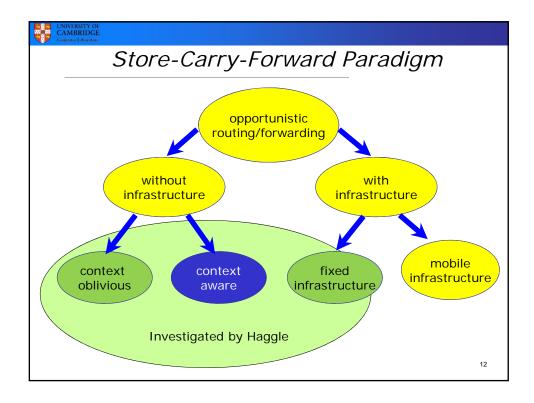


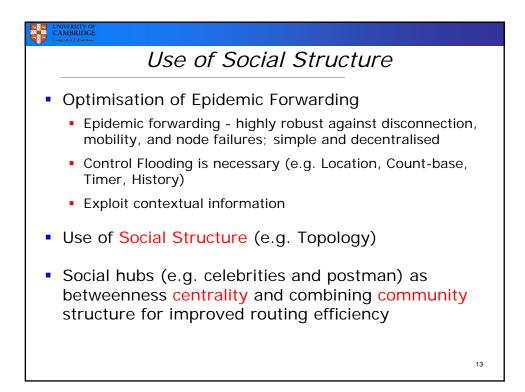


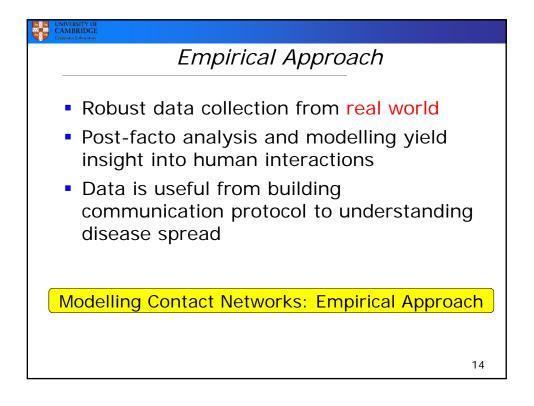




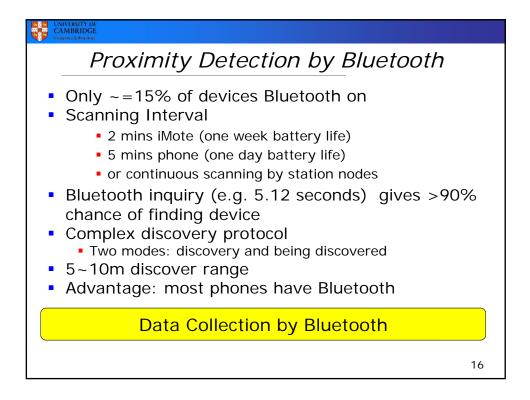


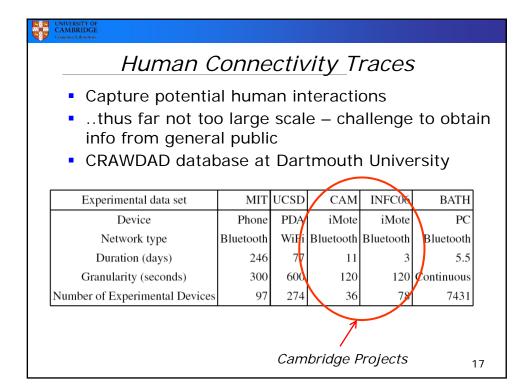


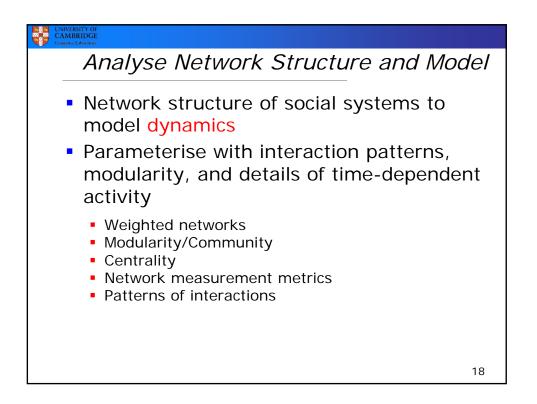


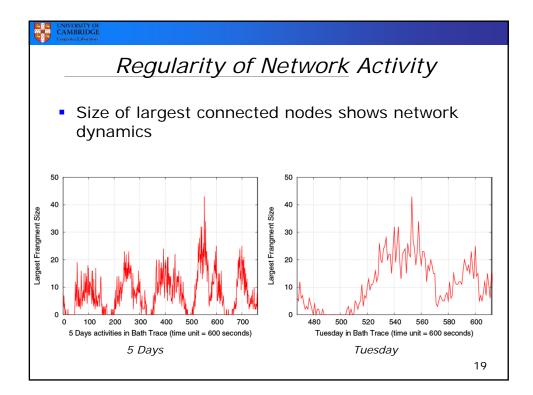


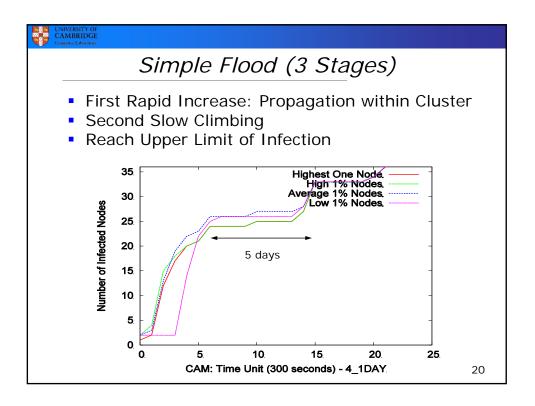


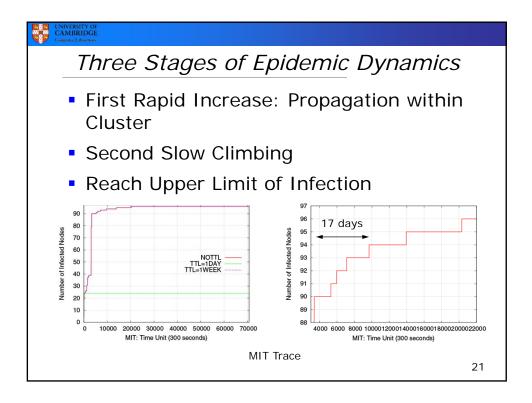


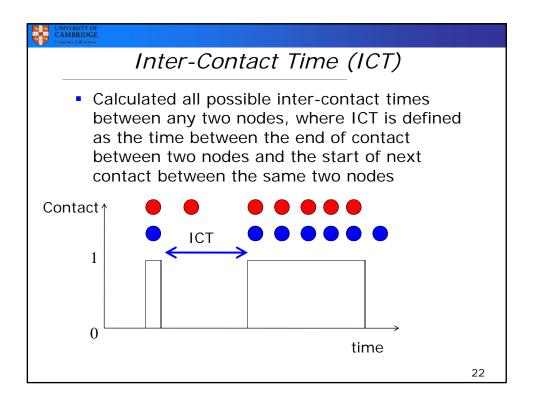


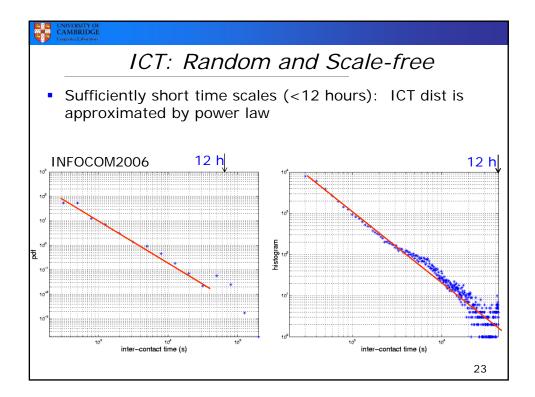


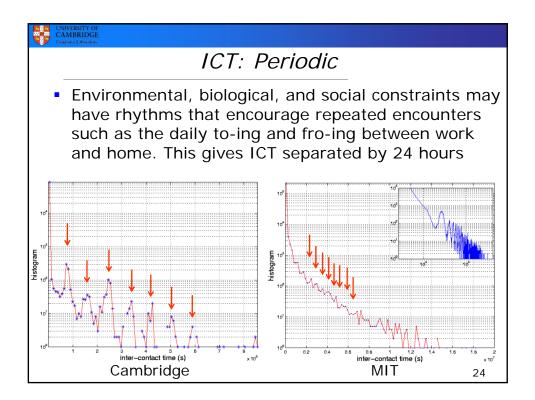


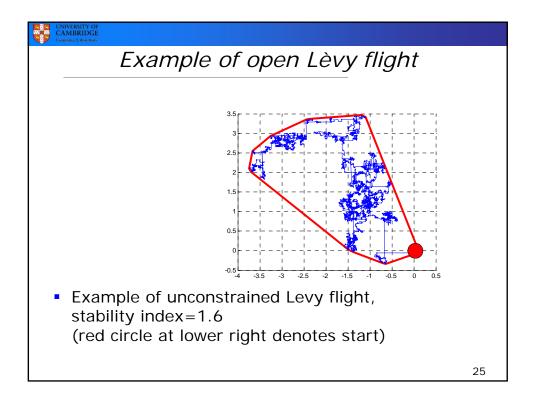


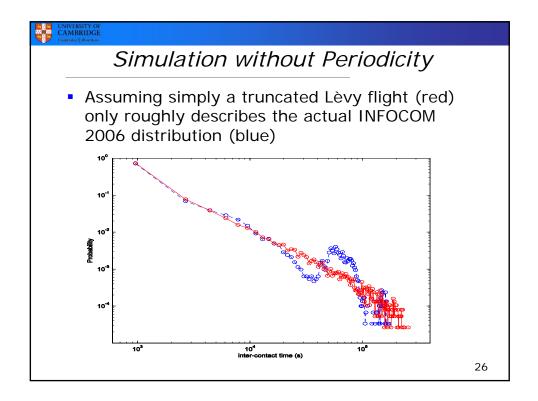


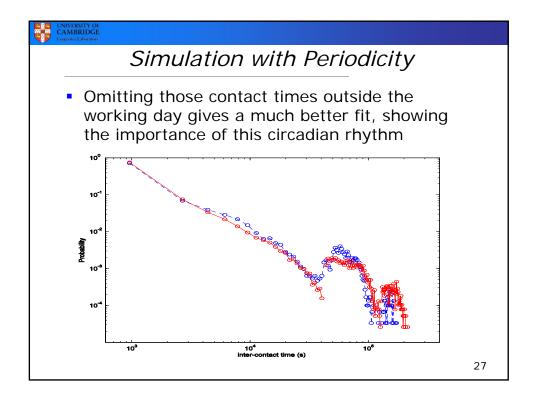


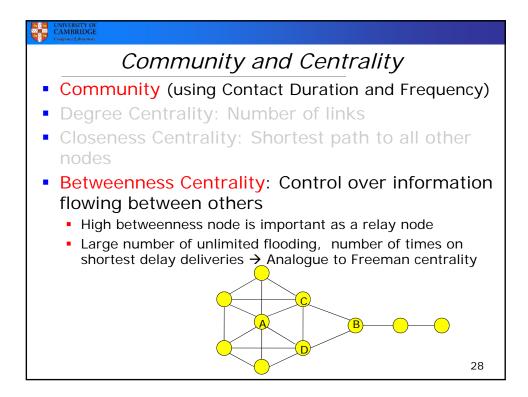


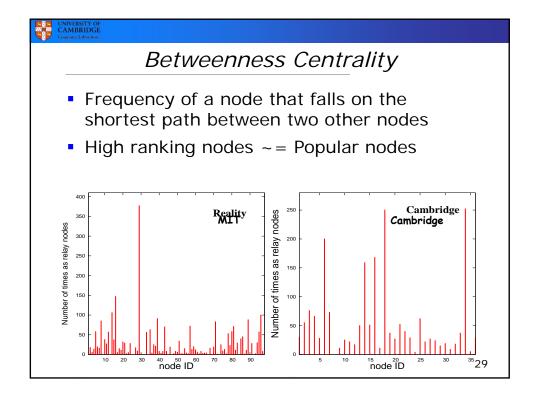


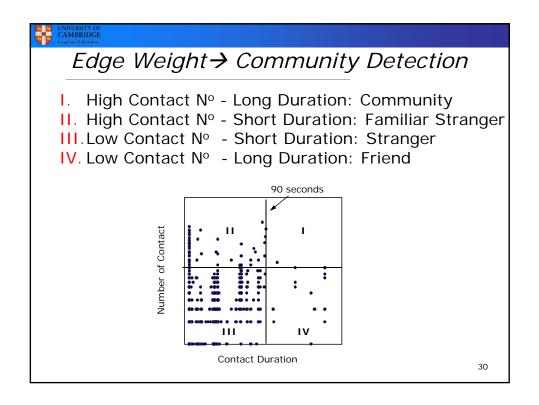


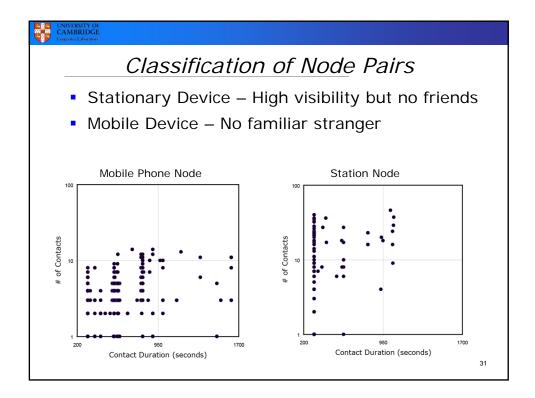


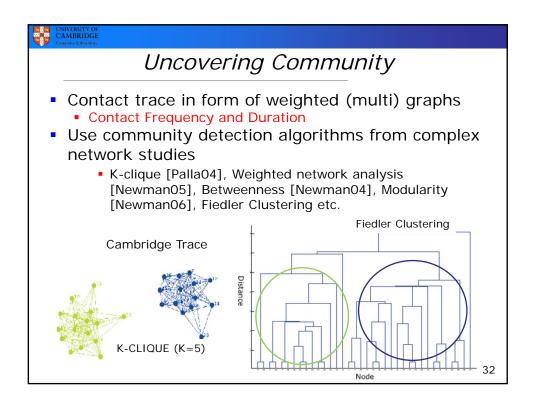


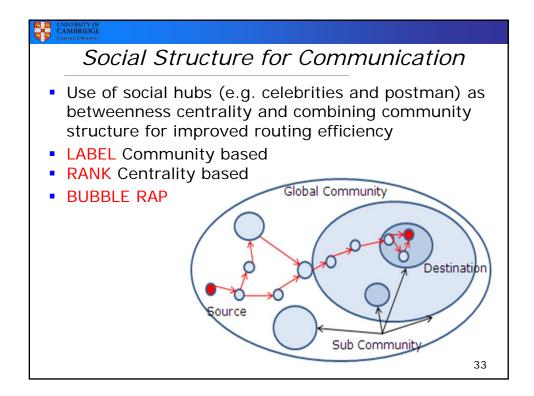


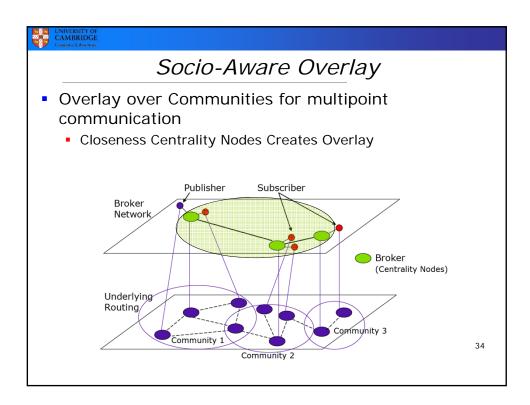


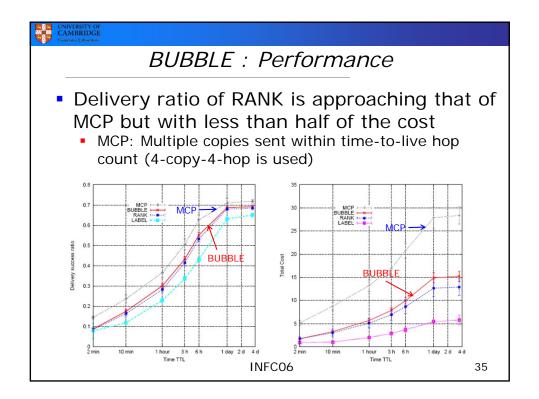


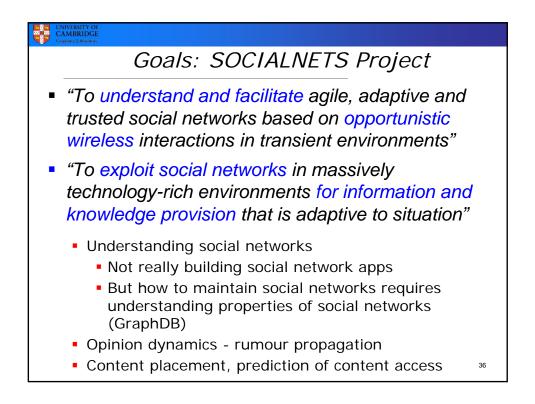


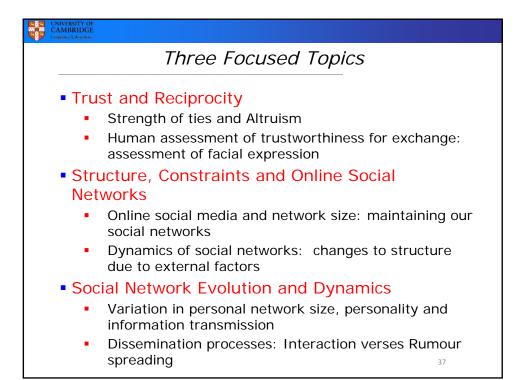


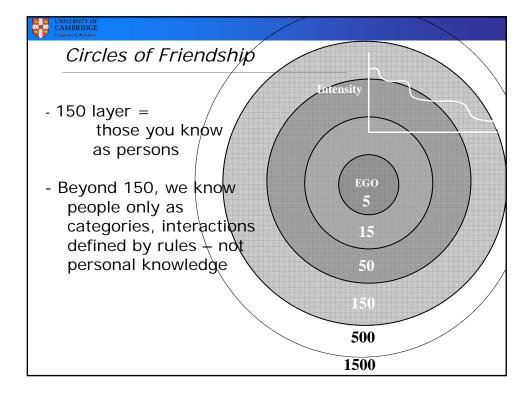


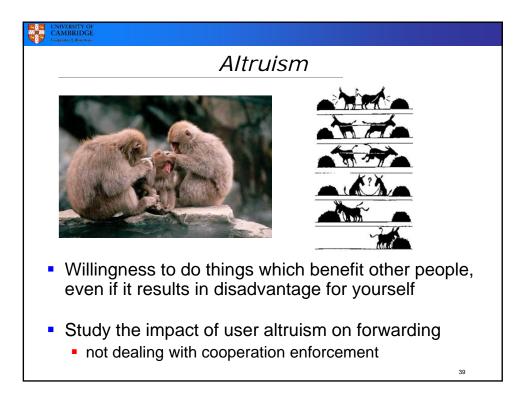


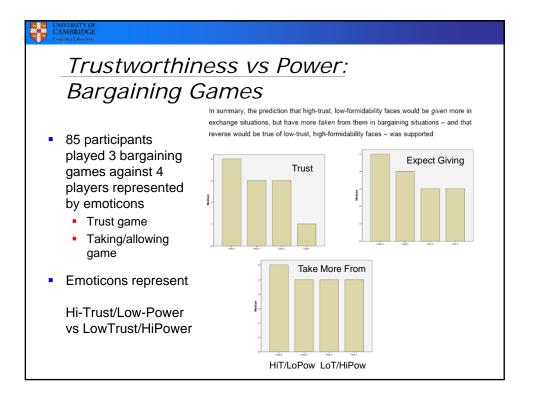


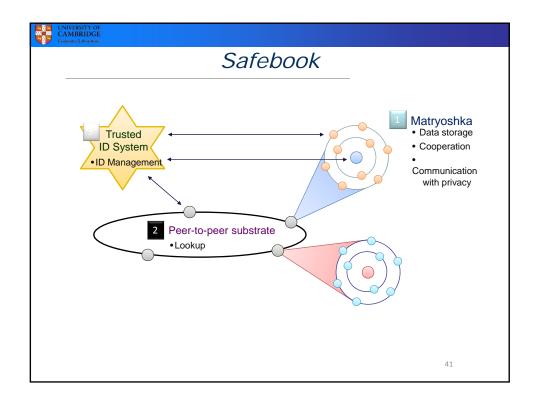


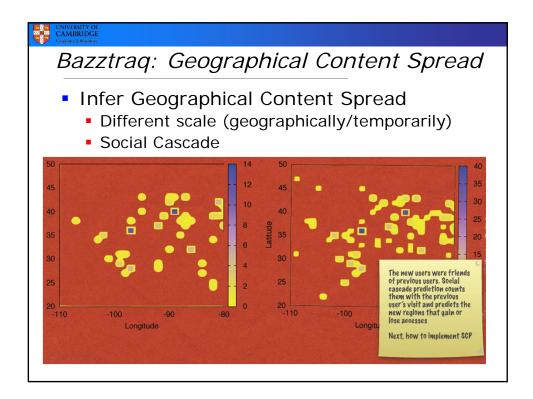


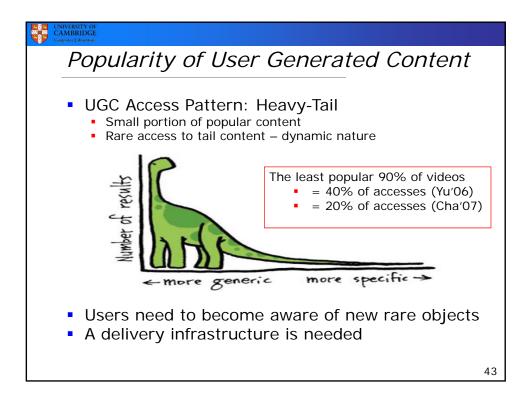




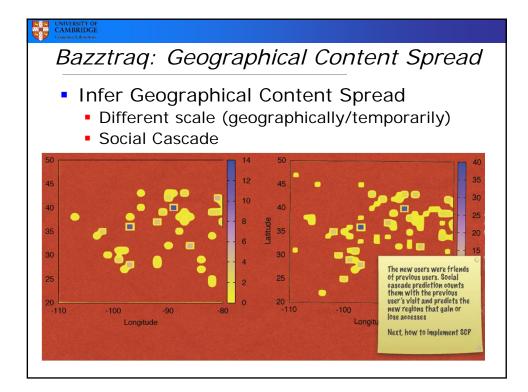


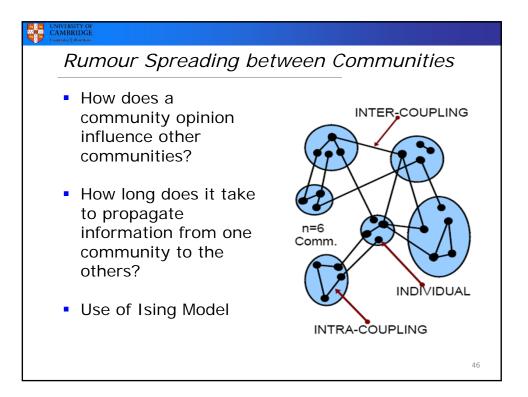


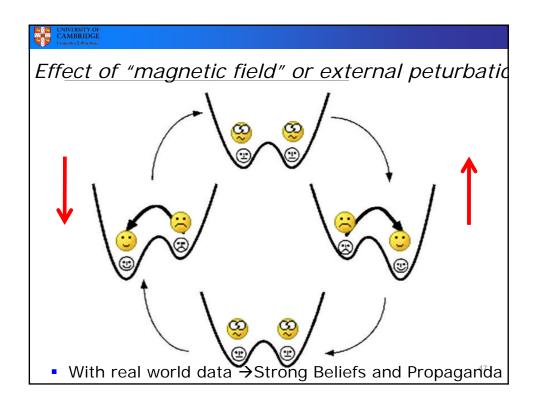




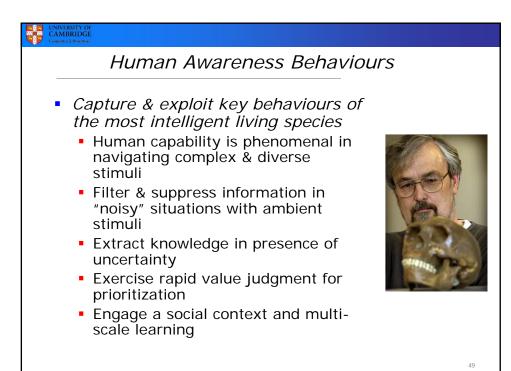
	IVERSITY OF MBRIDGE paret Laboratory							
6	Content Awareness and Delivery Method							
 Popular content: by Web advertisement, Broadcast Heavy-tail content: by Word-of-mouth: via social cascade (Cha2006) 								
	 Online social networks Email Face-to-face: phone-to-phone 							
		Awareness	Audience	Delivery Method				
	Popular Content	Web Ad, YouTube	Global, Large	CDN				
	Heavy-tail Content	Social Cascade	Friends, Global by effort	Selective Replica Placement	44			

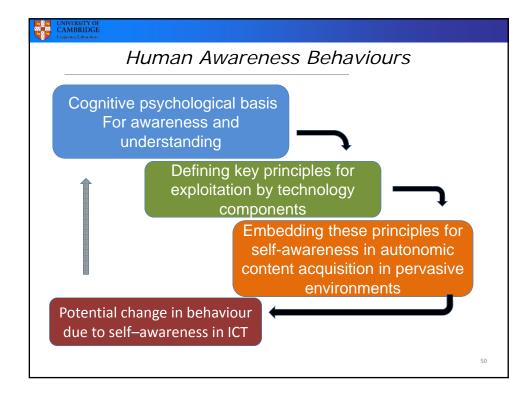


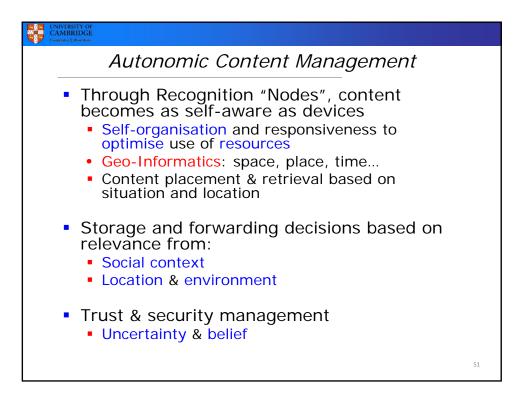


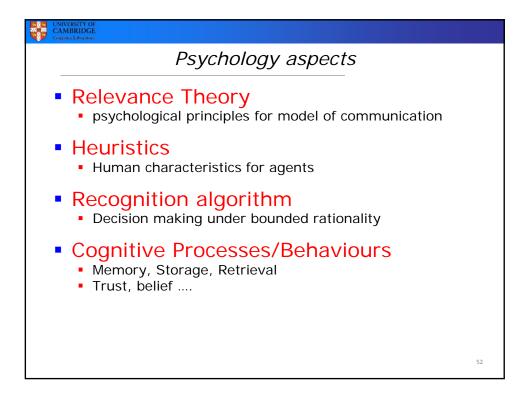


CAMBRIDGE Cambridge		
EU FP7 RECOGNITION		
 Cognition for self-awareness in a content-centric Networks Using psychological and cognitive sciences Participatory generation of content Prosumers, diversity, expanding edges Long tail, swamping, scale! Content in the environment Linkage of the physical and virtual worlds Embedding content and knowledge 	Port © B.G.M Second Second Se	
 Acquiring knowledge through social mechanisms Blogging, social networking, recommendation, RSS feeds 		
 How content reaches users will continue to change 		48

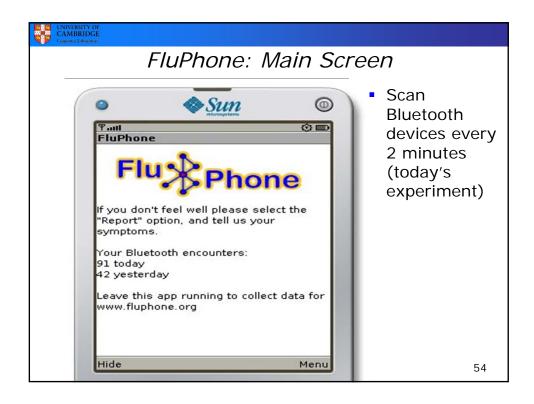


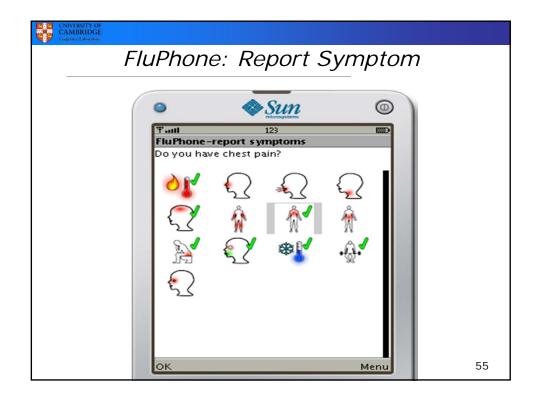




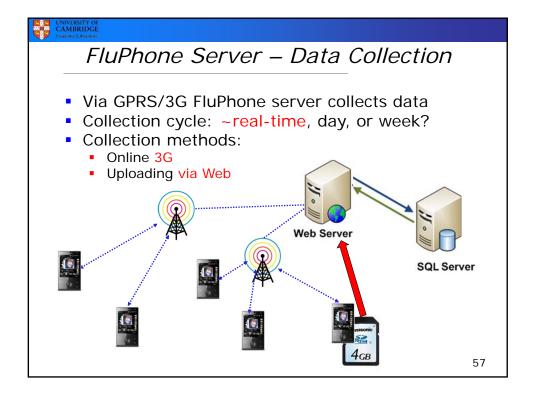


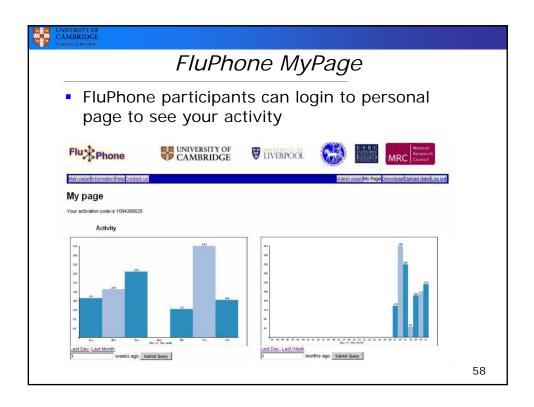


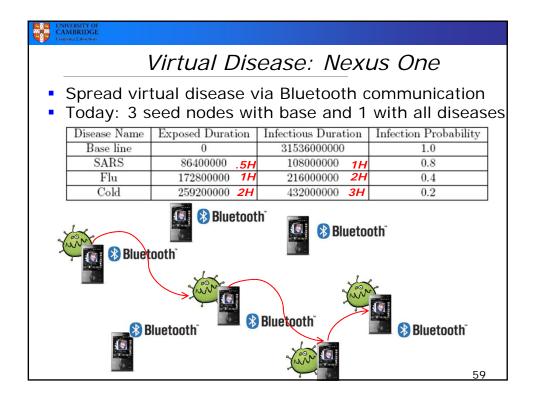




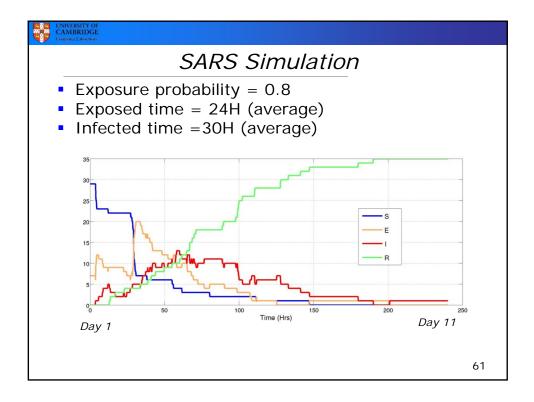
CAMBRIDGE CAMBRIDGE	
FluPhone: Report	Time - Feedback
<u>M</u> IDlet <u>V</u> iew <u>H</u> elp	MDlet View Help
• • Sun ©	• • Sun O
Tent Temperator Report Symptoms When did your fever start? Today (2010-4-13) Yesterday (2010-4-12) 2010-4-11 2010-4-10 2010-4-9 OK	Trail Report Symptoms You have respiratory symptoms suggesting an influenza-like illness. However, this is not a diagnosis. Thank you for your help! Your information will help analysing flu-like illnesses in your region. OK

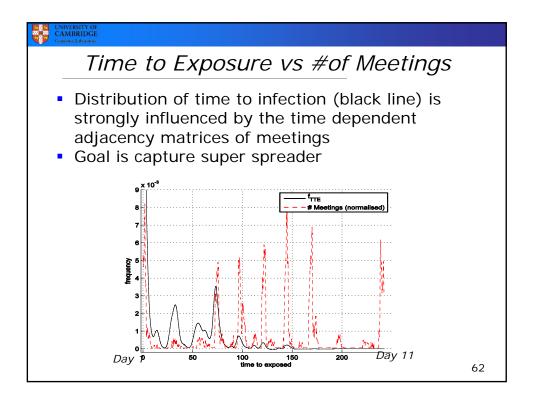


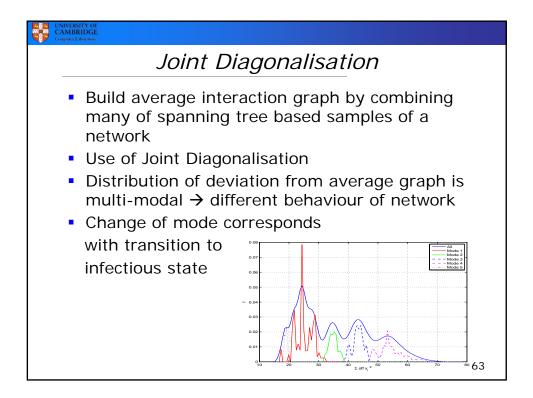




CAMBRIDGE Cambridge Lineary	
Simulation of Disease – SEIR Model	
 Four states on each node: SUSCEPTIBLE→EXPOSED→INFECTED→RECOVERD Parameters p: exposure probability a: exposed time (incubation period) t: infected time Diseases 	
 D1 (SARS): p=0.8, a=24H, t=30H D2 (FLU): p=0.4, a=48H, t=60H D3 (COLD): p=0.2, a=72H, t=120H 	
 Seed nodes Random selection of 20% of nodes (=7) among 36 nodes 	
60	







UNVERSITY OF CAMBRIDGE Compared Laborator	
Build New Proximity Detection Device	ò
 Combination of Bluetooth and Audioplus? Bluetooth: range 5-10m Audio to analyse interaction 802.15.4 + (magnet, gyroscope) 	
 Extending RFID Tags 	
 Add memory +CPU on active RFID tag 	
 NFC Nexus S 	
 Integrating sensing unit to Mobile Phones 	
GPS Logger ?iPhone how?	
• Online Social Networks ?	
 Foursquare: Checkin any location 	
6	4

