



The TEASE Project

Prof Michael Goldsmith¹, Dr Jason Nurse¹ and Dr David Lund²

¹*Cyber Security Centre, Department of Computer Science, University of Oxford, UK*

²*HW Communications Ltd*



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Driving Innovation

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TEASE

❑ **TEASE project – Trust-Enabling Augmented-reality Support for information Environments**

❑ **Core goals of TEASE:**

- ❑ To allow crisis responders and other professionals interested in situation awareness to make use of the variety of open-source information now available (e.g., Twitter, Facebook, blog posts) online
- ❑ To provide users with an innovative technology to measure the trustworthiness of this information and its source
- ❑ To incorporate information trustworthiness metadata in applications, presenting information to the user in such a way as to build trust in it where and only where deserved





Trustworthiness

30%



Two buses have collided in London on Scarman street! (@Andy)

Trustworthiness

80%



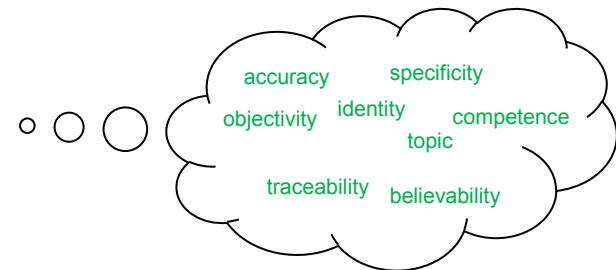
Definitely no collisions in Scarman street! I'm there now! (by Frankie)

- ❑ How do we determine how trustworthy a piece of social-media information is?
- ❑ How do we present a trustworthiness measure to tool users in a cognitively enhanced way and to build trust in information only where deserved?
- ❑ Generally, how to create an interface that is ultimately useful to crisis responders – we aim especially towards tablet PCs which can be used on the scene but also PCs to be used in Emergency Operations Centres

□ How do we calculate the trustworthiness score?

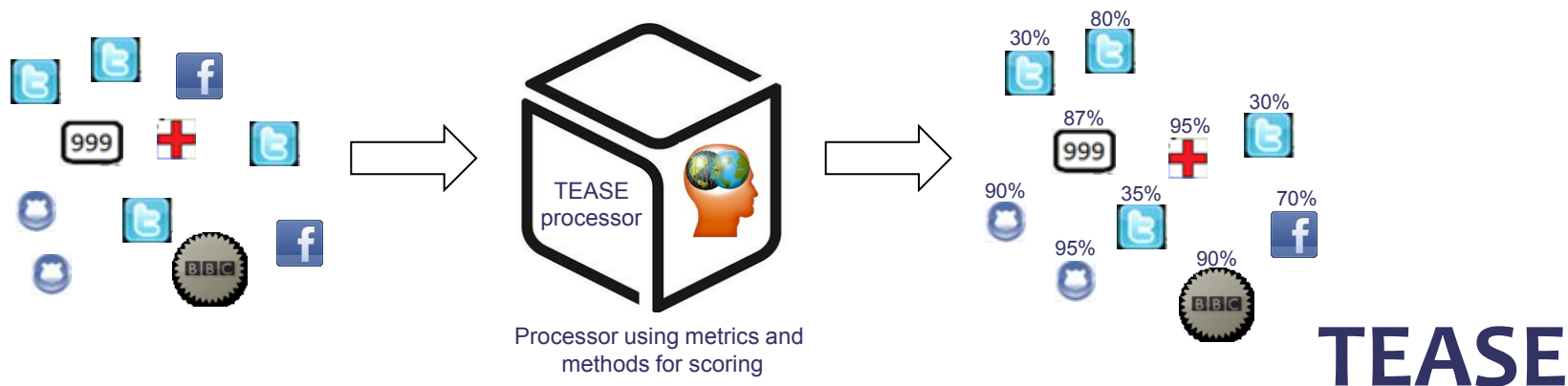
- We defined several core factors that influence confidence in information – at a high level they are:

- Information Provenance
- Intrinsic Information Quality
- Infrastructure Integrity



- We have developed a set of novel techniques and metrics to automatically analyse social-media information and metadata in light of these factors and create a combined trustworthiness score

NLP
Reputation
Corroboration
Sentiment analysis
Recency



❑ How to present information and trustworthiness in a cognitively enhanced manner?

❑ Fields from which we have drawn inspiration:

- ❑ Psychology – human cognitive processing
- ❑ Risk communication in disasters; System usability

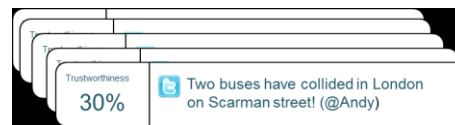


❑ We have applied various standard design principles for the TEASE interface



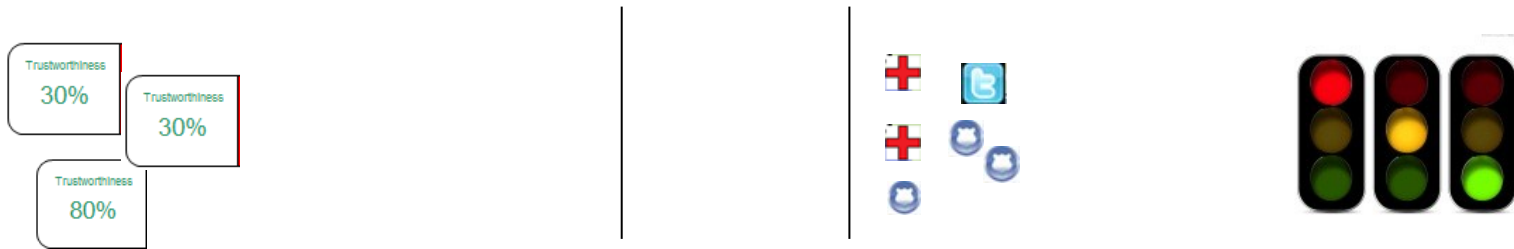
❑ Recent user experimentation has shown:

- ❑ TEASE design interfaces are highly usable – most users able to perform necessary tasks quickly and accurately
- ❑ Preference for simple trustworthiness visualisation techniques...
- ❑ Persons are capable of cognitively combining information content and trustworthiness measures...

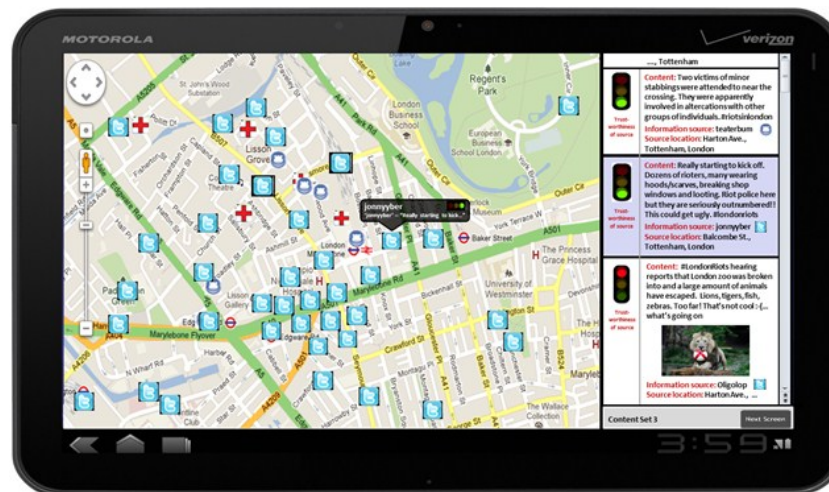


TEASE

- Preference for very simple trustworthiness visualisation techniques



- Persons are capable of cognitively combining information content and trustworthiness measures to make a decision



❑ **How to create an interface that is ultimately useful to professionals in Crisis Management and Response?**

- ❑ We would like to take the opportunity provided by this session of...



- ❑ ... to demo the TEASE tool to you and gather feedback on how useful it might be and several of the features it has, including:
 - ❑ The application's potential ability to support decision-making when a user is faced with large amounts of data
 - ❑ A cloud feature as an option to convey an overview of social-media information originating from a specific geographic location / scene
 - ❑ A confidence drill-down option that enables responders to see why a piece of information is rated by the tool as high, medium or low trustworthiness

□ Summary

- Overviewed the TEASE research project
- Highlighted the main research problems and how TEASE addresses them
- Introduced evaluation we would like you to participate in

□ Come try out the TEASE tool!

- Evaluations to be conducted today and tomorrow
- Speak to one of us for further information and please sign-up to participate
- The tool is for your community!



Thanks for listening!

Questions, comments



TEASE