Horizon;
A Digital Economy Research Centre

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Director
• Digitization and cost of storage has already combined to generate enormous amounts of data

• ... but issues of unstructured data, data integrity and appropriate models
  “...51% of data mining projects either never left the ground, did not realize value, or the ultimate results were not measurable.”

• ... and it’s the tip of the iceberg
The Contextual Footprint

- Add sensing data from:
  - Buildings, furniture, artefacts, vehicle, biosensors
- Together with:
  - Location, context, interactions...
  - ..both virtual and physical
- Issues:
  - Lifetime, privacy, ownership, ...
Experience projects drive challenges...

Experience projects

Research challenges
- Innovation
- Human
- Infrastructural

Creative Visiting
Exposing The Footprint
The Connected Journey

...
Visitors and the act of visiting are central features of tourism and leisure
- integrate the whole visitor experience blending on-line activities with augmented physical sites
- allow creative connections between visitors & residents and current & past events

e.g. A Day in the Park:
- integration of personal and wearable technologies with the park’s embedded systems
- match visitors’ ‘thrill profiles’ to scheduled rides
- just-in-time virtual and real souvenirs
What is “Can you see me now”?

No video?
- Go to http://www.mrl.nott.ac.uk/~sdb/videos/
Mixing virtual with physical

- What is “Can you see me now”?  
  - a game?  
  - a performance?  
  - 3D social networking?  
  - a group planning tool?  
  - a basis for virtual souvenirs?  
  - an archive of an event?
Move beyond their current approach of ‘targeted profiling’ to explore new ways to view and understand contextual information

- for service providers and consumers
- on multiple timescales over extended periods of time

e.g. The Future of Brands:
- how does on-line consumer-to-consumer (C2C) information exchange impact consumer products and brands
- how do we create a framework to analyze and benchmark these emergent phenomena
• Making a behaviour based dynamic model for customers
  – Deployment over vast data sets
  – Presentation of outputs
  – Projections
  – Real-time

Mobile phone usage behaviour
The Connected Journey

- Transform the journey of the future to make the experience more connected and the end-to-end journey much better integrated
  - use routine travel experiences to tackle transportation issues
  - understand human and social issues in sustainable transport
- e.g. The Socially Connected Journey:
  - how can technology make ride sharing safe and simple
  - correlate location to understand who could ride share
  - enable safe social interaction so they want to...
The Connected Journey

- Technical challenges
  - Human Factors
  - Location
  - Modelling

- Social challenges
  - Trust
  - Safety
  - Awareness
- Interdisciplinary supervision
- At least one 3-month industrial internship
- 4 year programme
- 75 PhDs over 5 years
- Broad skills
The initial partners

- Universities of:
  - Hub & DTC: Nottingham
  - Hub spokes: Cambridge, Reading, Exeter, St. Martin’s
- With:
  - Accelerate Nottingham, Aerial, Alton Towers, the BBC, Blast Theory, The British Library, Broadway Media Centre, BT, the Creative Industries KTN, EADS Astrium, emda, Experian, Greater Nottingham Partnership, HW Communications, Infoterra, the Ingenuity Programme, the IPA, Invensys, Jaguar, Leica, the Location and Timing KTN, Logica, Network Rail, Nottingham City Council, OGC, Oracle, Ordnance Survey, the Radiator Festival, Robocoaster, ScienceScope, the SEA, Sharp, Tenet, TRL
It’s the people

- Individual empowerment
- Understanding perceptions
- Ethics
- Inclusion

AT THE MOVIES, I GET FRUSTRATED WHEN WE FILE INTO OUR ROW HAPHAZARLY, IGNORING THE COMPUTATIONALLY DIFFICULT PROBLEM OF SEATING PEOPLE TOGETHER FOR MAXIMUM ENJOYMENT.

- FRIENDS
- IN A RELATIONSHIP
- ONE-WAY CRUSH
- ACQUAINTANCES

GUYS! THIS IS NOT SOCIALLY OPTIMAL!
Questions?

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