The Magician’s Assistant

Kevin Tassini
Carnegie Mellon University
Context-Aware Technology
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- Collecting data to help systematically predict the user’s state (GPS, accelerometer, microphone, time).
- Providing services that are personalized to the user based on their context.
- Types of data we can gather is getting greater and more sophisticated everyday.
About the Author

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• HCI Researcher @ Carnegie Mellon University

• User experience research/ethnography.

• Applying HCI (interaction design and user experience principles) to the public health domain, particularly in the area of public health.
• Anind Dey
• Ian Li
• Maria Brooks
• Scott Davidoff
• Gabriela Marcu
• Christian Koehler
• Brian Ziebart
• Denzil Ferreira

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• Eija Haapalainen
Potential Benefits

• Predicting context to improve energy efficiency.

Christian Kohler, Automatic Thermostat Control and Behavior Modification, Ongoing Work.
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Potential Benefits

• Predicting context to improve efficiency and ability to manage routine.

Potential Benefits

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\[ \Sigma_{\text{driver}} = P_1 \]

\[ \varnothing = \frac{\Sigma_{\text{driver}} = P_1 + \Sigma_{\text{driver}} = P_2}{L_n, R\text{type}, DoW} \]

Potential Benefits

- Predicting context to improve efficiency and ability to manage routine.

\[
\emptyset = \frac{\sum_{\text{driver}} = P_1}{\sum_{\text{driver}} = P_1 + \sum_{\text{driver}} = P_2}
\]

Potential Benefits

• Improving social interactions.

Potential Benefits

- Improving social interactions.

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Potential Benefits

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Potential Benefits

- Improving workflow and quality of life.
Potential Benefits

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Science Fiction Prototype

- Vernon uses context-aware technology throughout the day from the moment he wakes up. It communicates to him through a “lithe and lilting” female voice and he calls her Becca.

- Becca controls everything Vernon does throughout the day from the moment he wakes up.
Science Fiction Prototype

• In a world where context-aware technology is commonplace, and presumably effective, what will the implications be for the user?

• As developers of these technologies, what is our role versus the role of the user?
Thank You.