Development of Augmented Reality using Computer Vision; Problems & Proposed Solutions with the present AR

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State of the Art :

- Geo-tagging is limited to point of interest.
- Using inertial information is not enough to obtain accurate 2D marker less tagging.

Our Work :

- Takes advantage of the biggest geographical database available : *Google Street View*.
- To improve GPS information with the fusion of computer vision to obtain accurate Region of Interest stored in a database.

Input from User

Hypothetical Inertial Navigation Information (INIh)

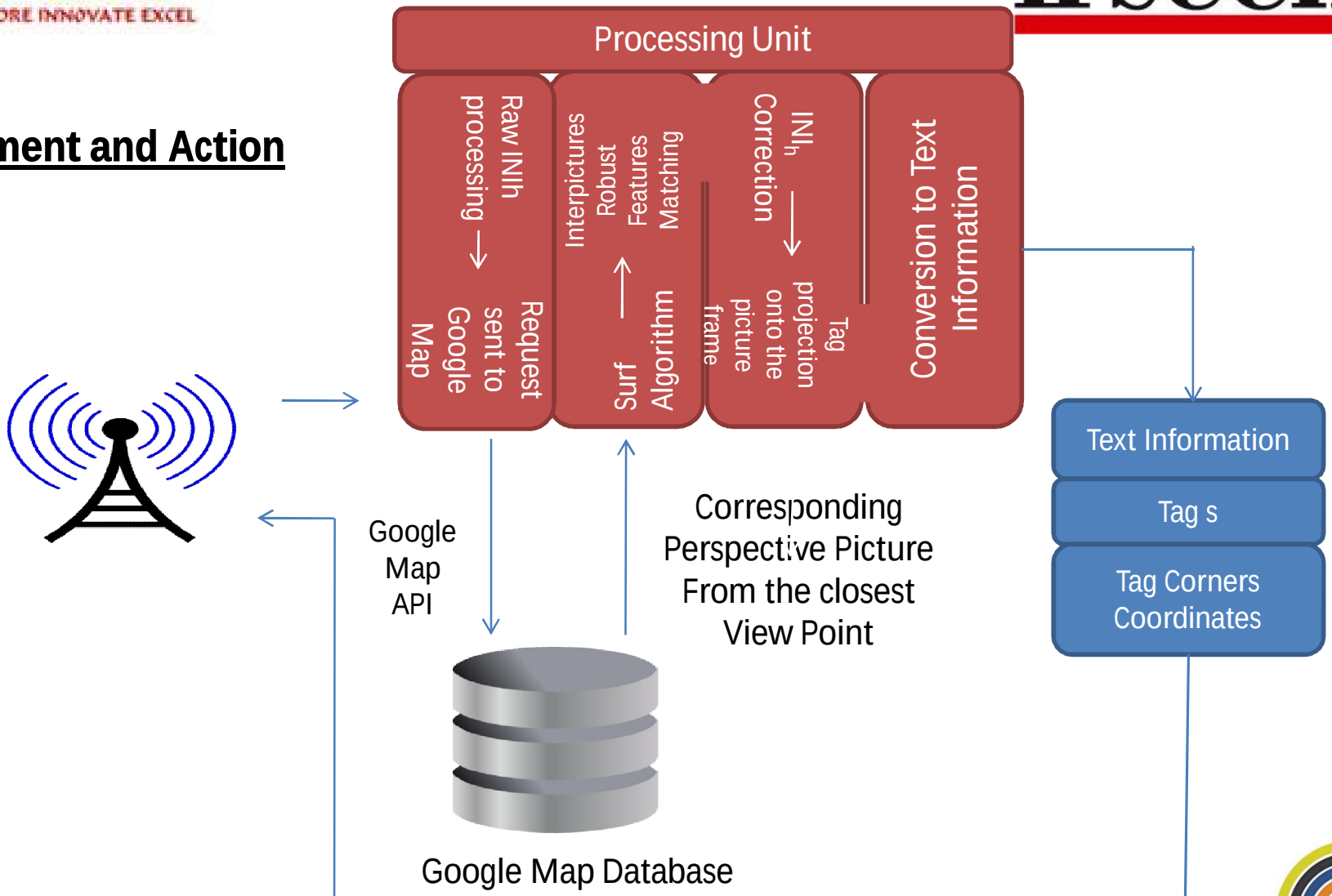
GPS
Accelerometers
Digital Compass

User Picture

Augmented Reality

Tags Overlay

Treatment and Action

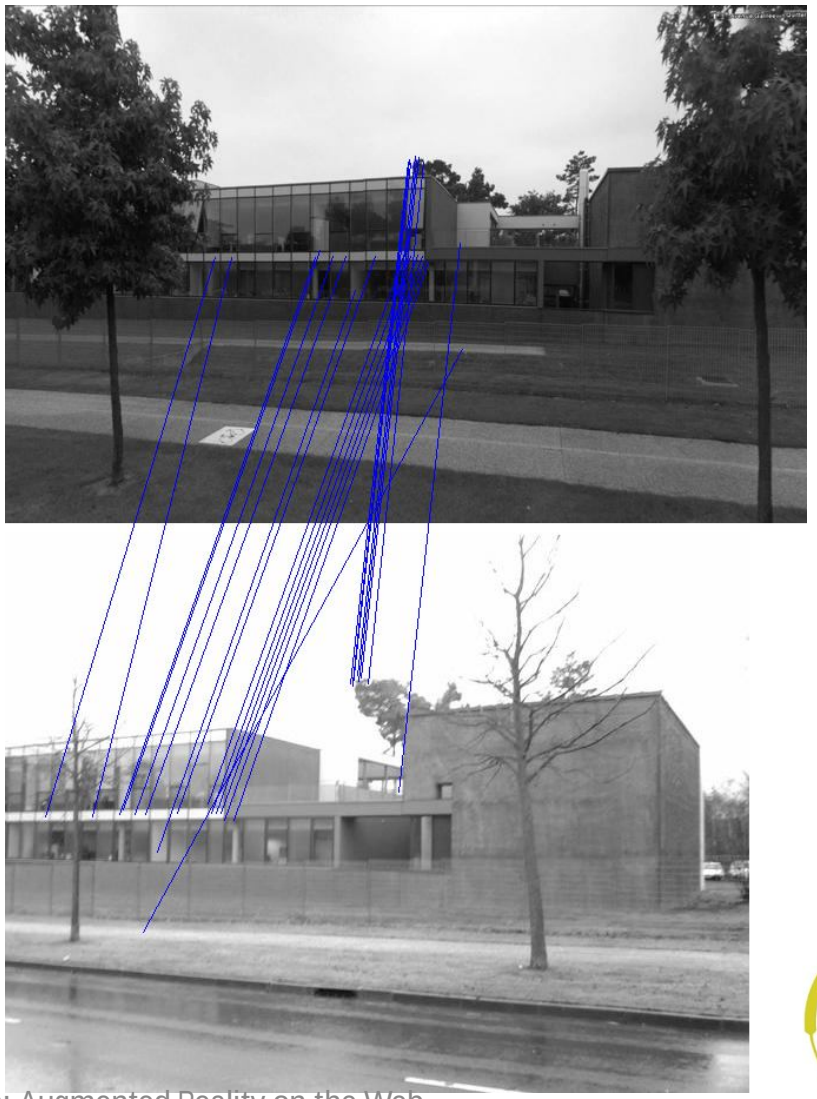


Illustration

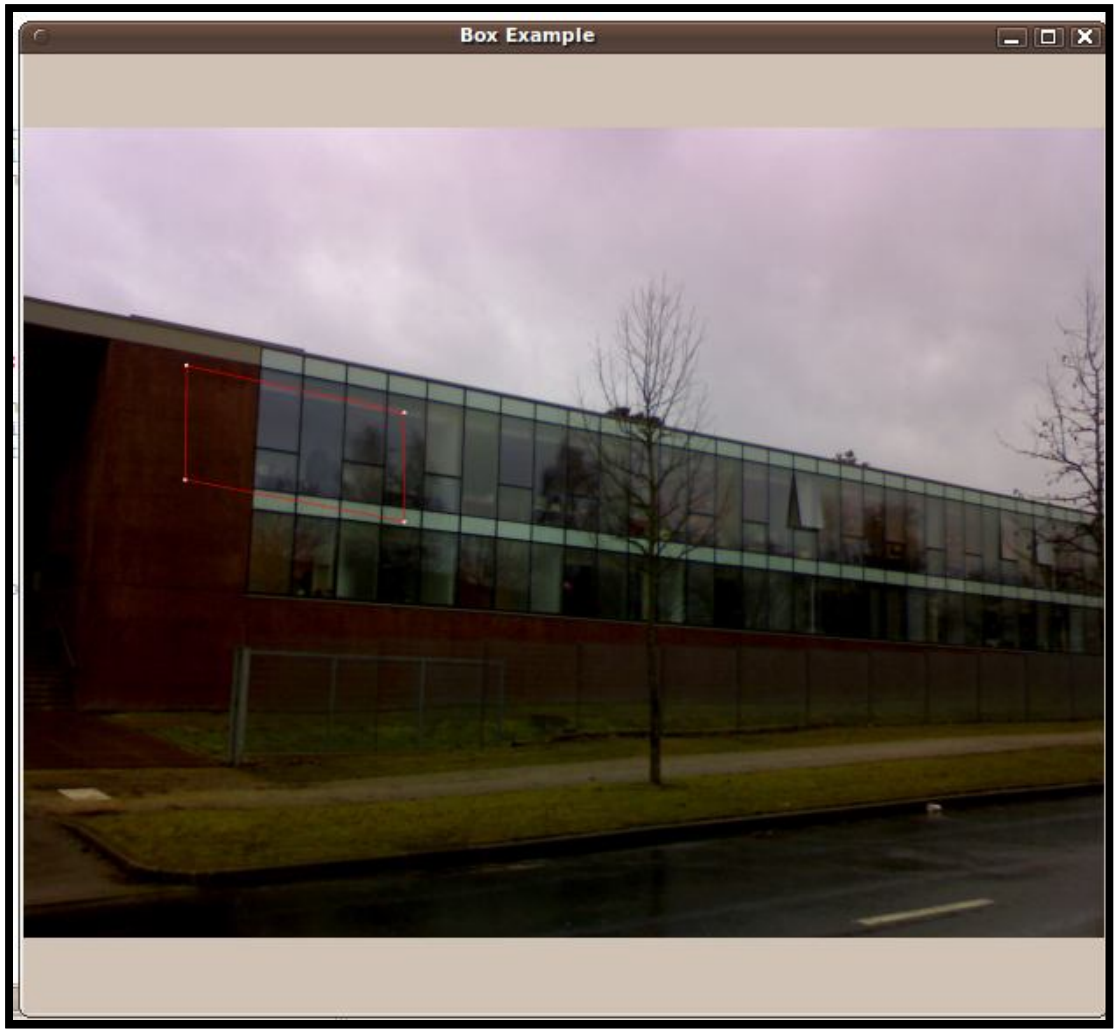
Google Street View Image

User's Image

Extracting correspondence between Google Street View And User Image



User's Augmentation



Major Concerns

- Interoperability
- Multi-person AR
- AR for human- Broader domain
- Secured Web AR
- Incognito/ Privacy Issues
- Open AR Experience

Thank you!