

A Quality-aware Road Digital Twin Using Multi-modal Data

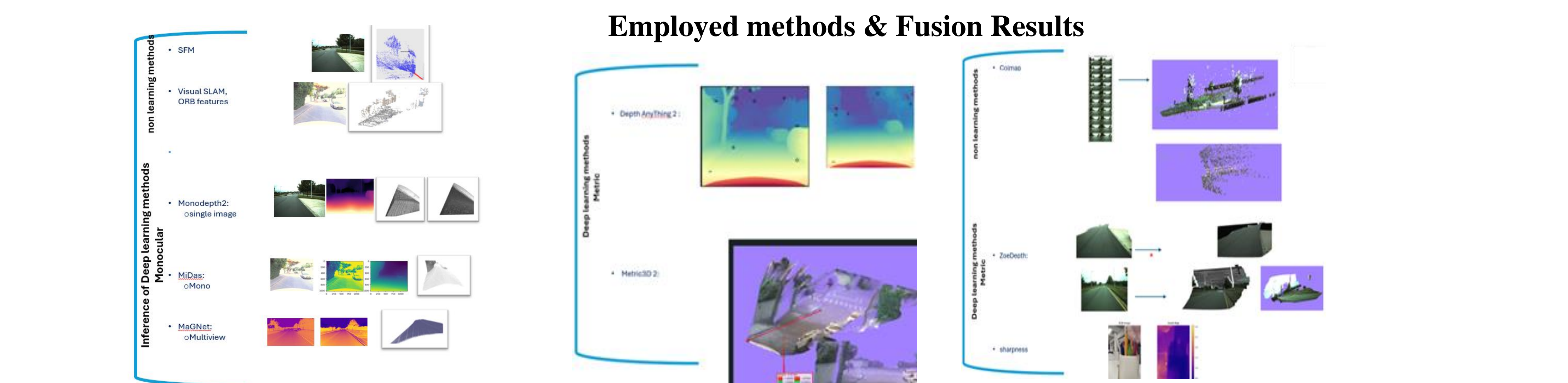
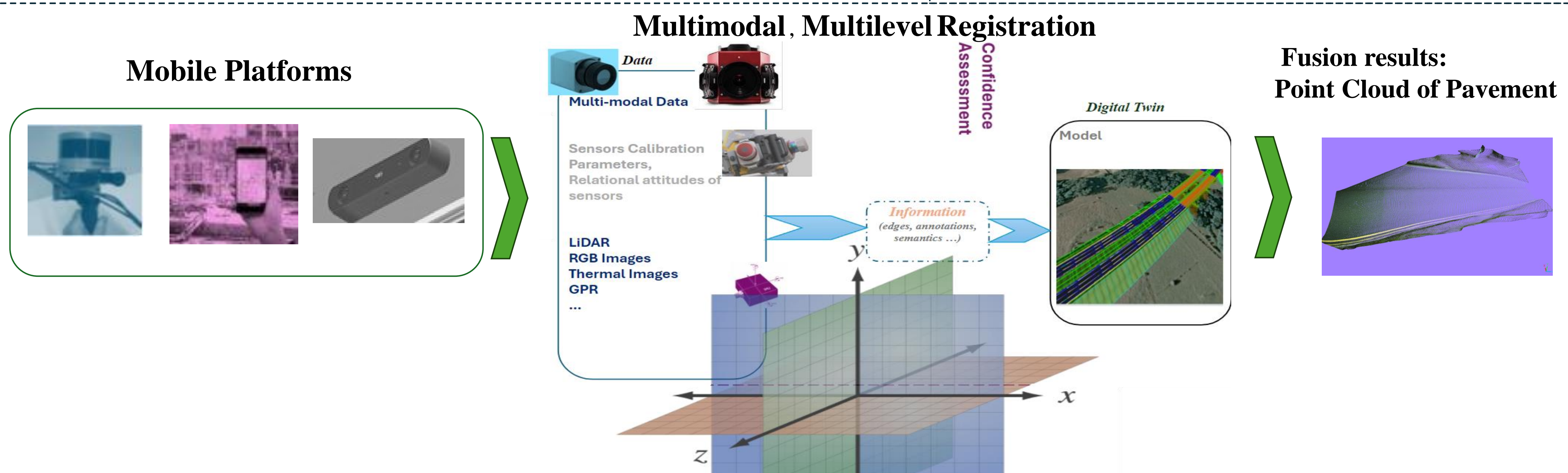
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Summary of the research:

- Remote sensing multimodal data can provide a comprehensive sensing of road assets
- Lack of literature on fusing data modalities with the application for road digital twin
- The target quality parameter to fuse modalities plays an important role in the fusion
- Digital twin serves a crucial function for decreasing carbon footprint, simulating lifecycle of materials and achieving circular economy

Objectives:

- Image fusion on mobile platform
- Image to LiDAR fusion on mobile platform
- Fusion with third modality
- Quality analysis of the generated output for road digital twin
- Developing a framework for data fusion for road digital twin



What next?

- Co-registration with other modalities considering semantic
- Designing the fusion framework considering confidence parameter
- Quality assessment

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