

# From Multiview Image Curves to 3D Drawings

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## MOTIVATION

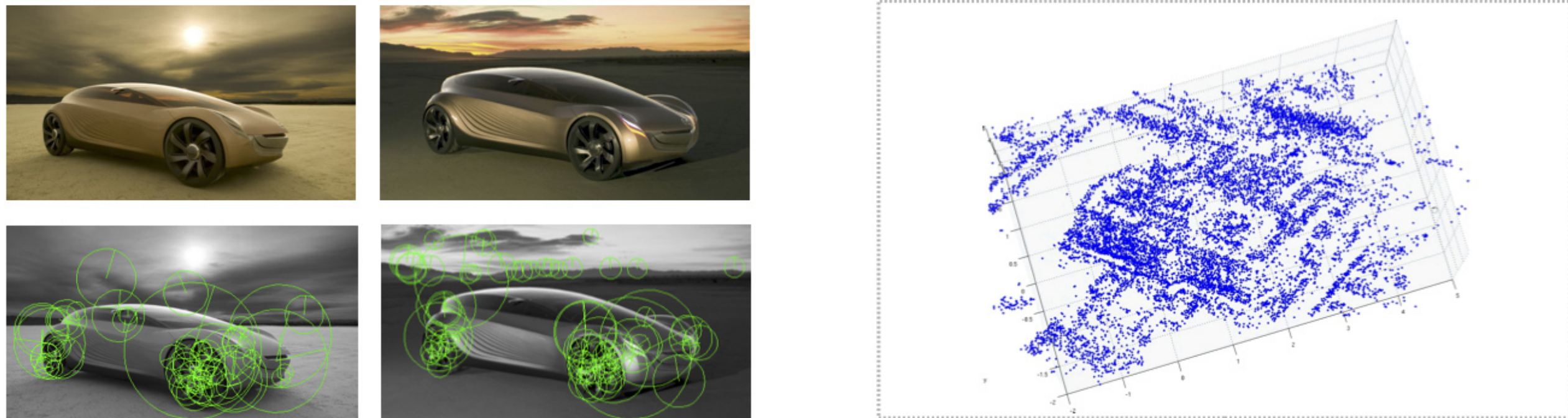


From a **large** sequence of 2D images, produce 3D models  
**This paper: a global network of 3D curves and junctions**

**Isolated point features + dense multiview stereo**

**Pro:** uncontrolled acquisition; dense textured models

**Con:** point cloud; need texture; use a large amount of resources; unscalable; oversmoothing; lack semantic info



**We favor a middle ground approach based on curves**

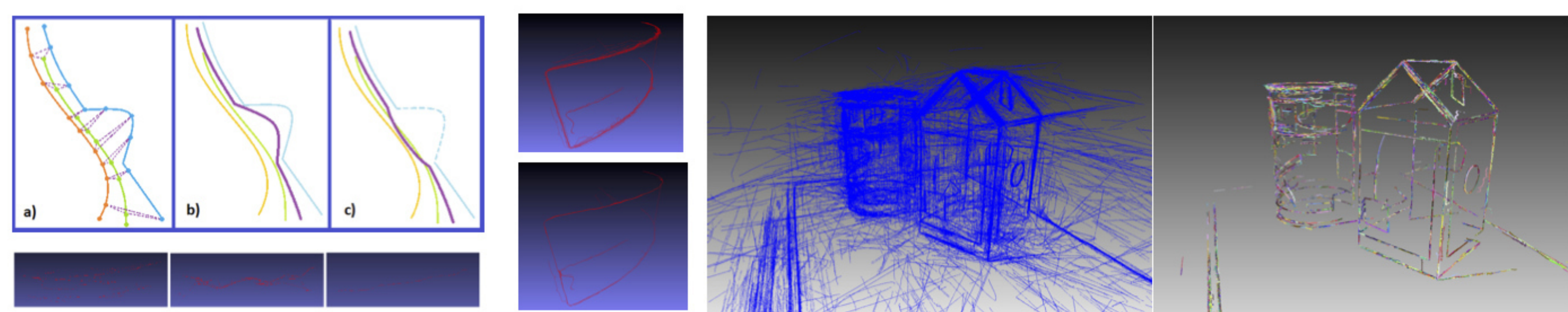
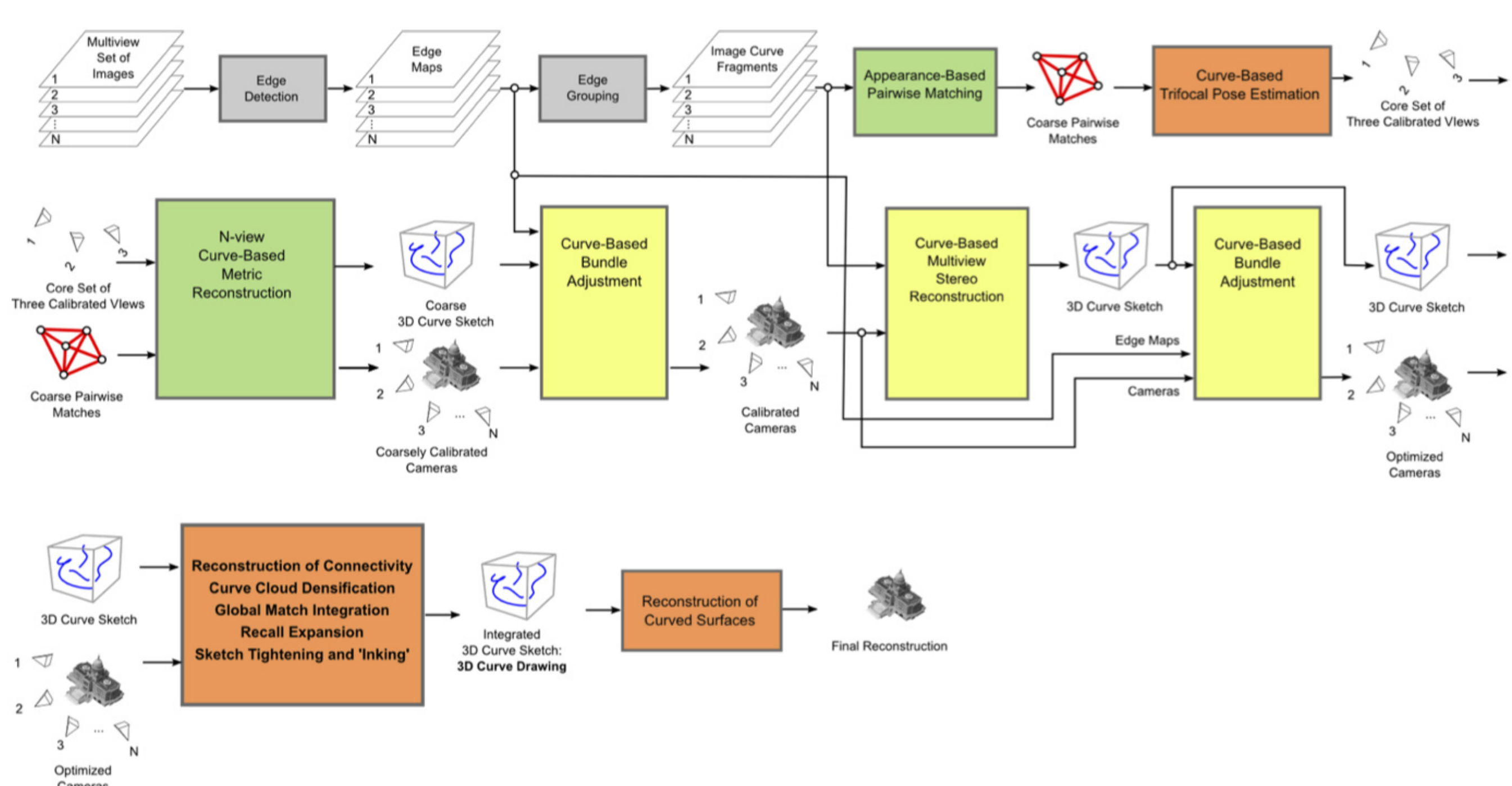
**More distinctive** features than points, allowing for applications such as 3D modeling and object matching

**More efficient** in space and time compared to volumetric or mesh-oriented approaches; prioritizes informative areas

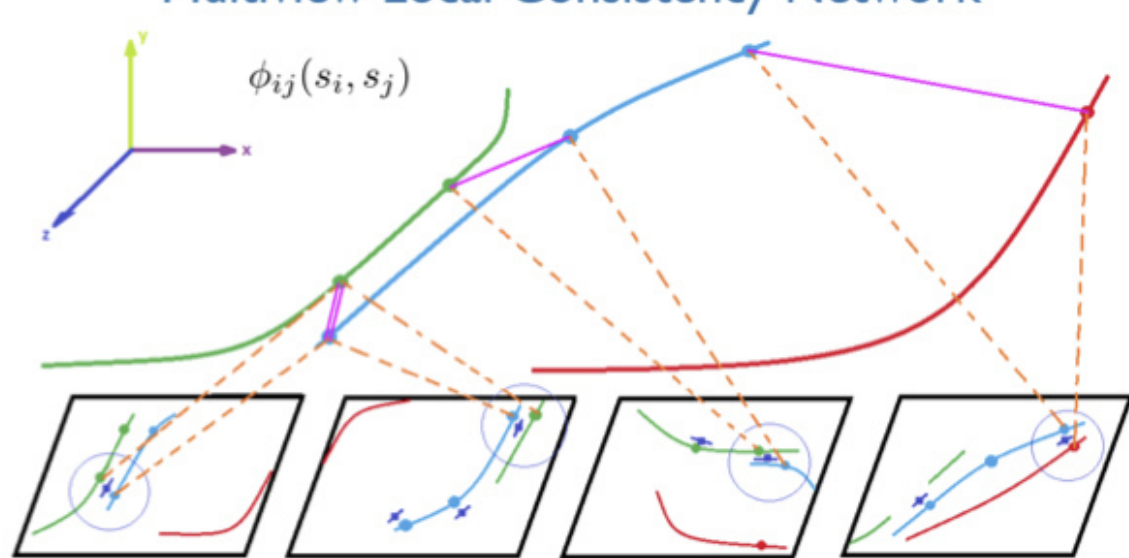
**More flexible** when there aren't enough feature points or texture, on its own or by constraining surfaces



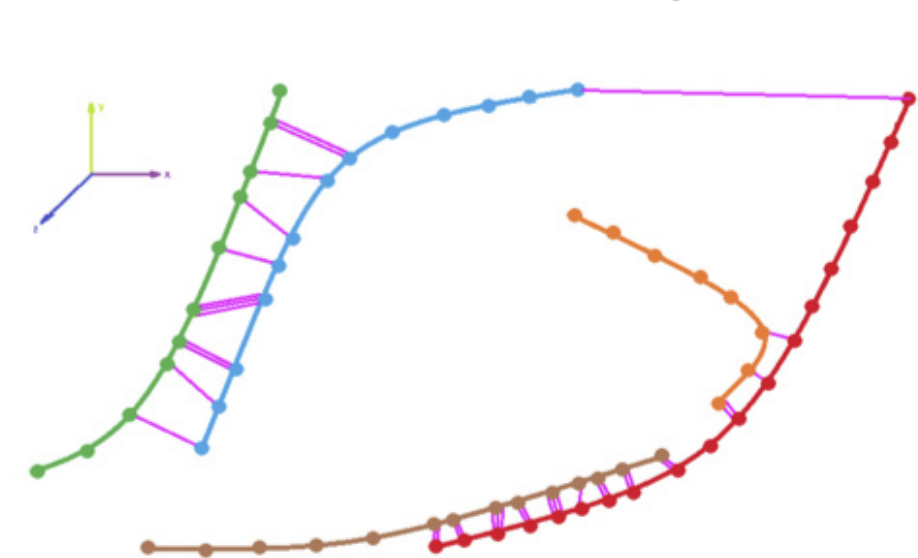
## 3D DRAWING



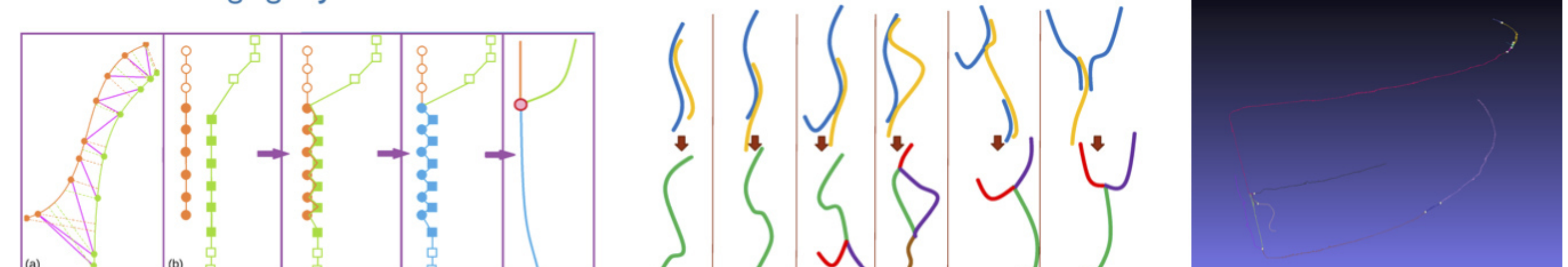
Multiview Local Consistency Network



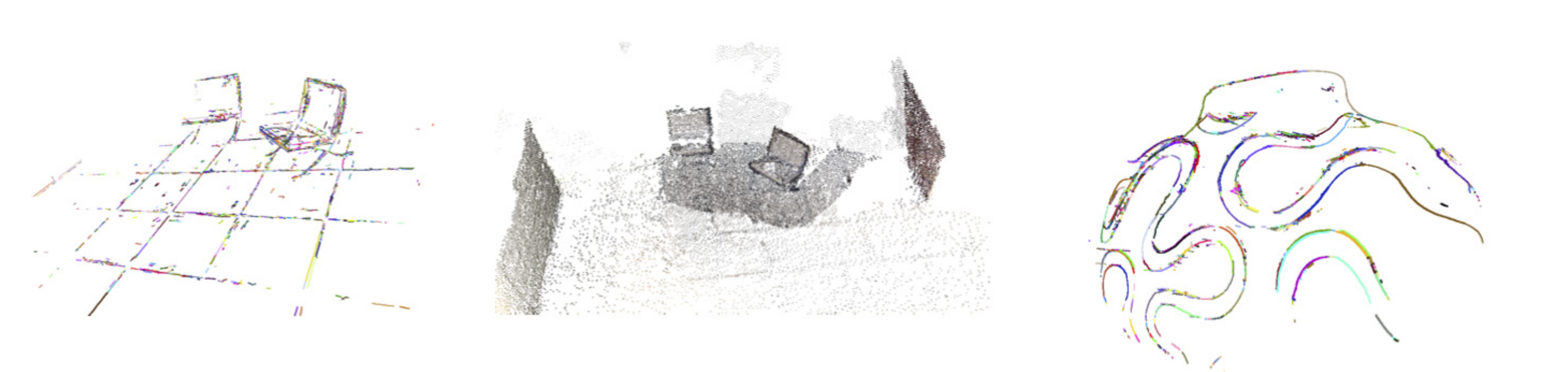
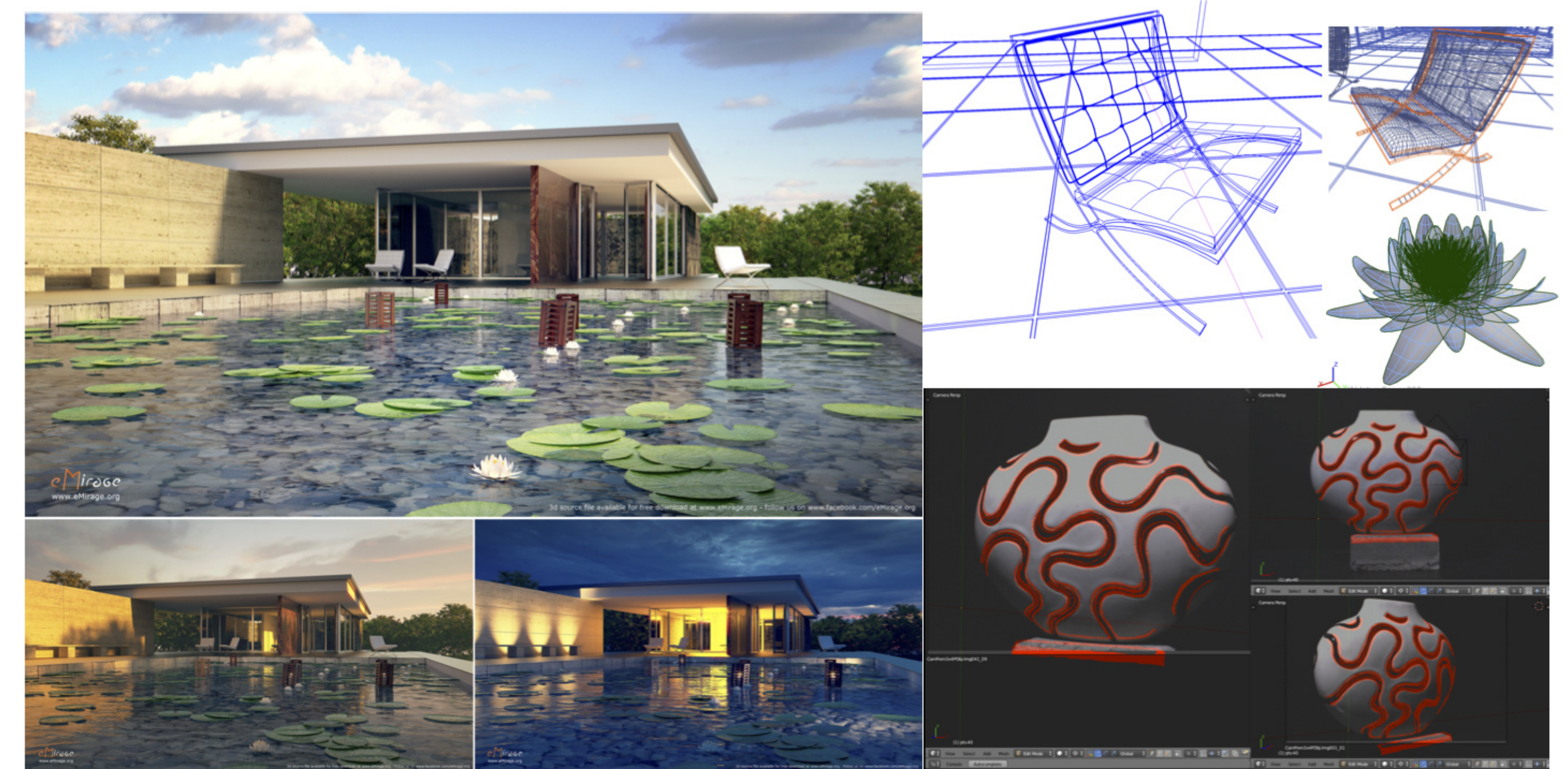
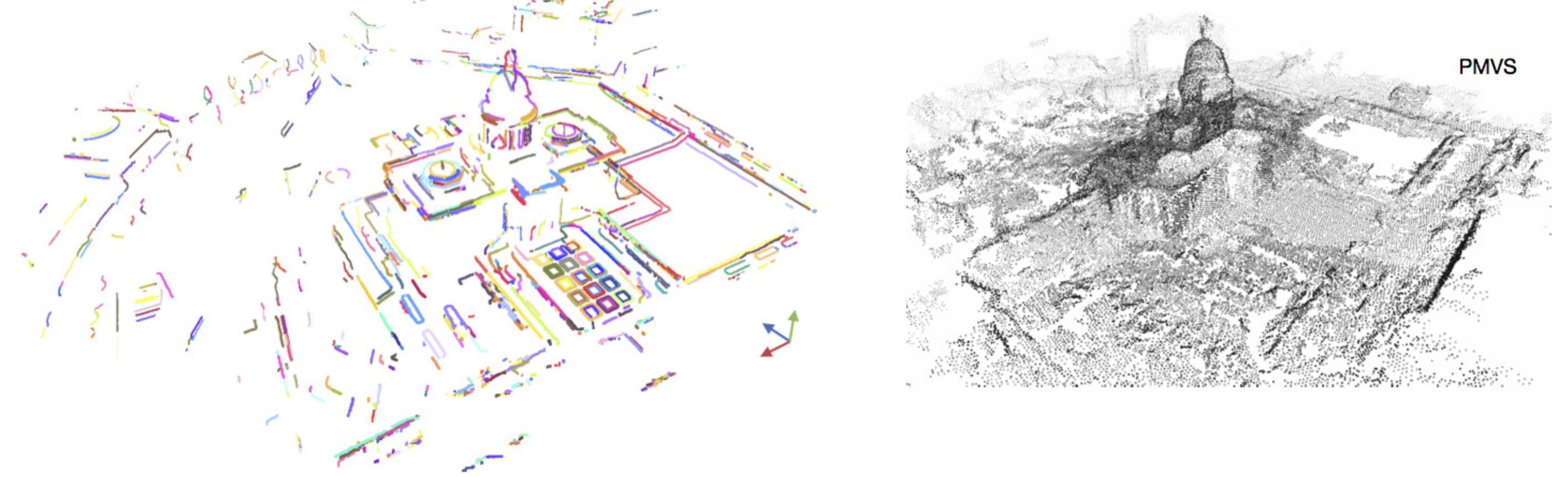
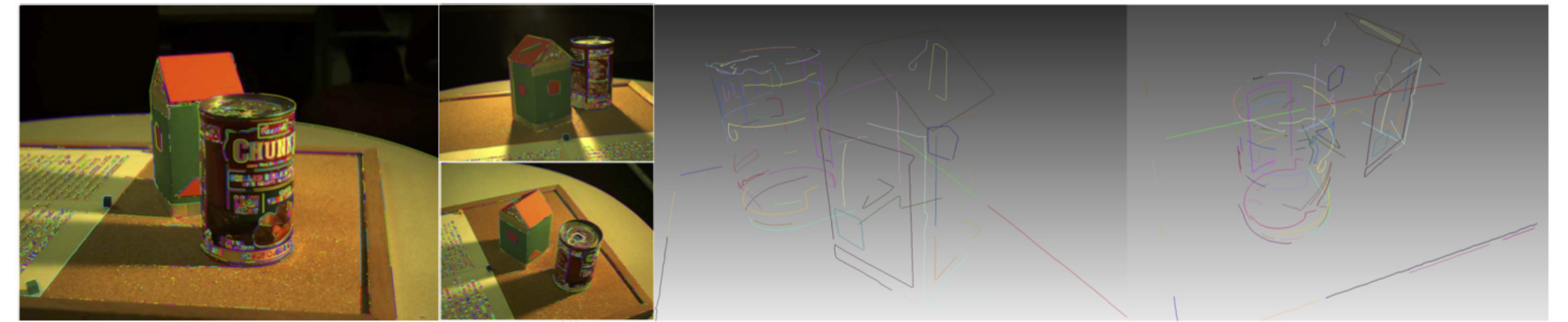
Multiview Curve Consistency Network



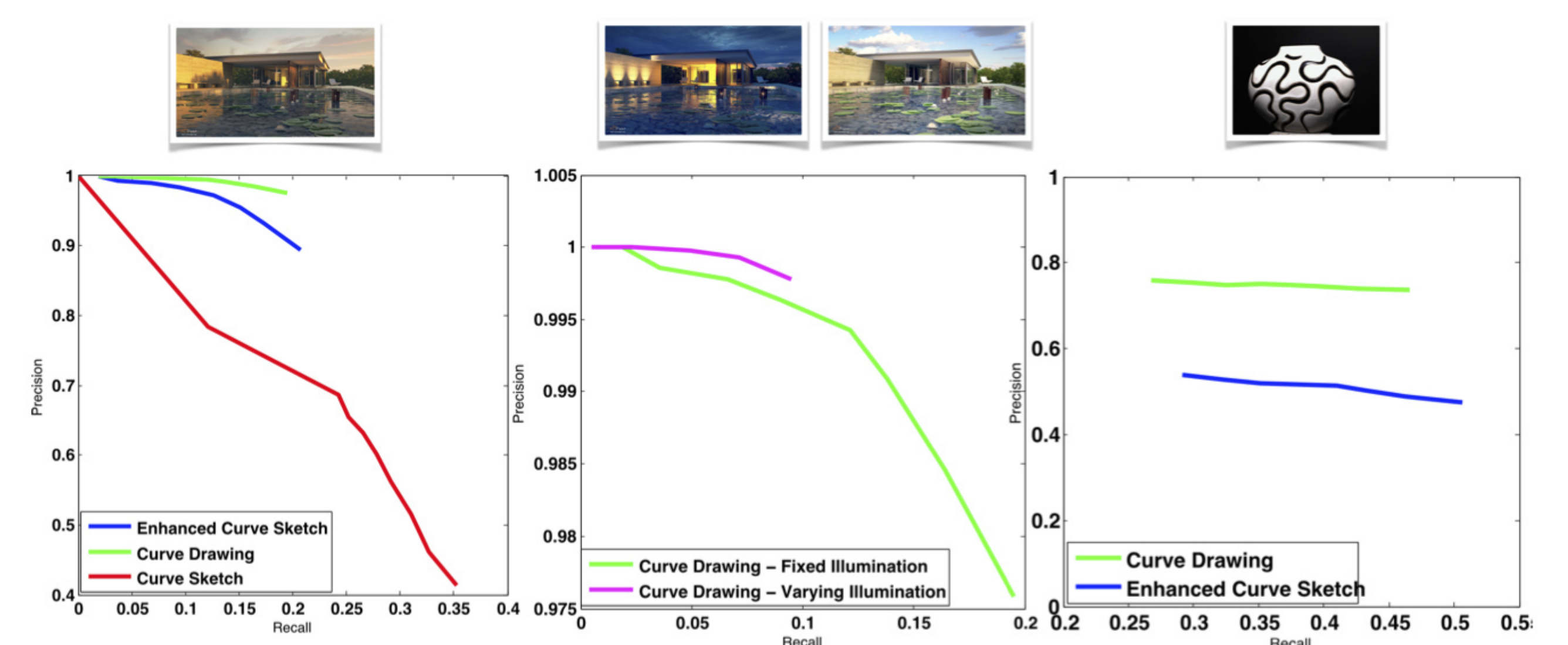
Merging & Junctions



## EXPERIMENTS



## QUANTITATIVE VALIDATION



## ONGOING WORK: LOFTING



## CONCLUSION

- Global multiview reconstruction based on image curve content
- Resolution anchored at singularities for progressive & crisp reconstructions