Principled Display Environment for Computer Augmented Laparoscopic Surgery

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**Dual Display Design**

A dual display environment of a global panorama view and the traditional 2D camera view with three configurable modes:

- **Separated**
- **Connected**
- **Integrated**

**Technical Highlights**

- Deformable 3D volumetric shape models based on medial representations are built from segmented pre-operative images

**Potential Applications**

- Nerve-sparing radical prostatectomy
- Partial nephrectomy
- Cryoablation for kidney tumors

- Registration of the 3D deformable shape models into a 2D camera view via computer vision techniques

- Visualization of a complex of adjacent anatomical objects or the secondary structures of a 3D anatomical object, such as a tumor

A complex of male pelvis objects