Virtual Reality
- Fully immersive virtual environments
- Intuitive 3D interaction metaphors
- Massively threaded VR systems

Real-Time Hand Tracking
- Full 26 DOF hand pose estimation
- Advanced Random Forest machine learning, featuring infinite data base training

Geometric Algorithms & Data Structures
- Fast space-filling sphere packings
- Real-time collision detection, proximity computation, and collision avoidance
- Acceleration data structures

Haptic & Force Feedback
- 6 DOF bi-manual multi user haptic rendering
- Stable 1000 Hz simulation rate by our novel Inner Sphere Trees

Spacecraft Simulation in VR
- World simulation (celestial bodies, gravitation, solar pressure, etc.)
- Realistic synthesis of artificial sensor data
- Procedural 3D modeling on GPUs

Point Cloud Processing
- 3D reconstruction of smooth surfaces
- Online hybrid CAD/point cloud proximity computations