An **Active Space** is a physical space coordinated by a responsive context-based software infrastructure that enhances the ability of mobile users to interact and configure their physical and digital environment seamlessly.

### Security Challenges
- Hundreds of dynamic, heterogeneous devices
- User-centric
- Physical and virtual environments interact
- Context-driven system and permissions
- Mobile & Collaborating users must be supported
- Sensor-rich environment raises privacy concerns

### Access Control
- Access control model based on RBAC
- Can support discretionary & mandatory access control policies
- Uses three types of roles to simplify management
- Space switches modes based on users and activity in space
- Individual, shared, supervised & collaborative modes

### Identification & Authentication
- Wide variety of authentication techniques: Biometrics, RFID, certificates, face recognition
- Distributed PAM using CORBA
- Confidence values for different authentication techniques
- Fuzzy logic to capture uncertainty
- Authenticating context information (e.g. location)

### Privacy Issues
- Mist protocol: a communication overlay that preserves identity and location privacy
- Cryptographic tokens that separates identity, role, and context of a user