Building Application Stack (BAS)

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What Is BAS?
- application programming interface/runtime for buildings
- discovery-oriented, building-agnostic query language
- focus on approachability, ease of use
- produces simple, portable code

```python
# Increase fresh air intake for Room 123
oad = api("#OUT_AIR_DMP > $Room 123")
oad.set_percent_open(100)
```

Future Work
- handle security or permissions levels
- not all users should be able to access entire building
- handle concurrent access and guarantee safe usage
- currently no safeguards to protect minimum airflow, temperature, etc
- handle, or at least recover from, multiple users accessing the same point

BAS Architecture
- abstract away specific building components
- provide drivers to communicate with low-level hardware in building

Functional Graph
Describe elements in terms of their functional relationships:
e.g. "All outside air dampers that feed into Room 123"

Porting BAS
- buildings are equipped with any number of control protocols (BACnet, etc.)
- BAS needs to understand each new building
- How? Parse ALC listings, do OCR on blueprints (left), manually construct, etc.