

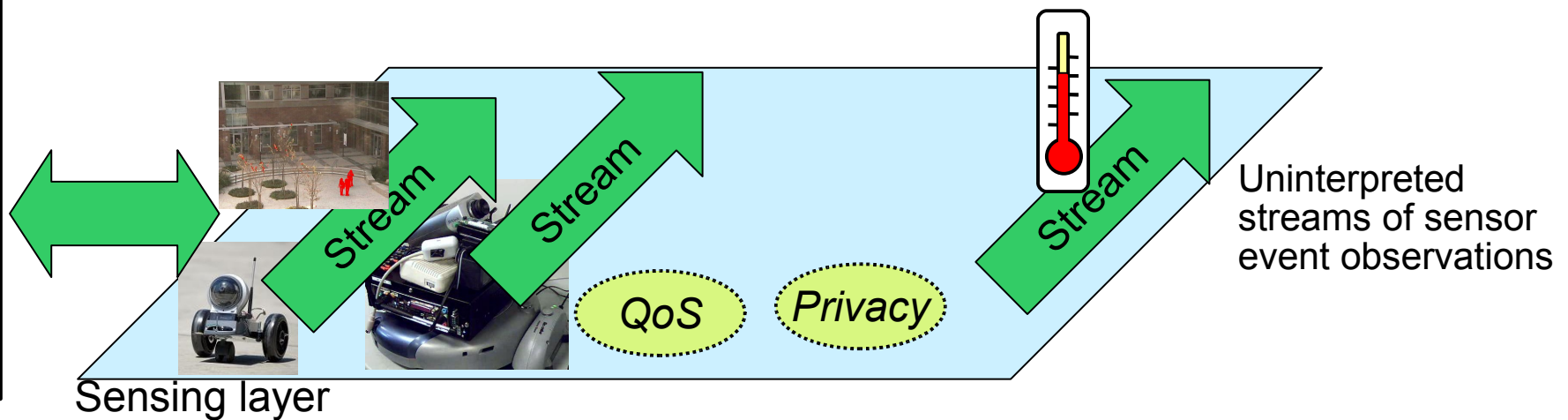


# Traditional sensor network



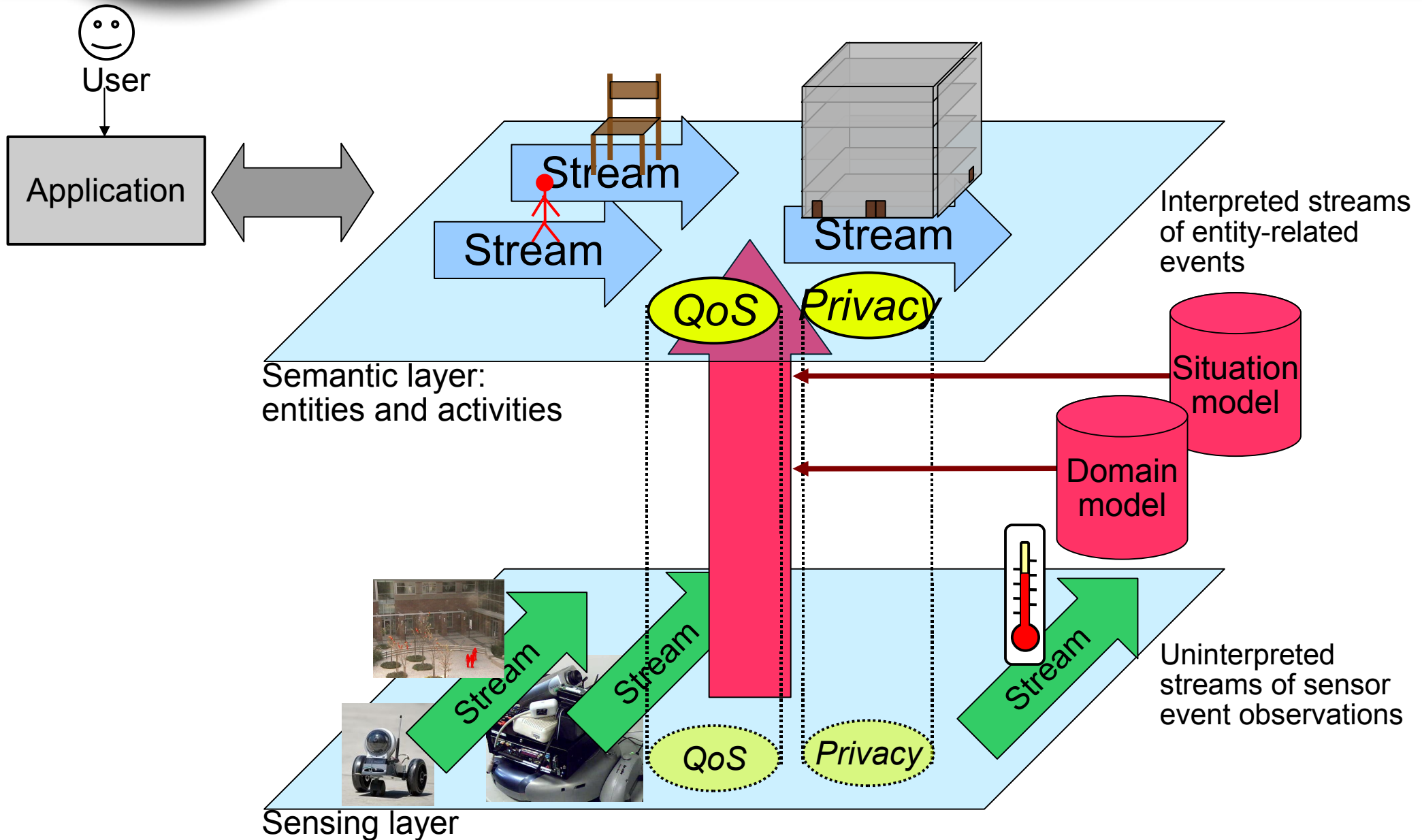
User

Application





# Semantic Layer





# SATRecorder

SATware

Outdoor

An aerial photograph of a building complex with several buildings labeled 310, 311, 312, 321, and 325. Several colored squares (yellow, orange, red) are placed on the map, representing sensor locations. A toolbar with various icons is visible at the top left of the map area.

Select visible sensors

- ☒ Lynksys indoor cam
- ☒ DLink indoor camer.
- ☒ Canon OutdoorCame
- ☒ PeopleCounter

Record

Schedule a recording job

Manage scheduled jobs

Manage stored recordings

Record All

Sensors management

Add new sensor

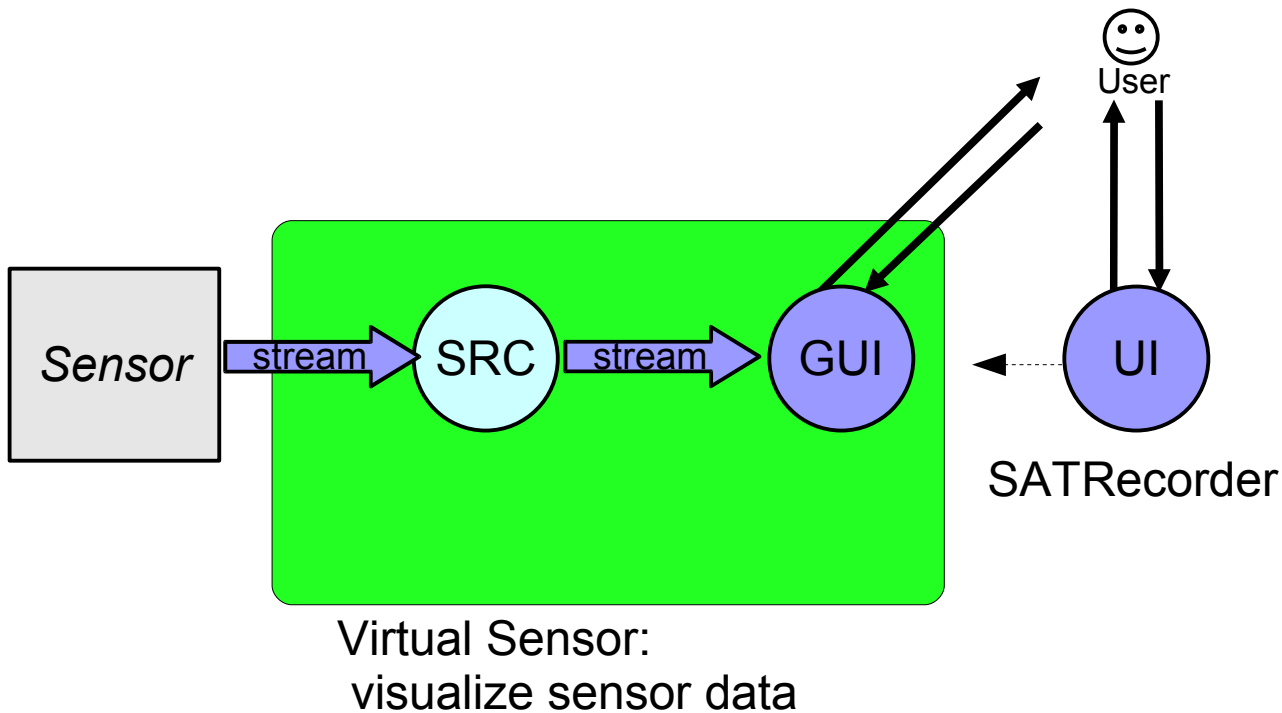
Manage sensors

(-117.84078,33.64348)





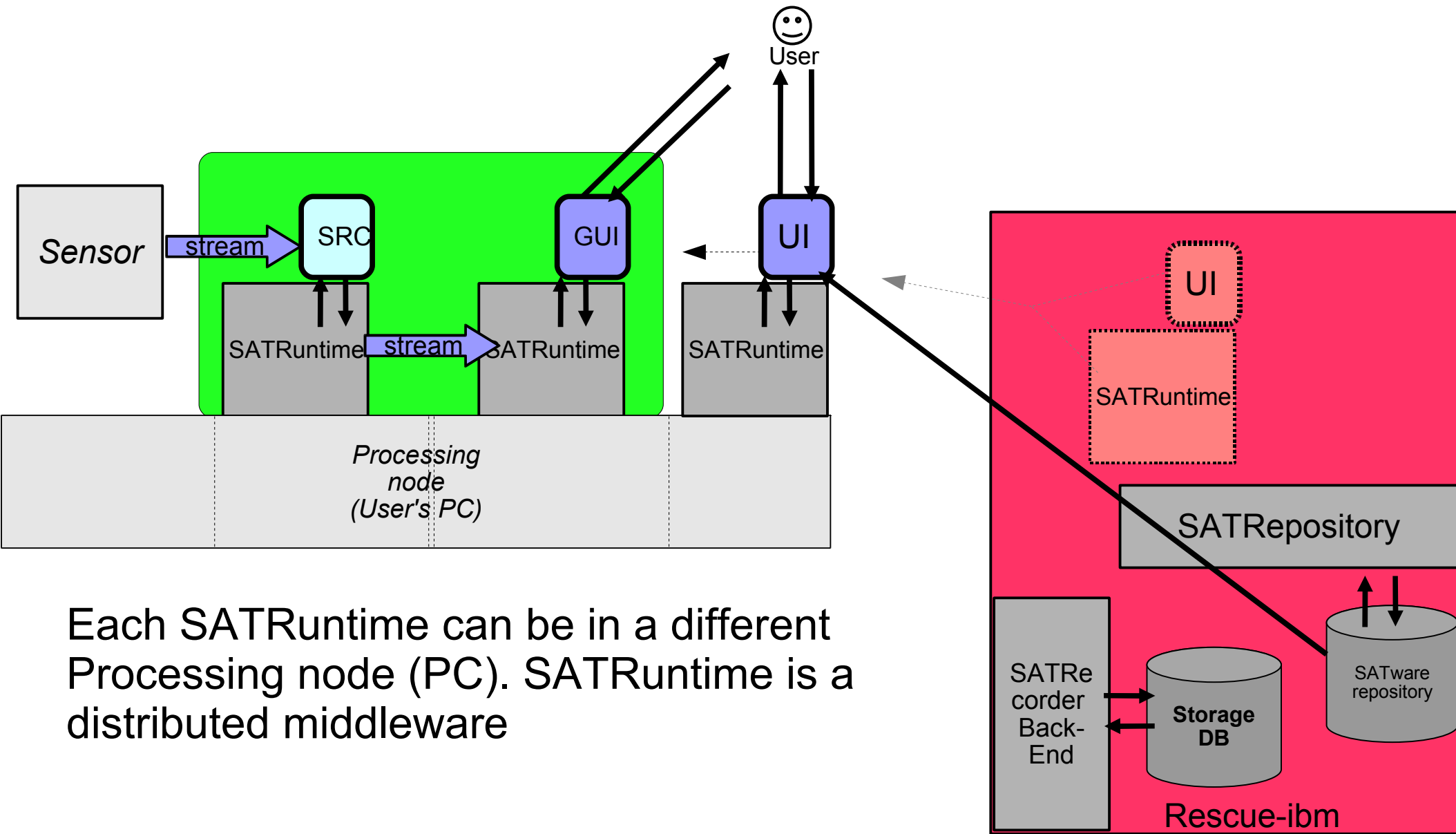
## A query



User asks SATware UI to visualize/connect to a sensor -> SATware UI instantiates a predefined virtual sensor.



# A query: implementation

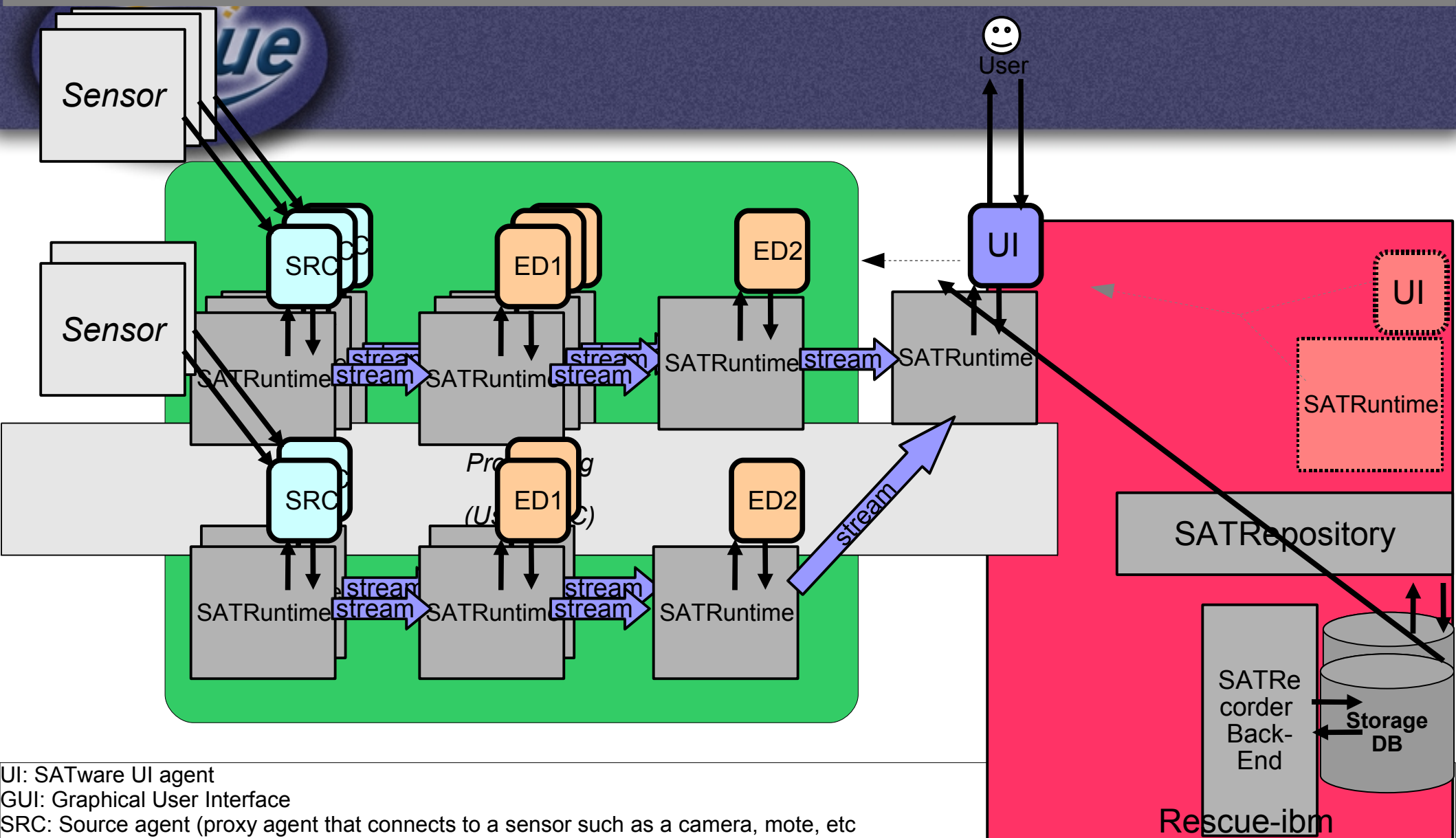




*Responding to Crises  
and Unexpected Events*



User asks SATware UI to visualize event x from sensor set y -> SATware UI instantiates a predefined virtual sensor.  
 > SATware UI receives event tuples and visualizes them



UI: SATware UI agent

GUI: Graphical User Interface

SRC: Source agent (proxy agent that connects to a sensor such as a camera, mote, etc

ED1: Door Event Detection + estimation of people crossing in each direction (Ronen and Shengyue)

ED2: Area (e.g. room) estimated occupancy