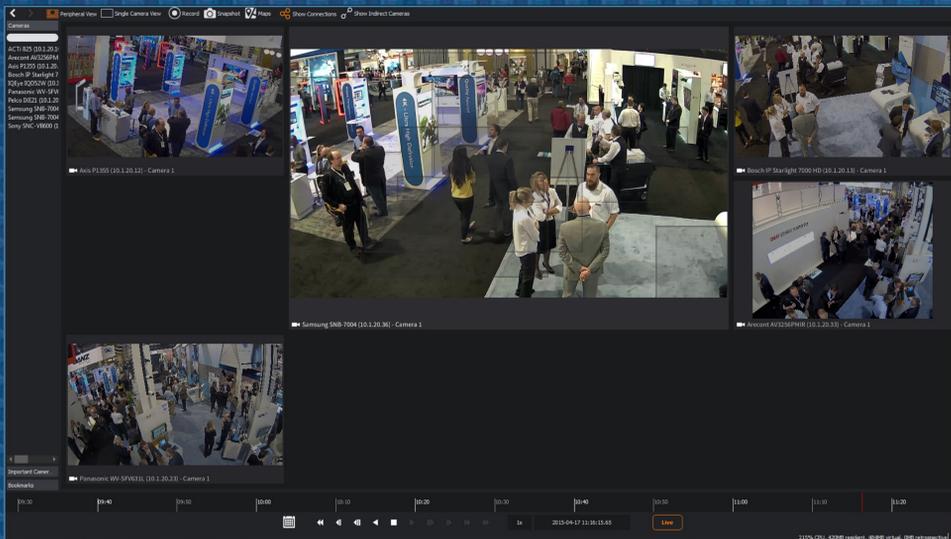
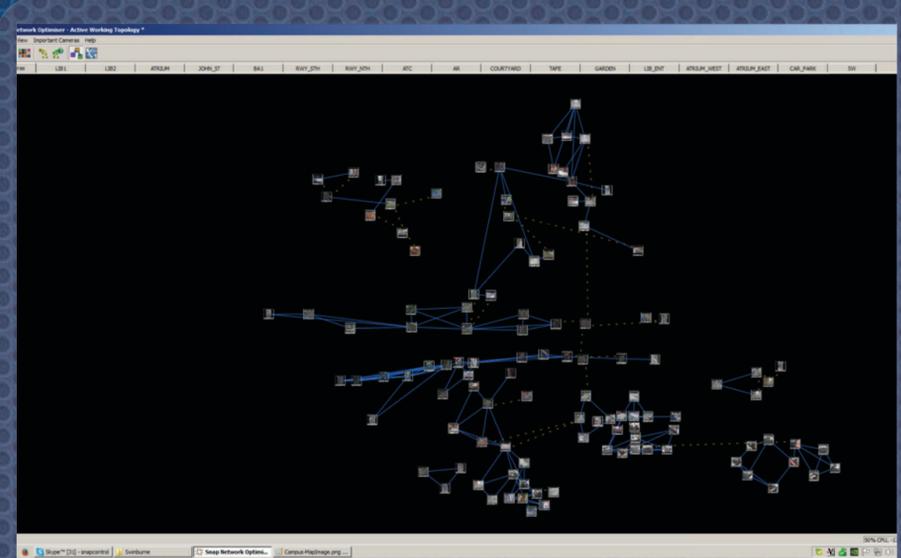


- Startup formed by Australian Centre for Visual Technologies (ACVT):
  - Has commercialised ACVT's technology for finding camera overlap from video
  - ACVT is "the Adelaide Vision Lab" with a 25 year history in Vision & ML, 15 papers in CVPR'2016 etc.
- Snap has paying customers in four continents in the Physical Security market
- Operates in realistic environments and at considerable scale

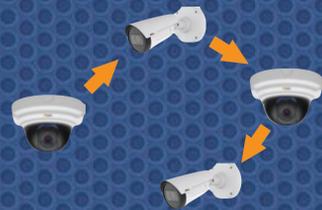
- Finding graphs of sensors' field-of-view relationships, at scale
- Can provide support for video analytics that operate over the graph:
  - Paths: target-centric analytics
  - Cliques: get the best camera angle
  - Search trees: handoff, re-ID
  - General subgraphs



Video client: operators view camera nodes in the context of adjacent nodes, and seamlessly navigate the graph



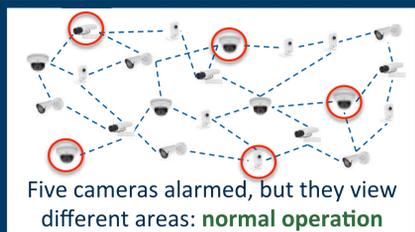
Snap's camera graph editor with a network of about 150 cameras; this customer now has nearly 1,000



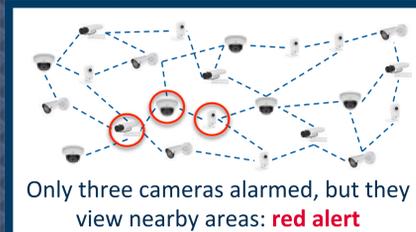
Graphs provide support for path analytics applied to activity as it moves from camera to camera



Cliques in the graph permit analytics to use the best camera angle, or several simultaneously



Five cameras alarmed, but they view different areas: **normal operation**



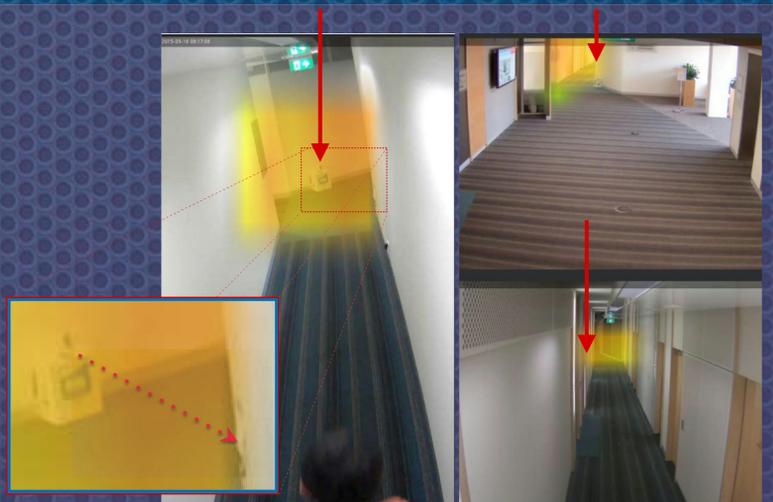
Only three cameras alarmed, but they view nearby areas: **red alert**

Shortest paths and other graph properties can be used as bases for conclusions on sub-graphs or even entire sites



The sensor graph defines breadth-first search trees for re-identification and other purposes

- Automated discovery of sensors' field-of-view relationships:
  - Cameras and certain other sensors
  - Purely from sensed data
- Server-based distributed implementation:
  - 1000s of cameras; 100,000s of simpler sensors
  - On-sensor processing is feasible
  - Cloud implementation is constrained only by video transport exigencies
- Software development capability including commercialisation of research software



Some recent development locating non-video sensors in video fields

Snap is seeking to join a team that can leverage its automatic sensor graph discovery and maintenance capabilities

Snap can also provide the benefit of its extensive experience in real-world video handling and VMS integration

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