

Snap Network Intelligence products

Product Overview

- Snap's FMx software bundle comprises three software modules - Snap Network Intelligence (SNI), Snap Network Optimiser (SNO), and the Snap Force Multiplier Operator UI.
 - SNI is the module that is responsible for Snap's Automated Camera Network Topology Estimation - the module that learns the relationships between cameras on the network – which cameras have overlapping fields of view and which are nearby.
 - SNO is used in concert with SNI when the software is deployed to optimise and tailor a network topology if required.
 - Snap Force Multiplier (FMx) is a package bundling of all the modules (ie SNI, SNO and the Operator UI) into a single product offering. FMx is the solution that provides an intuitive easy to use "Peripheral Vision" UI which allows operators to track people/targets across a camera network (using both Live and recorded footage) and create "Instant Video Export" (ie collated multi-camera video)
- In a typical installation, the integrator or installer is responsible for running and configuring the SNI and SNO software modules, and then publishing the output to the Force Multiplier UI – it is this latter software module that is used by the operators without access to SNI or SNO
- While FMx includes a standalone UI for video pursuit, SNI and SNO are able to be integrated within other management systems and PSIMs to provide camera network topology and enable Snap functionality within the native UI of the third party product
- Snap's software is an integrated product layered on top of Video Management Systems (VMS) software. Snap provides an integrated product deployed in concert with a VMS, and has proven integration with market leading VMS systems. It accesses video via the VMS and thus avoids any duplication of storage
- Snap's software enables video surveillance operators to more effectively navigate through large-scale IP surveillance camera networks. Based on advanced computer vision, Snap's software learns which surveillance cameras view overlapping areas and which view areas nearby to each other. Using this information, Snap's Network Intelligence platform automatically creates an accurate camera network topology which allows improvements in operator speed, effectiveness and efficiency, scaling to even the largest camera networks.
- Snap is not a traditional video analytic, instead focusing on the effective response to incidents (and review of those incidents), rather than initial detection. In this way it often complements video analytics and other sensing and detection systems.
- Peripheral Vision: Snap leverages its unique topology to provide operators with Peripheral Vision, a unique view for operators. As well as displaying a selected camera, the operator is also shown the other cameras which have overlaps or are nearby this camera, automatically arranged in a physically realistic layout. Rather than viewing a camera in isolation (or with many other cameras, some/ most of which may not be relevant and thus overwhelm, distract or confuse the operator), Peripheral Vision provides the operator with the local situational awareness of the overlapping and nearby cameras and the ability to quickly and easily observe from different angles and select the best view(s) at the time
- Visual Navigation: Snap provides a range of easy to use tracking and navigation tools within the Peripheral Vision display including Synchronised viewing – both forwards and backwards, different viewing/playback speeds, Bookmarks, highlighting of overlapping fields of view for camera pairs, and

coloured connectors to aid the selection of the most appropriate “next camera” as targets move from camera to camera.

- Instant Video Export - Once operators have tracked a target of interest, Snap’s software provides an Instant Evidence feature that can automatically produce a collated single video of multi-camera action, in the form of a standard video file. The video can be produced instantly on the completion of tracking; a step change in the efficiency of an important task that is currently a time-consuming process. Furthermore, FMx provides awareness of all possible camera views of an event, thus providing comprehensive vision of the incident being tracked and enabling the operator to choose the best view of the target at all times. The presentation of all available cameras to the operator together with the ease of use of the FMx GUI enables the easy and cost effective production of videos with continuity and completeness to the maximum extent that the camera coverage supports
- Performance Benchmarks: Snap’s Force Multiplier UI is focused on helping the operator more easily track a subject (live) or review an incident (from video archives) – and provides measurable benefits for operators of all levels of system experience and site familiarity.
 - For experienced operators, Snap delivers improvements in tracking a subject live – with significantly lower likelihood of losing the subject within the surveillance area – and also in an order of magnitude reduction in the time required to review an incident from video archives;
 - For inexperienced operators or users unfamiliar with a site, Snap provides dramatic productivity gains, with operators able to confidently use the camera system almost immediately and with minimal training, and operators or forensic review teams able to quickly review incidents in near real time rather than spending days or even weeks post-incident

Specifications / Performance Requirements

- The system shall have the capability to determine the relationship between all cameras contained within a defined location, such that when viewing a subject of interest on a camera (the dominant camera), the GUI shall present the operator with view(s) of all immediately adjacent camera(s) whose view either overlaps that of the dominant camera or is the next (or one of several) in which a subject of interest could move into after leaving the view of the dominant camera.
- The system shall provide an automatic learning capability that determines relationships between overlapping cameras.
- The learning capability shall provide options for learning from both live camera feeds and from recorded video.
- The system shall provide a user interface that enables operators to navigate from camera to camera (eg. when following a target or when conducting a virtual walkthrough) without requiring extensive site knowledge.
- The system shall have the functional capability to enable a user to follow a person of interest across multiple cameras with live and recorded footage by presenting all camera views adjacent to that of the dominant camera. As the person of interest walks out of view of the current dominant camera and into view of one of the related adjacent views, the operator shall be able to select that view which will then become the dominant camera. The adjacent camera views will now change to reflect all related adjacent camera views of the now new dominant camera.
- In the case of a security operator viewing live footage and identifying a person of interest on a particular camera, the application GUI shall provide the security user with an input (button, right mouse click, etc) to convert this to a dominant camera. This conversion and corresponding change in the layout and presentation of the user GUI will enter the system into a video pursuit view / mode.
- A security user shall be able to assign a bookmark at any point in time on any dominant camera whilst tracking a person of interest in 'manual tracking' mode. After a 'manual tracking session' the security user shall be able to select the bookmark and will be returned to the original dominant camera. The security user may then use the recorded footage to track the person of interest backwards in time. The security user may assign bookmarks to any dominant camera during this session.
- Whilst in video pursuit mode the user shall be able to stop, start and vary the speed and direction of the play of footage
- The system shall provide a facility to activate recording of the live or archive video playing in the dominant view, with the recording continuing as the dominant view changes, until recording is stopped. This recorded video shall then be exportable as a single continuous file, playable in standard video players including but not limited to Windows Media Player, without additional software being required for playback. In addition to the exported video itself there shall be an ability to export associated metadata, such as, but not limited to, date, time and camera name or number