Surveillance Impact Report

Sensource Patron Counter System
Public Library

As required by San Francisco Administrative Code, Section 19B, departments must submit a Surveillance Impact Report for each surveillance technology to the Committee on Information Technology ("COIT") and the Board of Supervisors.

The Surveillance Impact Report details the benefits, costs, and potential impacts associated with the Department's use of Sensource Patron Counter System.

DESCRIPTION OF THE TECHNOLOGY

The Department's mission is:

The San Francisco Public Library (SFPL) is dedicated to free and equal access to information, knowledge, independent learning and the joys of reading for our diverse community.

In line with its mission, the Department uses Sensource Patron Counter System to track meaningful operational metrics that show patron entrance/exit traffic throughout our 28 public facilities.

The Department shall use Sensource Patron Counter System only for the following authorized purposes:

- to tally the entry and exit of Library visitors at all 28 public facilities.
- to track usage of meeting rooms, elevators and restrooms for purposes of resource allocation.

There are no additional uses employed by or authorized by the Library. Any use(s) not identified in the Authorized Use(s) above are strictly prohibited.

Department technology is located in the following locations: The110 Sensource devices are installed above entry/exit points at each of the Library's 28 public facilities, including elevator banks and the external doorways of some restrooms and meeting rooms. They are generally affixed to the ceiling above the entranceway.

Technology Details

The following is a product description of Sensource Patron Counter System:

SenSource technologies are used by libraries across North America for data-driven decisions. Not only do we offer the most accurate people counting system, it's also expandable to new features such as occupancy monitoring and facemask detection, securing your investment for years to come. Patron traffic data is used to determine total library usage to report for government funding; to optimize staff and scheduled events based on forecasted traffic; and to justify the need for expansion or remodel.

A. How It Works

To function, Sensource Patron Counter System uses a proprietary camera system to tally visitor counts **in real time** at all 28 San Francisco Public Library facilities. **The video images are not recorded or stored.** The aggregate tally data is stored on a cloud-based server and is accessible through web-connected devices.

The devices are mounted overhead and produce a low quality black and white image. This is a still-frame image of what the Sensource devices see:
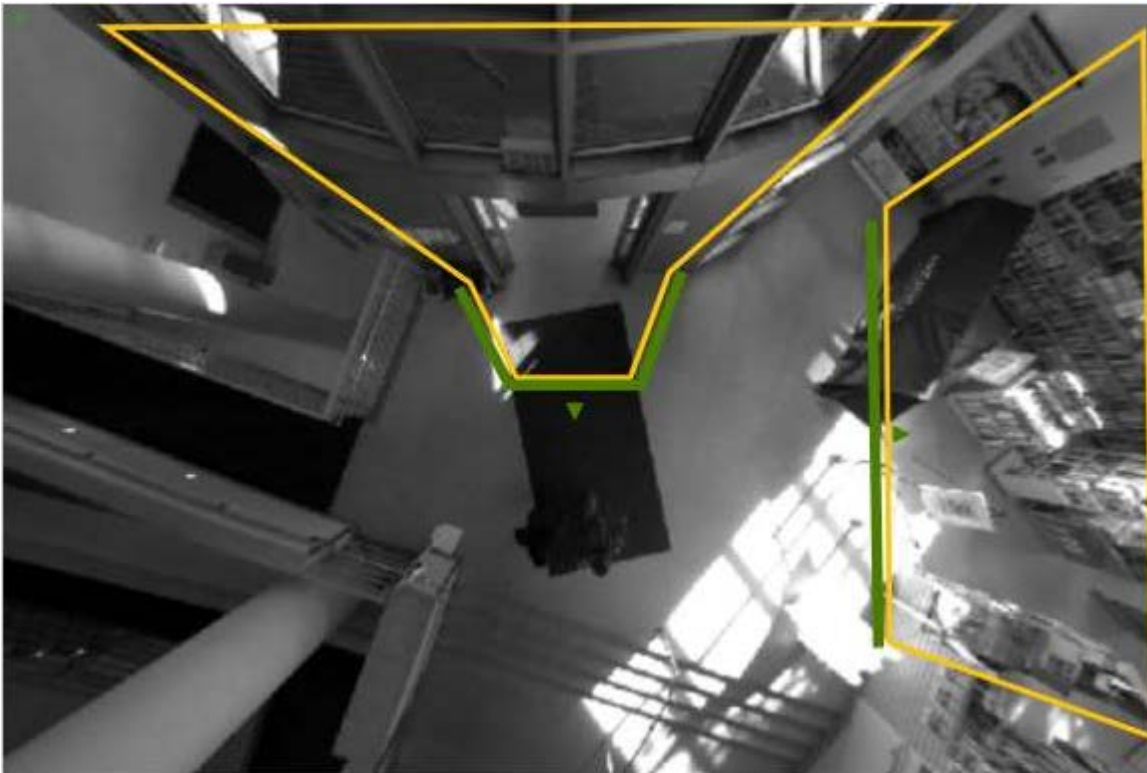
The sensors know their mounted height from the floor and that its individual lenses are 3" apart. It then uses trigonometry to create a Stereo Height map from the 2 images it sees. It then monitors the resulting Stereo height map for anomalies, as in the case of something moving through the scene:
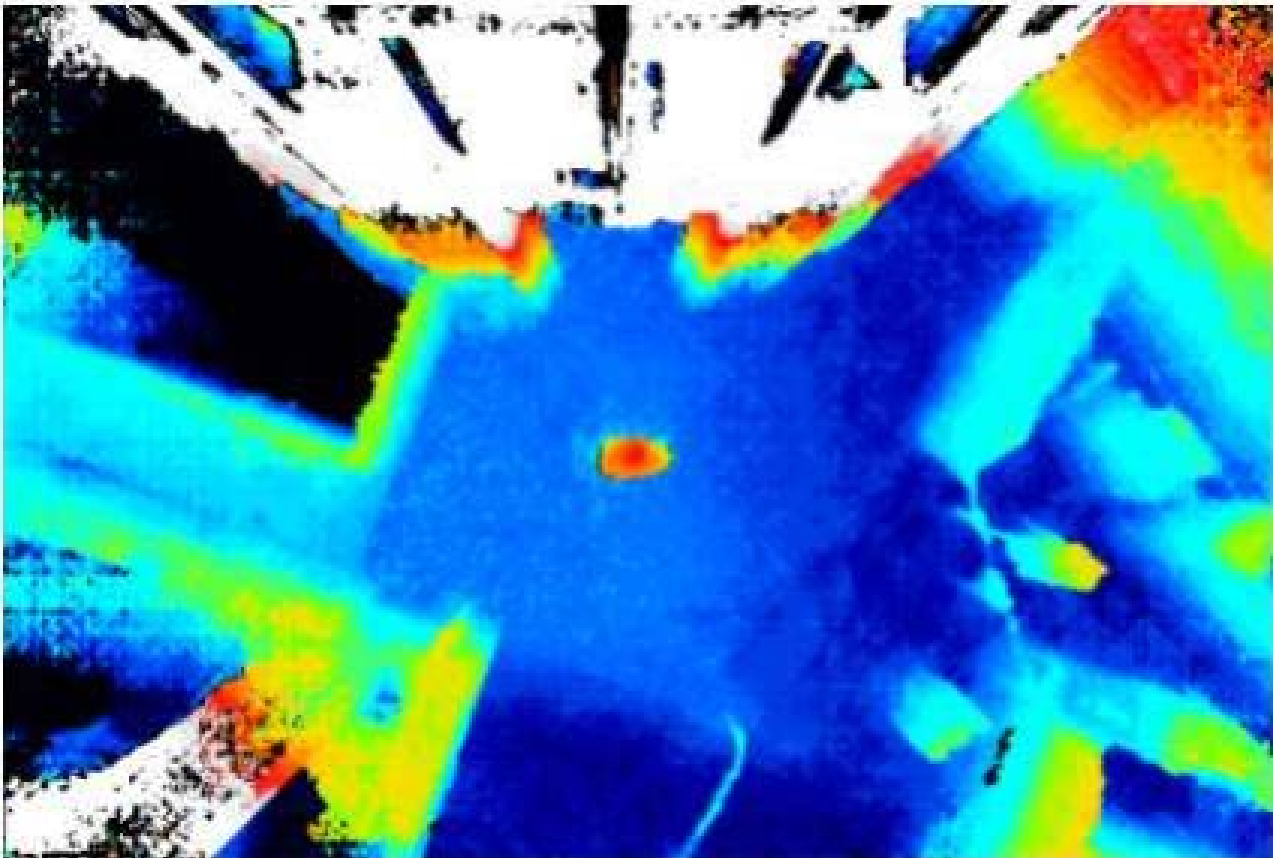
The algorithm analyzes the moving object to see if it fits the known characteristics of a humanoid shape. The red area in the shape of the top of a head. The symmetric orange showing a shoulder shape to the object and then the light green of arms and legs. If it sees these indicators it will consider this to be a trackable object and continue to utilize these height maps to track the object while it is visible to the sensor.
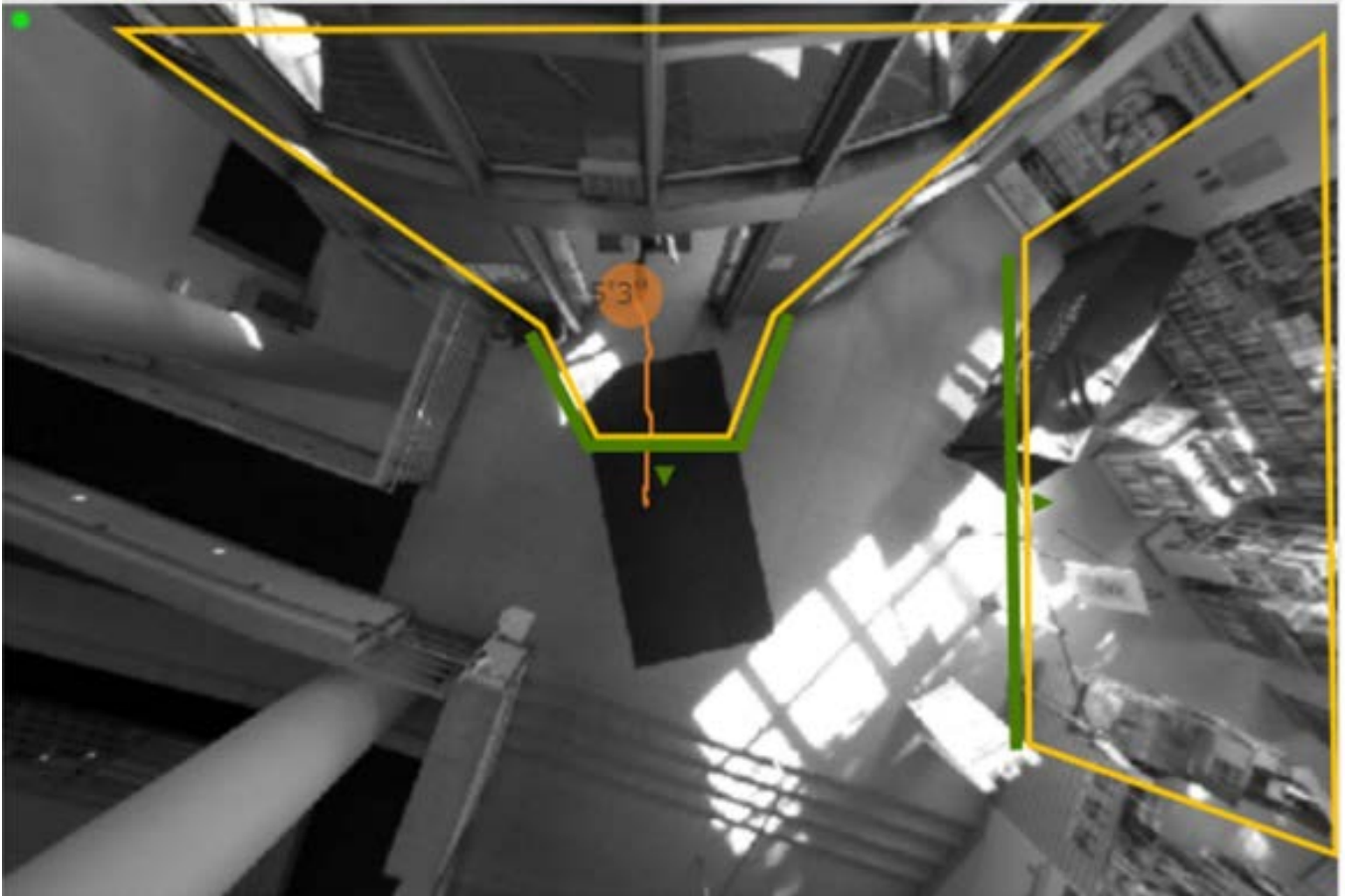
It then tracks the moving object through the scene to see if it crosses a counting line. And then if it meets all of the rules for the count line its count event will be added to the internal storage tally and then the aggregated count data (**not the video images**) is sent to the server in simplified form:

- Line 1, 11:45:00 am, 1-22-22, FW 1, BW 1
- Line 1, 12:00:00 pm, 1-22-22, FW 0, BW 5

All data collected or processed by Sensource Patron Counter System will be handled or stored by an outside provider or third-party vendor on an ongoing basis. Specifically, data will be handled by Sensource, Inc. to ensure the Department may continue to use the technology.

IMPACT ASSESSMENT

The impact assessment addresses the conditions for surveillance technology approval, as outlined by the Standards of Approval in San Francisco Administrative Code, Section 19B:

1. The benefits of the surveillance technology outweigh the costs.
2. The Department's Policy safeguards civil liberties and civil rights.
3. The uses and deployments of the surveillance technology are not based upon discriminatory or viewpoint-based factors and do not have a disparate impact on any community or Protected Class.

The Department's use of the surveillance technology is intended to support and benefit the residents of San Francisco while minimizing and mitigating all costs and potential civil rights and liberties impacts of residents.

A. Benefits

The Department's use of Sensource Patron Counter System has the following benefits for the residents of the City and County of San Francisco:

X   Community Development: The ability to track accurate patron counts by location in real-time is integral to provision of Library services planning with respect to resource allocation (e.g., staffing, planning for programs, ensuring public safety, etc.).

X   Criminal Justice: Library services benefit the residents of the community in numerous ways, including but not limited to education (programming), health (programming), workforce development/jobs (adult programming), community engagement/development (programming), environmental concerns (programming), housing (programming), criminal justice (programming) and public safety (ensuring crowd sizes are appropriate for spaces).

X   Education: See above.

X   Environment: See above.

X   Health: See above.

X   Housing: See above.

X   Jobs: See above.

X   Library Services: See above.

X   Public Safety: See above.

B. Civil Rights Impacts and Safeguards

The Department has considered the potential impacts and has identified the technical, administrative, and physical protections as mitigating measures:

Though the potential for impact is very low, SFPL limits access to staff responsible for maintaining the devices as well as those validating and collecting aggregate visitor data.

- Technical Safeguards: Access to the Sensource Patron Counters System is password-protected and users are validated for business need on an annual basis.
- Physical Safeguards: SFPL servers are behind two locked doors requiring keycard access. The first level of keycard access is limited to IT staff and high-level individuals in the organization (City Librarian, other department heads, etc.). The second level of keycard access requires both the validated keycard and an individual PIN code. This is limited exclusively to individuals in the IT Division who have a business reason to access servers – primarily the library's DISO (department information security officer) and server team, as well as other IT managers with need to directly access the data center.

C. Fiscal Analysis of Costs and Benefits

The Department's use of Sensource Patron Counter System yields the following business and operations benefits:

Χ Financial Savings: Visitor traffic is a core metric within the library industry, reported at the national, state and local levels as a key performance indicator. The Sensource Patron Counter System allows for considerable financial and time savings, as what was previously a manual data collection and analysis process has become automated, allowing for real-time review and data analysis.

Χ Improved Data Quality: Data quality has become much more reliable and valid through automation.

Χ Staff Safety: Staff safety with respect to planning and managing busy times and crowding with respect to popular programming (e.g., Night of Ideas) is also a befefit to department operations

Χ Time Savings: See "Financial Savings".

The fiscal cost, such as initial purchase, personnel and other ongoing costs, include:

- Number of FTE (new & existing): The technology does not require additional FTE; however, it is supported by staff members representing the following classifications:
  o 0.02 FTE - 1822 Administrative Analyst
  o 0.01 FTE - 1823 Senior Data Analyst

- The annual costs are:
  o Total Salary & Fringe: $4,614.71
  o Software: $47,000.00
  o Hardware/ Equipment: $6,500.00
  o Professional Services: 0
  o Training: 0
  o Other: 0

The Department funds its use and maintenance of the surveillance technology through Sxn. 16.109 City Charter - Library Preservation Fund.

COMPARISON TO OTHER JURISDICTIONS

Sensource Patron Counter Systems are currently utilized by other governmental entities for similar purposes.