

Surveillance Sensor Knowledge Fusion Scenario Description "Bella Center"

Introduction

An international political summit is taking place in Copenhagen. The summit is taking place at the conference center "Bella Center". The attendants are the environment ministers of all of the EU countries, and their aides. Each entourage consists of approximately 10-15 people, including the minister, the secretaries, subject matter experts, political advisors, etc. Some of the large / influential countries have larger entourages.

Schedule

The summit opens on Tuesday March 20, 2012 at 09:00 in the morning. The scheduled meetings run during daytime until Friday March 23 at 16:00, starting at 09:00 each day and ending at 16:00. There are lunch breaks between 12:00 and 13:00, and coffee breaks at 10:00 and 15:00 each day. During the entire scheduled day, the conference attendees (both the ministers and their aides) stay inside the Bella Center. In the evenings after the conference day has ended they retreat to their respective hotels, apart from on the Thursday, when a grand gala dinner is held at the Copenhagen City Hall from 19:00 until midnight.

Location

The Bella Center is located in the southern part of central Copenhagen, approximately ten minutes car drive from the hotels at which the guests are staying. During the summit the local police will clear the roads so that no traffic jams hinder access. The guests travel via motorcade from their hotels to the Center and back again. Furthermore, the Bella Center is located adjacently (2 minutes walk) to the Bella Center metro station, from which the greater Copenhagen area can be reached within 25 minutes. It is also within ten minutes walking distance of the Oerestad and Sundby metro stations that are on the same metro line as the Bella Center station. All three stations will remain open during the summit and metro trains will run according to their ordinary schedule, with one train passing by every fifteen minutes all day and night. Trains take two minutes to travel between each of these stations, i.e. from Sundby to Bella Center takes two minutes, and from Bella Center to Oerestad takes two minutes more.

Surveillance systems

The Bella Center and the hotels that the guests are staying at are equipped with a number of sensors that detect various types of activity. This includes:

- Camera systems that can identify and track people, vehicles, and objects as they move around within their field of vision, and that can identify car license plates, faces (including face recognition/fingerprinting), peoples' clothes (color and type), whether they are male or female, if they are carrying something, moving naturally or with a limp, etc.

- Audio recording systems that can identify different types of noise (ordinary street sounds, gunshots, loud crowds, glass breaking, etc) and pinpoint the direction and distance of the noise.
- Seismic sensors noting larger movement that can estimate the number of people in a crowd or the weight of a vehicle.
- Terahertz imaging that allow detection of solid objects (such as knives and guns) underneath people's clothes, at a distance.
- Facial recognition software that matches detected faces to the attendee list of the conference or the police list of dangerous people (if they are on any of these lists, obviously).

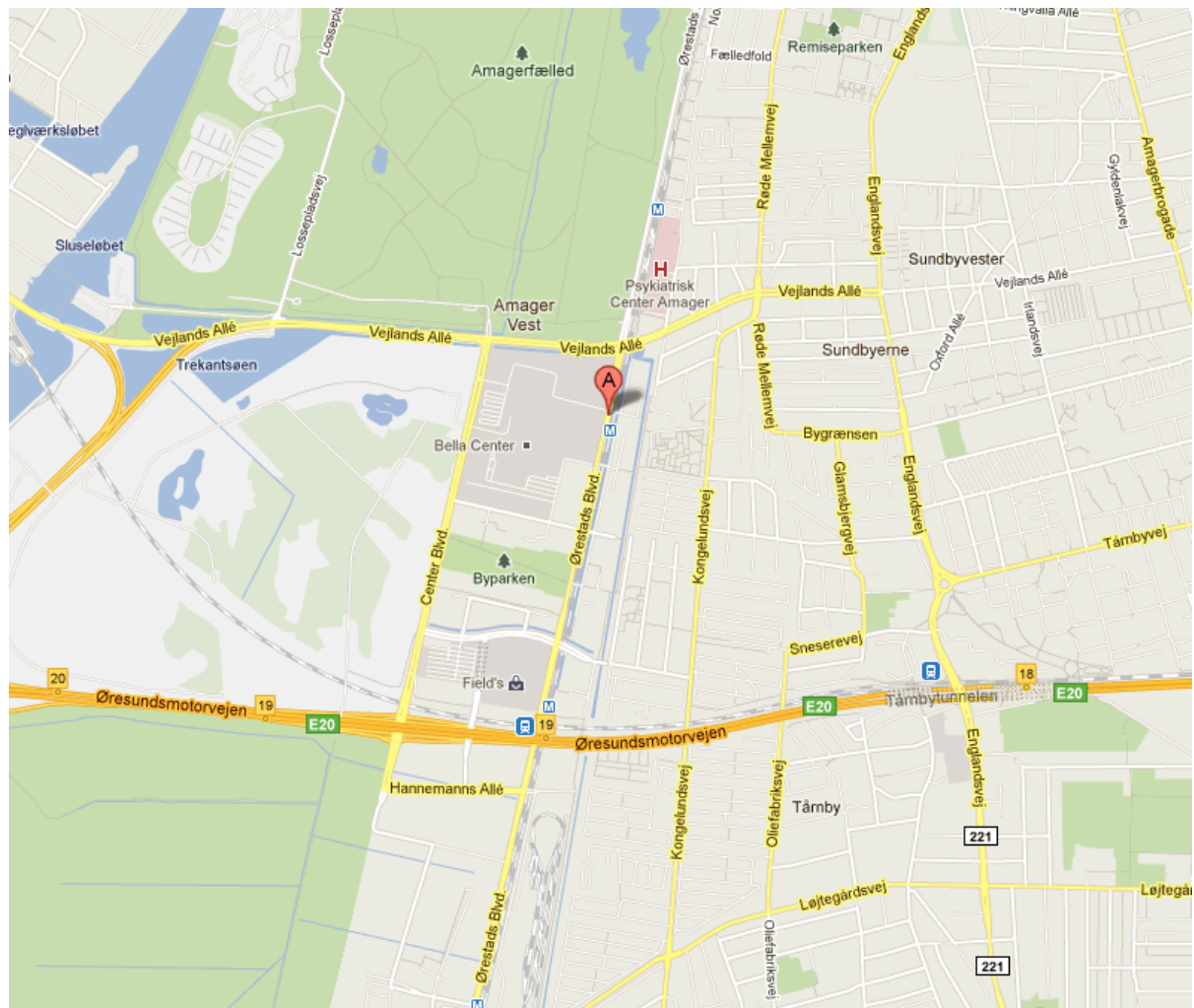
Security zones

The Bella Center is closed off to the public for the duration of this conference. The only people allowed in are conference attendees, security staff, and conference staff (waiters, chefs, cleaning staff, receptionists, etc.). This is enforced via checkpoints at all known entrances where people are matched by ID and facial recognition. Additionally, there is a security zone of 500 meters in each direction around the Bella Center in which the public may move freely, but in which there is significant surveillance established as per above. In the closer half of this zone (250 meters from Bella Center) no cars or larger vehicles are allowed to travel, only people on foot (excluding VIP motorcades). This ban is enforced via manned roadblocks on all roads accessible by car. The hotels used to house the guests in central Copenhagen are locked down via checkpoints just as Bella Center, and only authorized staff are allowed entry. However, for the hotels, no car-exclusion zone has been established, only a 500 meter security zone.

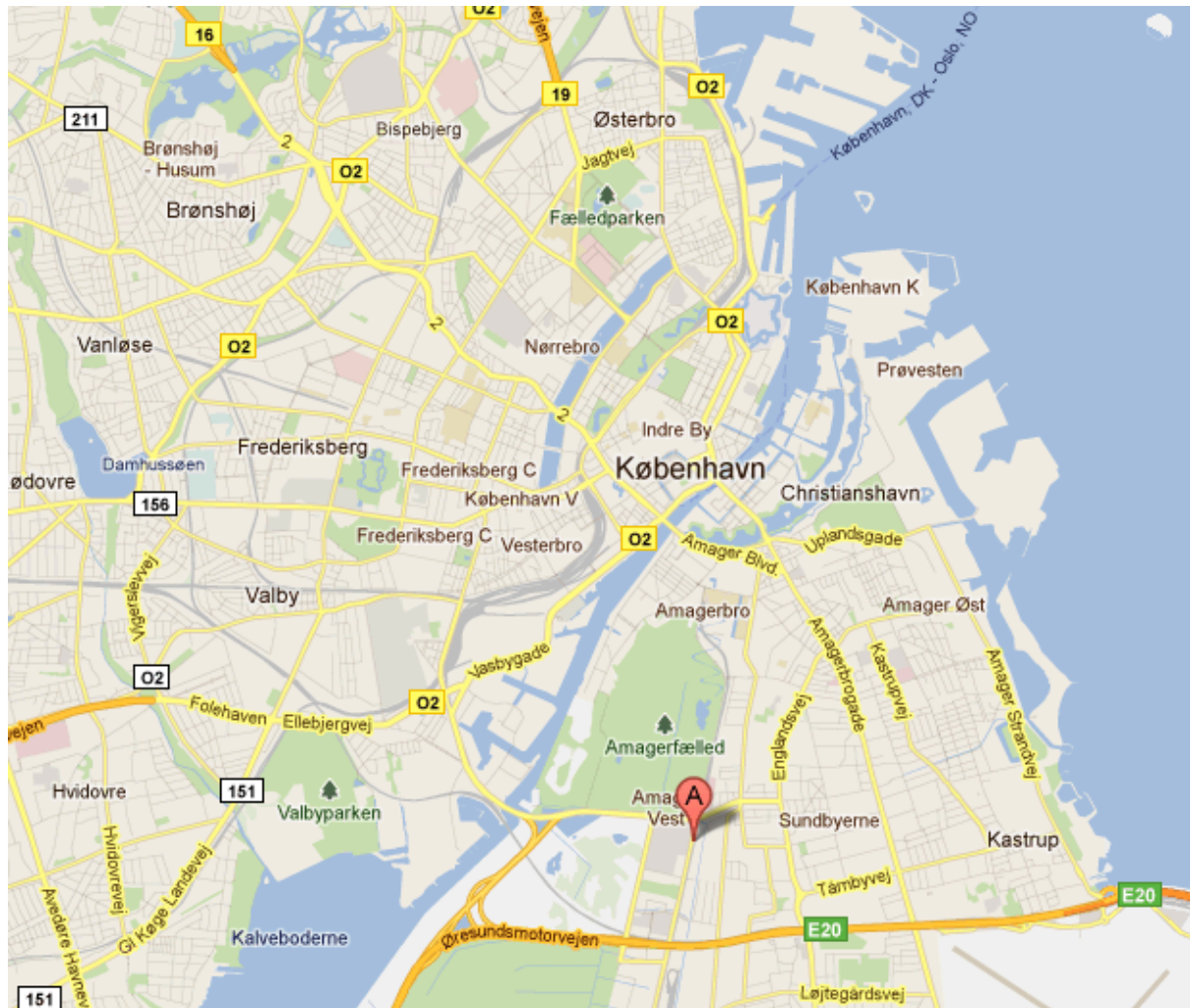
Security staff

The Danish police have a presence and are responsible for the security of the Bella Center, the hotels of the visitors, and for clearing the way for the motorcade transports between hotels and conference center. They have liaised with the Danish Armed Forces who also have a presence at key points, for instance as backup force close to the main entrance to the conference center. The Police have the authority, and command the Armed Forces in this operation. The Armed Forces provide backup aerial protection for the event, while it is the police who operate standard aerial surveillance via helicopters. Additionally, some of the larger countries have their own security details and bodyguards to protect their staff (France, Germany, UK, Spain). These security details liaise with the Danish Police but do not report to them. They are cleared to carry concealed weapons at all locations but are mandated to carry GPS tracker devices so that the Danish Police Command and Control staff can tell where they are at all times. The Armed forces do not have this requirement but check in via radio frequently.

Map of the area surrounding Bella Center



Map of Copenhagen



Bella Center Parking Lot



Metro Station Bella Center



Competency questions

1. How many people have been detected near the Poelse Hotel in the last 15 minutes?
2. Which people that were within the last hour detected at the Bella Center South Entrance have not been detected for more than 30 minutes by any sensor anywhere?
3. What is the last detected position of the Belgian Minister's second secretary, Mr Jean-Damme van Claude?
4. Are the crowd at the Sundby metro station peaceful protesters or rioting hooligans?
5. What is the distance between the crowd at the Sundby metro station and the French Minister's motorcade?
6. What people who are not known members of a security detail are carrying weapons?
7. Along the route from the Grand Hotel to the Bella Center, how many bridges are there?
8. What people who are not known members of the security detail or VIPs or VIP service staff have been detected at the Bella Center in the last 60 minutes?
9. At what surveilled locations have crowds formed?
10. Which crowds are the largest?
11. Which crowds contain masked people?
12. Which stationary (i.e. have not moved for ten minutes) objects have been detected at bridges that were not present 60 minutes ago?
13. Which crowds are within five minutes of each other by metro or walking?
14. Which cars or other vehicles have been moving around within the surveilled area in the last hour but are not affiliated with any known security detail?
15. Which people who are not authorized to be in Bella Center have been detected within Bella Center?
16. Which motorbikes are within the car exclusion zone (250 meters from the Bella Center)?