Aviation Crisis Management in Europe

Cyber Attack Exercise – CYBER 13

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1. EUROCONTROL
Aviation Crisis Management in Europe

EUROCONTROL Working together to deliver a Single European Sky

MISSION

Founded in 1960, today EUROCONTROL, the European Organisation for the Safety of Air Navigation, is a civil-military organisation committed to building, together with its partners, a Single European Sky that will deliver the air traffic management (ATM) performance required for the twenty-first century and beyond.

UNIQUELY QUALIFIED

EUROCONTROL is uniquely qualified to help make the Single European Sky a reality:

- Its 39 Member States provide a truly pan-European perspective;
- Its technical expertise is unrivalled and covers both the operational and regulatory elements;
- Can advise on both the civil and the military aspects of ATM;
Aviation Crisis Management in Europe

Avoiding congestion
Safety Issue

Sequencing the traffic

Benefits:
- Safer
- Fuel savings
- Less CO$_2$ emission
30000 Flights every day
1 Flight Plan processed every 3 seconds
And above 60000 Flight Plan electronic messages every day
88% of messages processed automatically
2. Eyjafjallajökull 2010 crisis
Normal traffic density in Europe in April

16.00 UTC

What happened?

Traffic in Europe on 18 April 2010
Impact on the European traffic
15 April – 21 April 2010

- 54% of flights not operated
- More than 100,000 flights
- 1% of annual traffic
CFMU Network Operations Portal (NOP)
https://www.cfmu.eurocontrol.int/PUBPORTAL/gateway/spec/index.html

13.5 million hits in one day!
@teemul we're looking into this, will publish jpg maps asap today
30 minutes ago via HootSuite in reply to teemul

@monstermunch99 sorry only Flash, can I help by forwarding a map or transmitting info?
39 minutes ago via HootSuite in reply to monstermunch99

@odeckmyn we are moving to a new site, same as the White House :-) soon soon... sorry about the inconvenience, what were you looking for?
about 1 hour ago via HootSuite in reply to odeckmyn

Join us on www.facebook.com/eurocontrol to share your stories about the massive air traffic disruption #euva #ashcloud
3. European Aviation Crisis Coordination Cell (EACCC)
Lessons learnt from 2010 ash crisis

May 2010:
European Aviation Crisis Coordination Cell

Network management  Political leadership  Airworthiness Safety
European Aviation Crisis Coordination Cell (EACCC)

Coordinate management of response to the network crisis affecting aviation in Europe

Activated when circumstances beyond normal environment of ops are evident

Members

- Airlines
- ANSP
- Military

State focal points
EACCC on Alert

Activated: volcano Grimsvötn, May 2011
Possible threats

- Volcanic ash dispersion
- Nuclear emissions dispersion
- War
- Hazardous chemicals dispersion
- Fire
- Security threats (terrorism)
- Airborne spread of diseases/Pandemic
- Earthquake
- Flooding
- Major failure of a pan-European function
- Industrial action or unavailability of a major or several ANSPs
- Massive cyber attacks
- Heavy meteorological conditions
- Shortage of fuel in Europe
- Threat from space (e.g. satellite, space weather, etc.)
- …
4. First Network Manager/EACCC Cyber Attack Exercise - CYBER 13
ICAO volcanic ash exercise: VOLCEX 13/01, 23 – 24 April 2013

Getting ready for the next eruption
Objectives:

- Evaluate effectiveness of coordination
- Evaluate impact of this cyber attack on aviation
- Evaluate role of State Focal Points
- Identify mitigations to this cyber attack scenario
- Contribute to enhancing national network of contacts

29-30 May 2013
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CYBER 13 – scenario & participants

Day 1 crisis

Day 2 recovery

The Community of European Railway and Infrastructure Companies

Observers

CER
The Voice of European Railways

European Union
EXTERNAL ACTION

NATO OTAN

flybe.

brussels airlines

enisa
European Network and Information Security Agency

Lufthansa

AIR FRANCE
Positive

- Getting to know each other
- Enhancing preparedness
- Raising awareness
- Testing national and European coordination
- Contributing to consistent communication

Areas for improvement

- Involve airports & railways
- Produce press releases & simulate their distribution
- More graphical representations during the exercise
- Ensure teleconferencing works properly

Selection ...
CYBER 13 – lessons learned

- Reporting lines on cyber issues to be clarified:
  - from Network Manager to States, ENISA or to Europol
  - within States - State Focal Points to national IT security experts

- Development and use of crisis management support tools is essential (e.g. EVITA)

- Involvement of airports should be foreseen in future exercises to help in managing airport congestion

- Airlines & Air Traffic Control need an estimated number of flights that can be processed to plan their operations

- EACCC should help relieve some of the legal aspects – ‘out of the box’ solutions recognised in crisis
CYBER 13 – conclusions

- Cyber attack may cause many flight cancellations - other methods for transfer of flight plans to be considered

- State Focal Points play a key role in such events in coordination and communication

- Very positive general impression of participants – ‘when will the next exercise be organised?’
Thank you!

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