

CONTINGENCY PLANNING of AIR NAVIGATION SERVICES

SASI Workshop

A practical case - Fire in a Tower

- **Professor Chris Johnson**



**Glasgow Accident
Analysis Group**

WS Attendants expectations

Fire in a tower

- How could it happen ?
- What can go wrong ?
- What should be the response ?

Fire in the Tower Overview

- In 2008, fire in machine room below tower;
 - Serviced approach and area control.
- Fire disabled all of the equipment in center;
 - control room was evacuated.
- Traffic taken by surrounding FIRs;
 - Within same overall management structure;
 - flow management a year after incident;
 - restrictions extend across entire region.

Fire in the Tower Overview

- 3 small, local FIR's operated from Towers.
 - 2 provide approach and area control.
 - 3rd provides approach and oceanic control.
- Cause of fire was electrical fault:
 - introduced during re-wiring by sub-contractor.
- Alarm sounds in control room:
 - Supervisor confirms not a false alarm.
 - Smoke seen in machine room
 - Evacuate all non-essential staff from tower.

Immediate Response

- Some technicians assist emergency services:
 - requested by direct telephone contact.
 - no automated warning for fire and rescue;
 - existing alarm application was unreliable.
- Other engineers stay in the control room:
 - remaining ATCO's quickly inform neighbours;
 - Unknown fire, help clear their airspace.

Immediate Response

- Other FIRs work closely in normal conditions:
 - small scale of operations
 - largely informal relationship
 - helped to ensure all flights quickly transferred.
- Meanwhile, fire takes hold in machine room.
- Legacy fire suppression system:
 - did not put out the fire.
- Fire crews exacerbate damage to systems.

Medium Term Response

- Flow management techniques applied
 - knock-on effects across all 3 FIRs;
 - Plans on the fly with ad hoc optimisations.
- Underlying problems in communications.
- Exacerbated by rising demand for services:
 - Government pressure to maintain tourism;
 - more efficient use of few remaining slots...
- Risk assessment of flow restrictions?

WS Attendants views

Fire in a tower

- What did we learn ?
- What went right ?
- What went wrong ?
- What could have been better ?

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A practical example - Fire in a Tower

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