



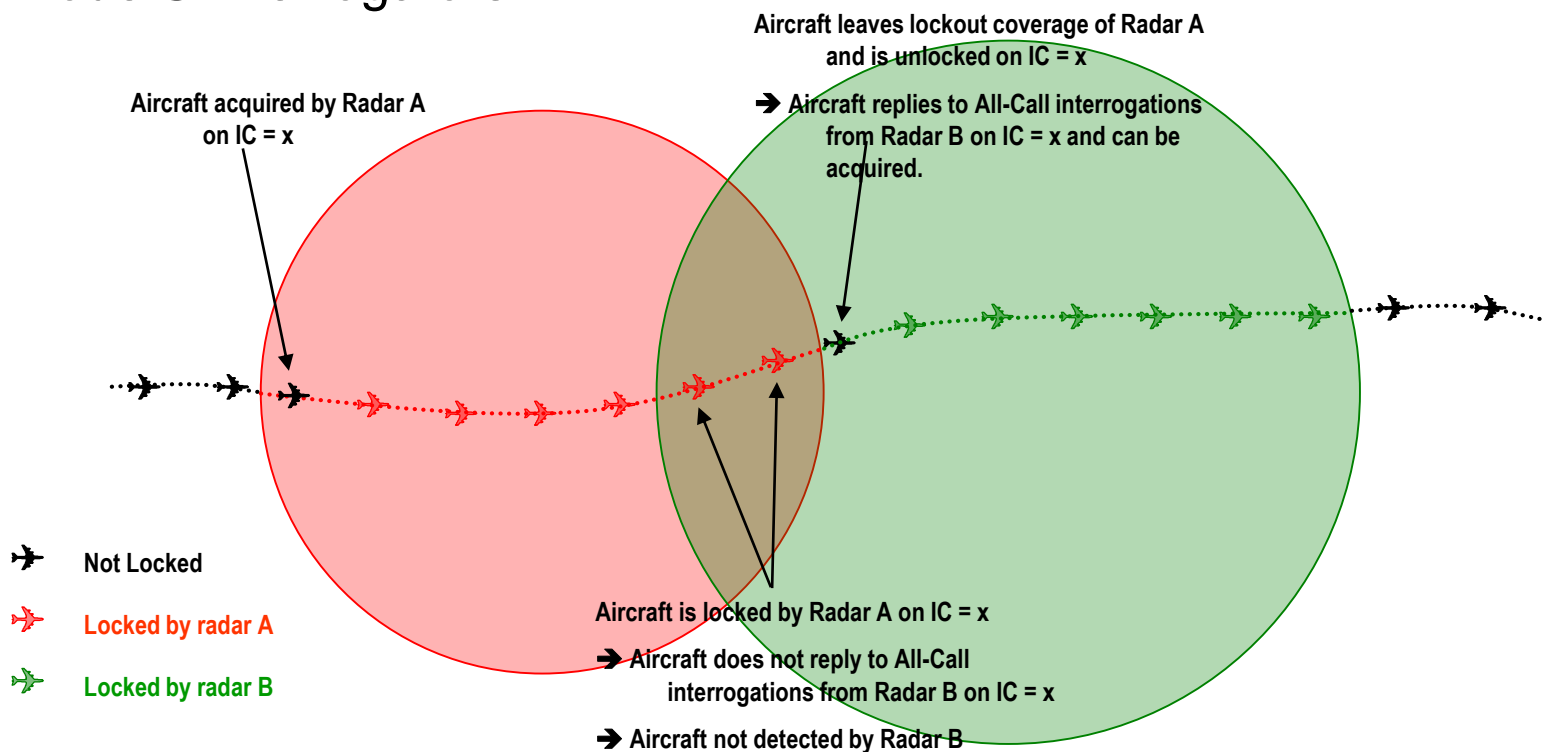
IC Conflict

Surveillance/MICA Workshop

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Impact of IC Conflict on Operation

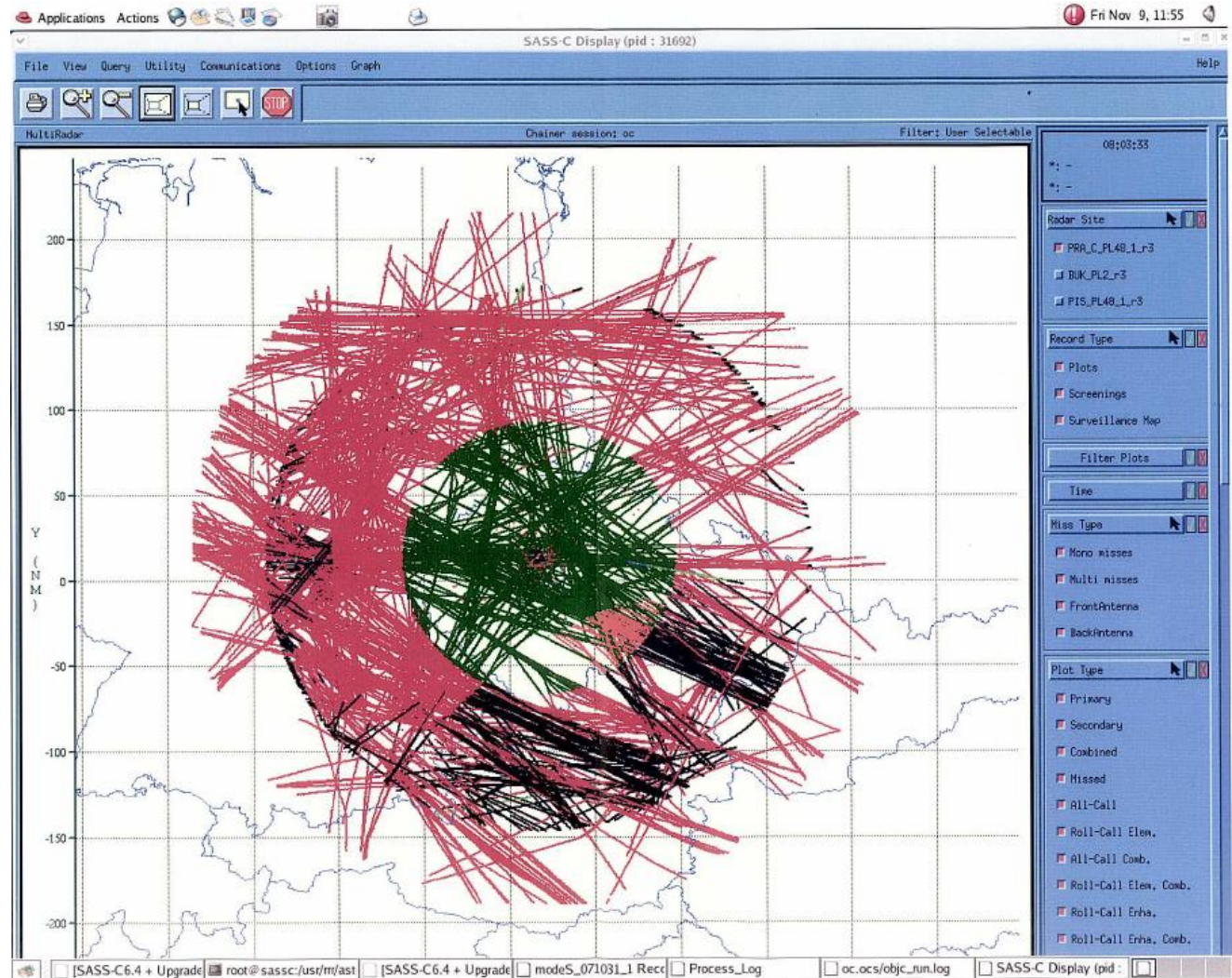
- An IC conflict is an uncoordinated overlap of lockout coverage of two or more Mode S radar operating on the same IC, potentially resulting in aircraft remaining undetected by at least one of the Mode S interrogators.



Example of IC Conflict

Incoming aircraft which are not detected by the Mode S radar are in black (Miss plots in SASS-C multi radar environment).

Outgoing aircraft are correctly detected till the end of the coverage.



Main Causes of IC Conflicts

1. Coverage map in EMS Map ICD format not loaded successfully on the radar
 - As a consequence the default parameters are applied.
 - Very often, default parameters are:
 - Default Lockout: Full Lockout
 - Default Range: 256NM
2. Mode S radar operating in Mode S without IC allocation
3. Mode S radar is not programmed in accordance with the latest issued IC allocation:
 - Wrong coverage and/or wrong IC is programmed
 - Operation on previous IC allocation, radar tests
4. One radar channel is correctly programmed, not the second
 - IC conflict when the radar revert to the second channel

Measures to avoid creating an IC conflict

1. Modify default radar parameters. The default lockout to apply if the coverage map fails to load should be set to “No lockout” and the default range should be set to a short range (60NM for example).
 - Default Lockout: No Lockout
 - Default Range: 60NM
2. Ensure that an IC has been allocated to the Mode S interrogator prior to start Mode S transmission.
3. Develop programming procedure to ensure that parameters are correctly programmed in the Mode S interrogator during the installation/validation.
 - The surveillance/lockout coverage map and IC should be programmed correctly programmed on both channels.
 - The latest IC allocation shall be programmed

IC Conflict Management Steps

- Detection of the IC Conflict
 - In general delayed acquisition of aircraft.
 - This has to be achieved on a timely manner (real-time required?).
- Implement a fall-back mode of operation
 - One possibility is to apply (Stochastic) Lockout Override
- Report the IC conflict in order to resolve it as fast as possible.

IC Conflict Reporting and Resolution

- When a Mode S Operator identifies a potential IC conflict impacting a Mode S radar under his responsibility, he has to:
 - Report the potential IC conflict to his representative Focal Point and to the MICA Cell.
 - Make available, through the MICA website, any related information for other Mode S Operators.
 - Investigate the conflict and coordinate bilaterally with appropriate ModeS Operators to determine the potential cause of conflict.
 - Mode S Operators contact details are provided on the MICA Contact List which is published on the MICA website.
 - Inform the Focal Point and the MICA Cell once the potential cause of the IC conflict has been identified, and once the IC conflict is resolved.

IC conflict Reporting and Resolution (2)

- When a **Focal Point** is notified of an IC conflict within his area of responsibility, the Focal Point has to provide the necessary assistance and advice to achieve an early resolution of the IC conflict.
- The **MICA Cell** should provide whatever assistance and advice it can to facilitate the dissemination of information and early resolution of the conflict.