

New MBT Extensions to SPx Server

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Summary

The MBT extensions to SPx Server (v1.72 onwards) provide a new capability for target initiation and tracking. The new track initiation method is significant because it can handle larger number of provisional tracks than the standard MHT's initiation process. The new tracking is significant because it supports models, meaning that different parameter configurations can process the same radar video. The ability to detect small targets and support multiple tracking modules may offer new opportunities for tracking.

Compatibility

The existing MHT in SPx Server works as normal, so existing configuration files work as normal. The MBT adds additional capabilities.

Models

A Model in the MBT is two things

1. A set of parameters for the ATI and tracking
2. A set of built-in assumptions for the behaviour of the target

The models incorporate assumptions about the behaviour of the target that will help to find targets of that type. The principle of how the models works is exactly the same.

Multiple models can be configured to process the same radar data independently and concurrently. This means that one model may be optimised to look for small weak targets, for example, whilst another is looking for stronger fast-moving targets.

Any number of models (subject to normal system limitations) can be active.

The MBT and the MHT Work Together

A track may be *created* by the MBT or the MHT. A track is always *tracked* by the MHT. However, the MBT can override parameters for the MHT, meaning that parameters of the MBT's model affect the tracking in the MHT.

Small Target Detection

The MBT can use non-qualifying (small) plots from the plot extractor. It doesn't *need* to use these plots, but by using them it can look for much small targets than the MHT.

ATI Configuration

ATI can be done in a number of ways:

- Use the MHT for the normal situation and the MBT for special cases (small/weak, fast agile etc)
- Disable ATI in the MHT and use several different models in the MBT for different types of target

