



UNIVERSITI TEKNOLOGI MARA

ANALYSIS OF TARGET CHARACTERIZATION IN
FORWARD SCATTERING RADAR (FSR)

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MASTER OF SCIENCE IN
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ABSTRACT

A special type of bistatic radar known as forward scattering radar (FSR) detect targets that is near to the transmitter and receiver baseline. The target on the baseline will then block the signal transmitted and create a shadow introducing an important signal increase that improve radar sensitivity at the broad beam as compared to monostatic and bistatic configuration. FSR has an attractive feature that abrupt rise in radar cross section (RCS) as compared to traditional monostatic radar. As any other system, FSR has its own constraints as compare to other radar system.

This paper discuss on forward Scatter Radar cross section (FS-RCS) of a target characterization. An analysis of simulation of a target with different characterization in forward Scatter Radar is conducted. Materials used for the target are based on the features of the actual car. It is observed that the side lobe spectrum is more visible as the frequency is higher for the different characteristic of a target. A slight changes made on a target could give different readings of RCS.

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