Dynamic Positioning Committee

Marine Technology Society

SENSORS

Modulated Microwave Position & Heading Reference Sensor

Jan Grothusen

Guidance Control Systems Limited (United Kingdom)

Session Chair – Steve Browne, Thales Geo Solutions

September 16-17, 2003
Houston, Texas

RadarScan

Modulated Microwave Position & Heading Sensor

DP CONFERENCE
September 16-17, 2003

Laser

- Passive retro-targets
- Little clutter
- High precision

Radar

- Weather independence
- Elevation coverage
- Widely recognized & trusted

Objectives
- Challenges
- Passive Targets
- Range Measurement
- Bearing Measurement
- Radar Clutter
- Embedded System
- Summary

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Modulated Microwave Position & Heading Sensor

Passive Targets

- spectrum pollution
- narrow band
- low power

Radar Clutter

- short range
- behind target
- multi-system operation

Range & Bearing Measurement

- multi-target discrimination
- high accuracy

Embedded System

- low cost / low maintenance

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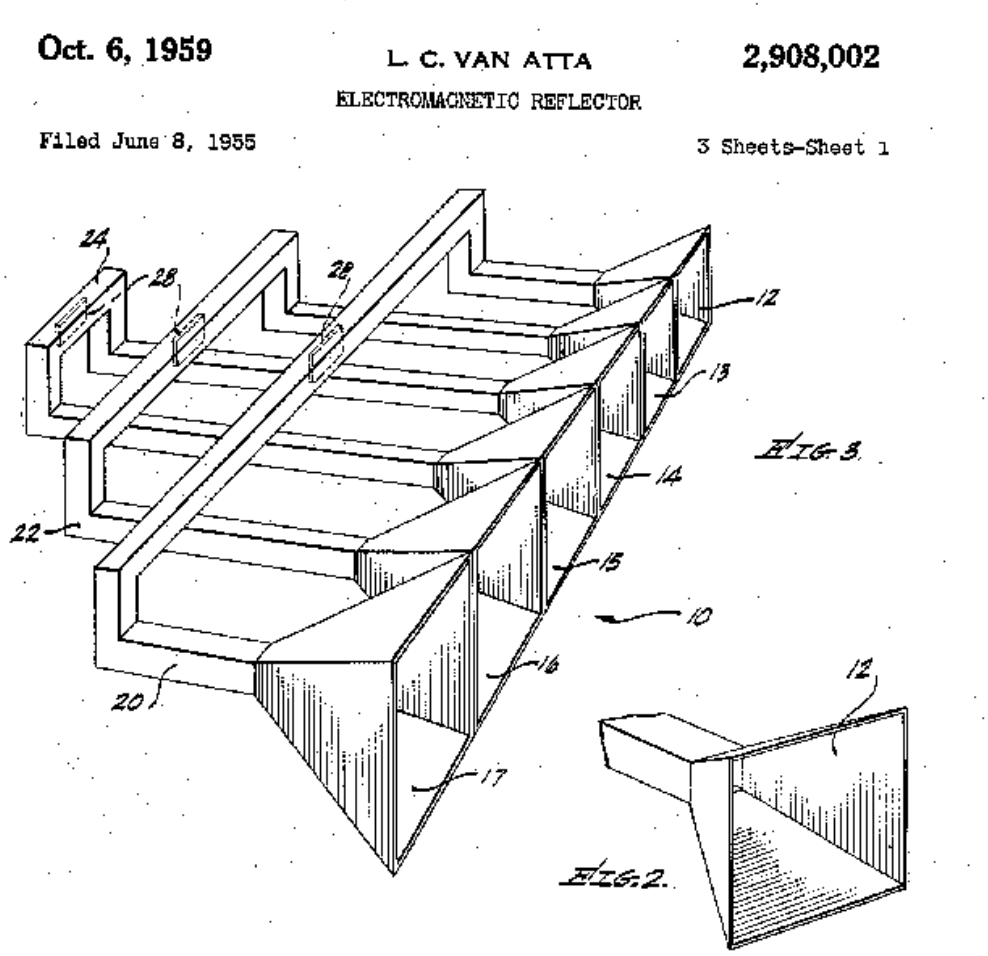

Oct. 6, 1959 L. C. VAN ATTA 2,908,002

ELECTROMAGNETIC REFLECTOR

Filed June 8, 1955 3 Sheets-Sheet 1

FIG. 3.

FIG. 2.

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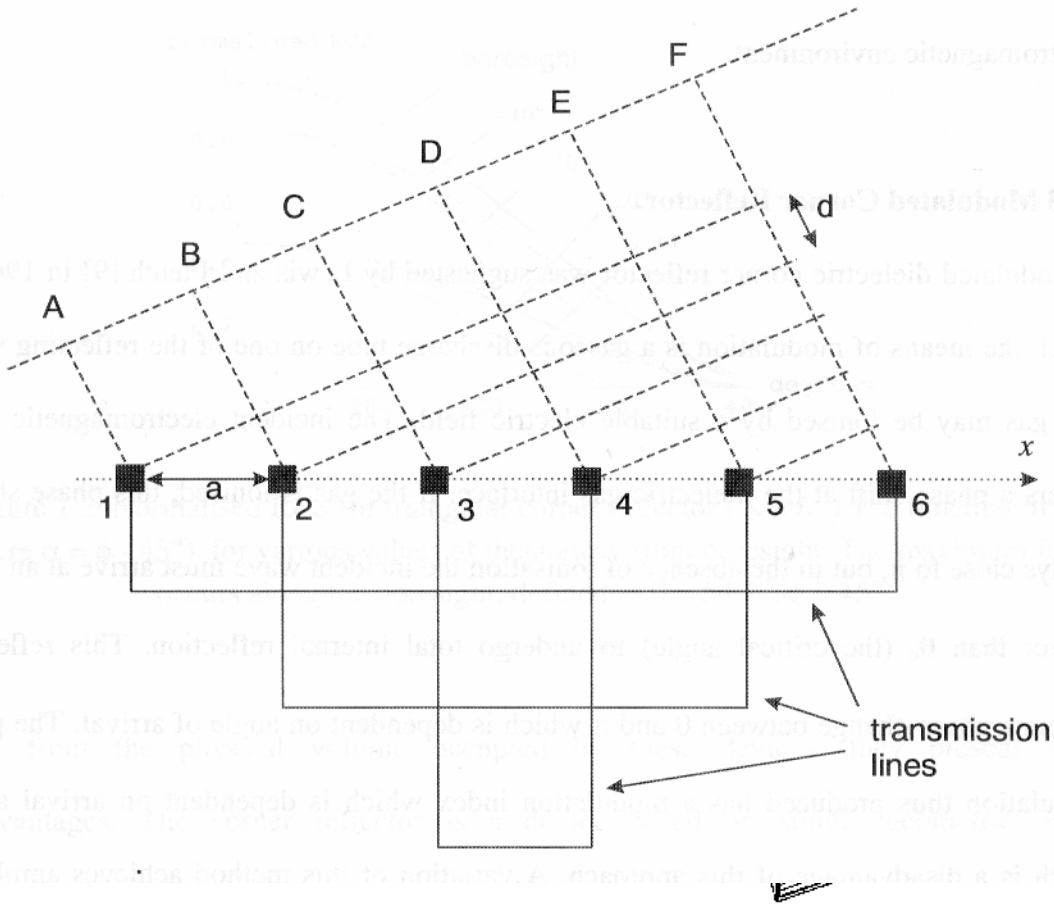

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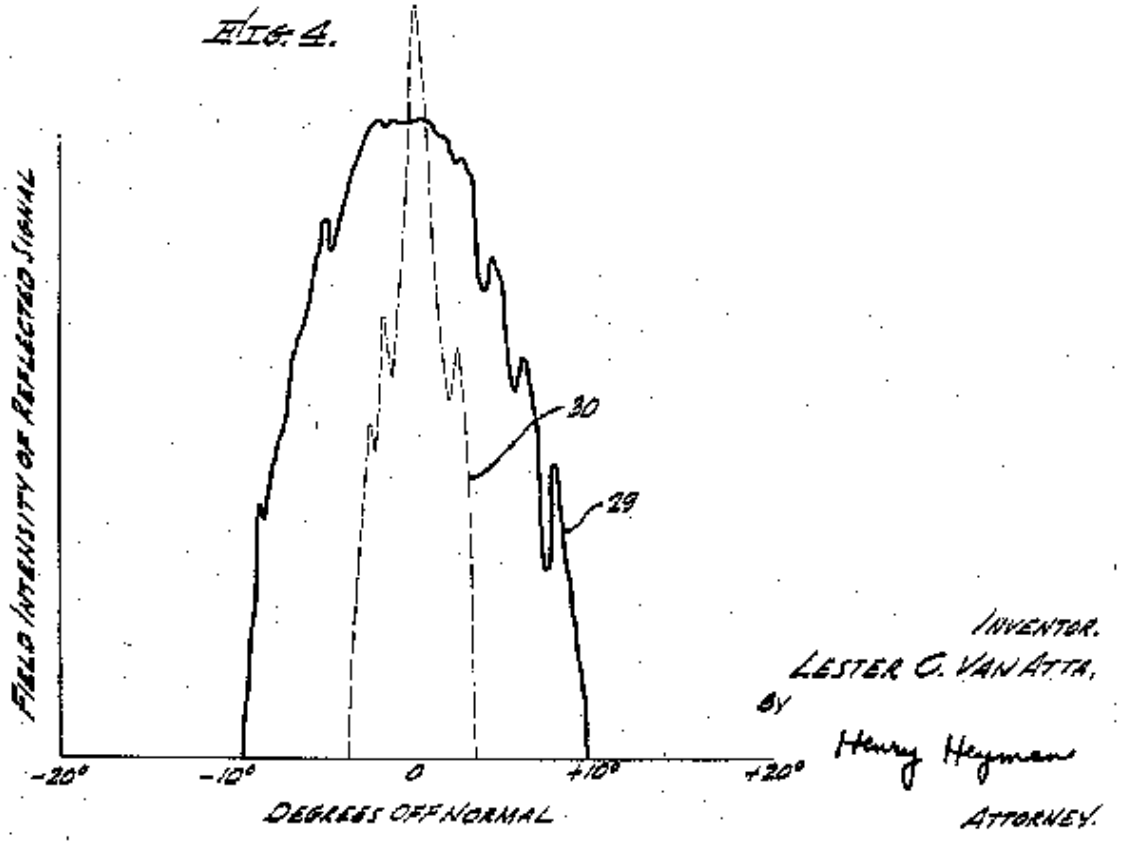

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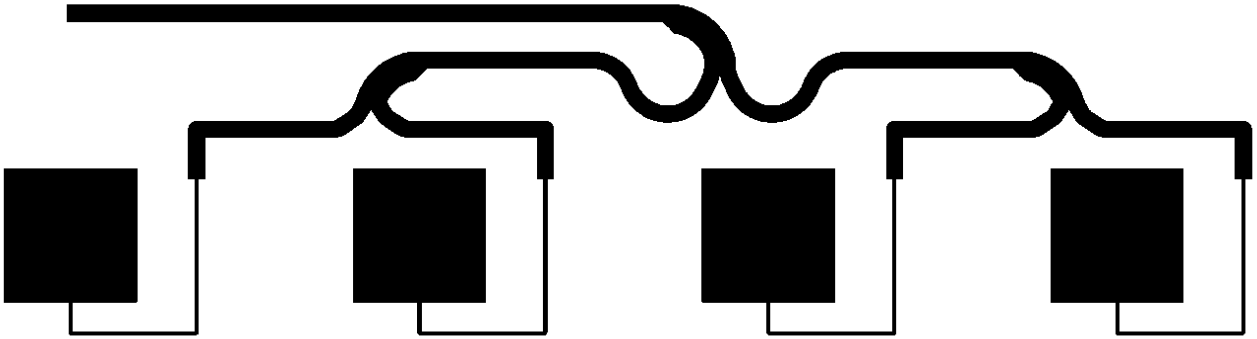

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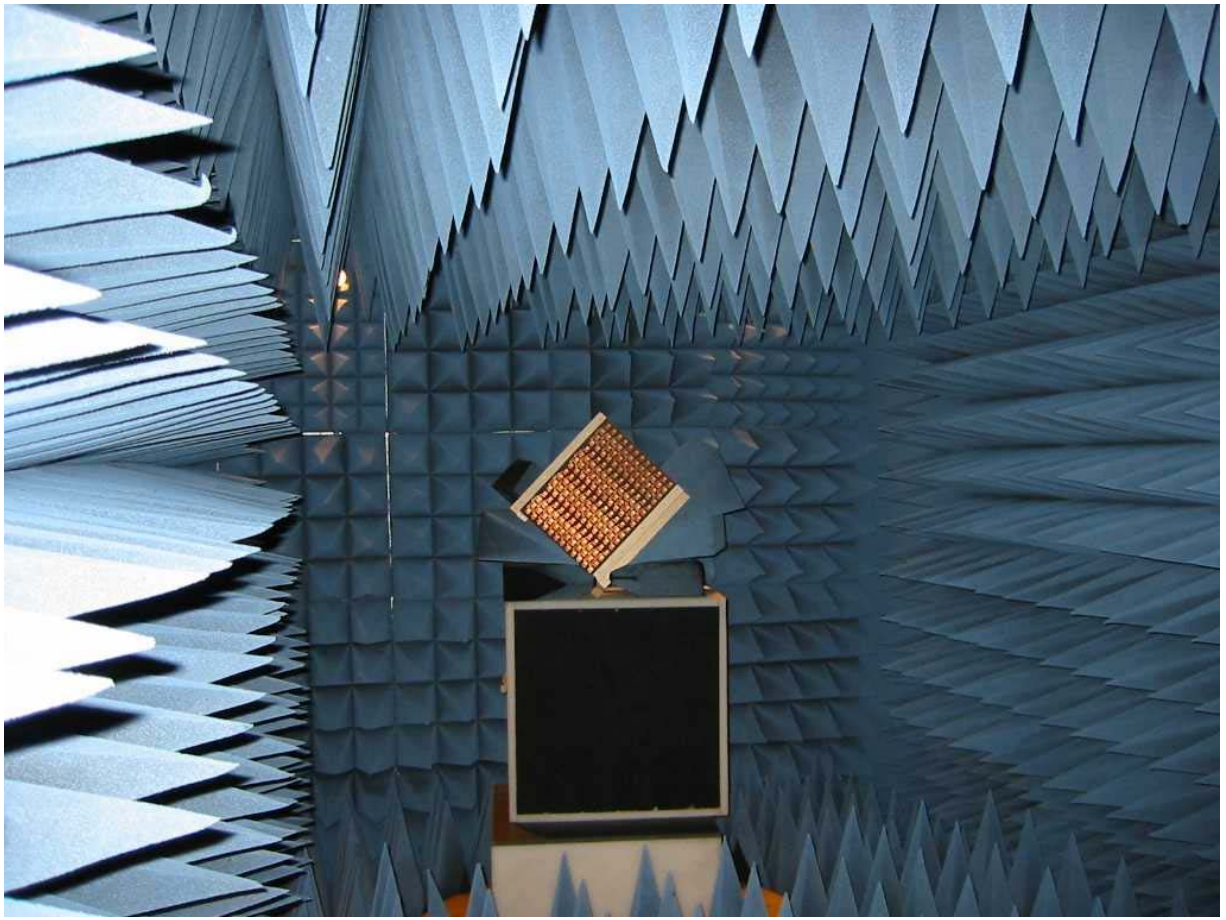

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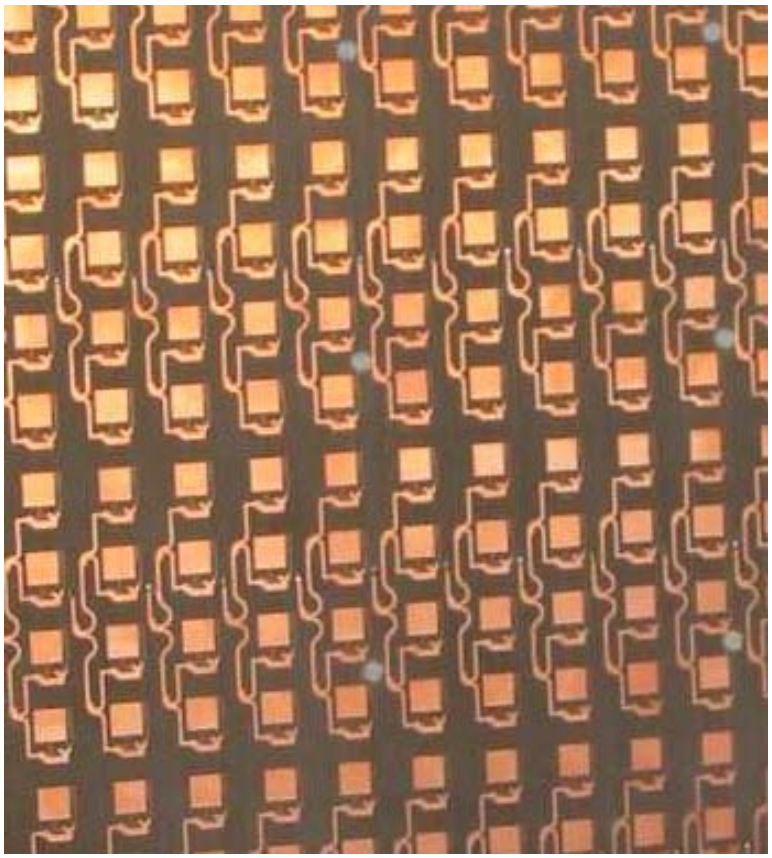

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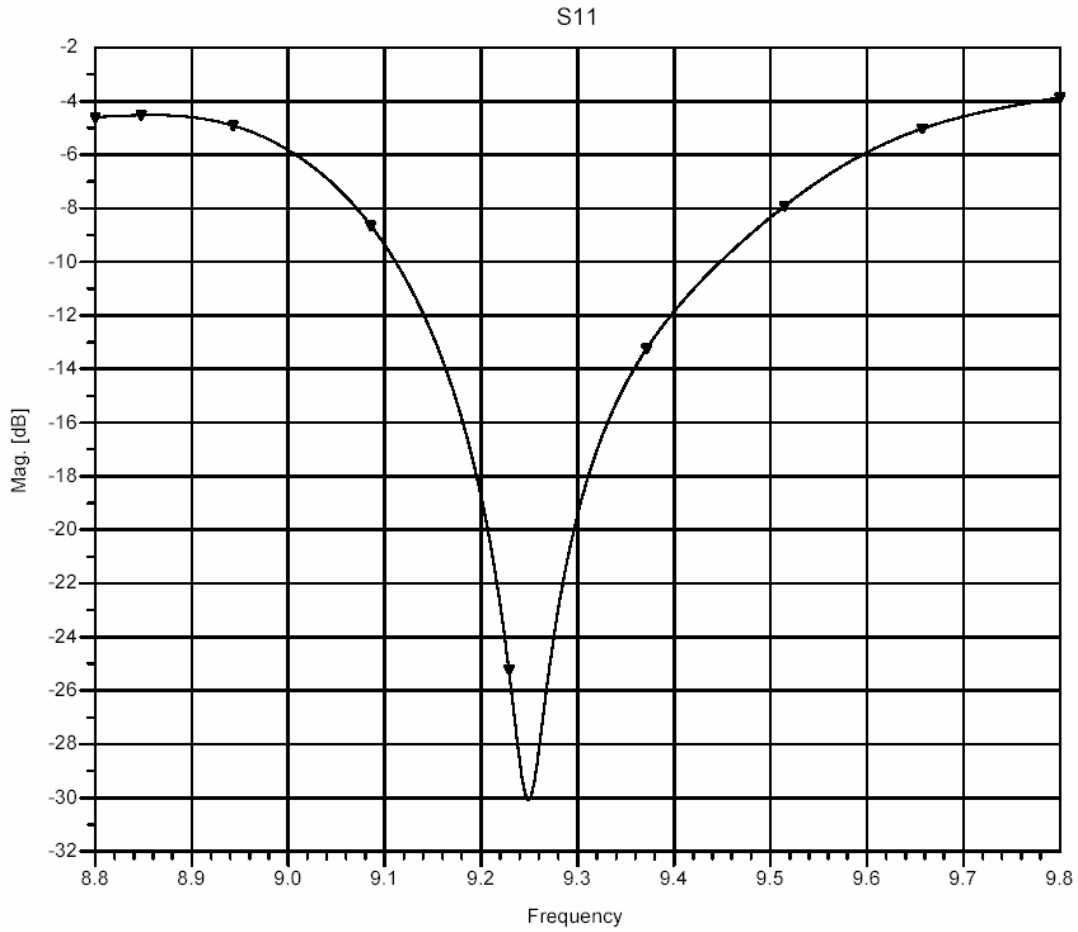
Tue Jun 03 2003 - Dataset: Lpoleant_4x1_feed_ext_feed_fc_2_XP_3_nv_4_9p25_adj_2_mom_a



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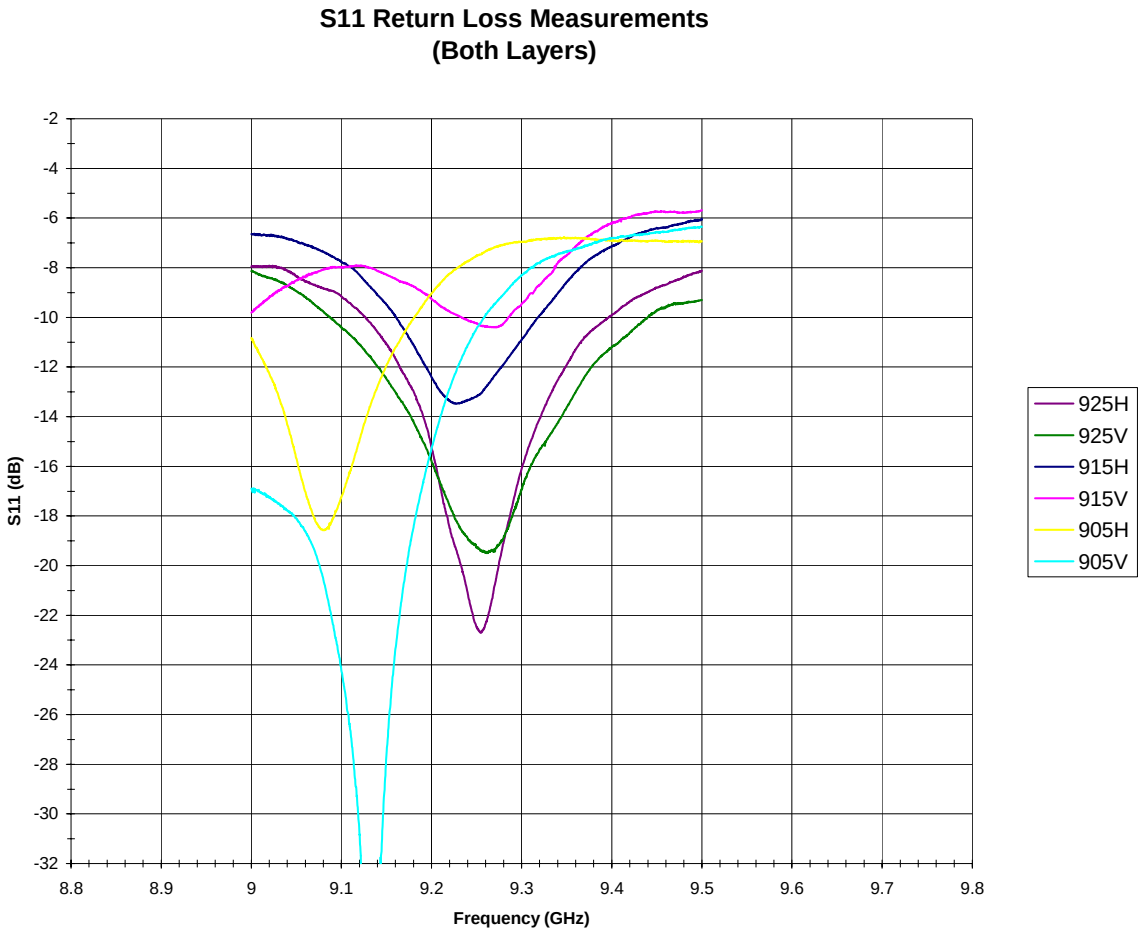

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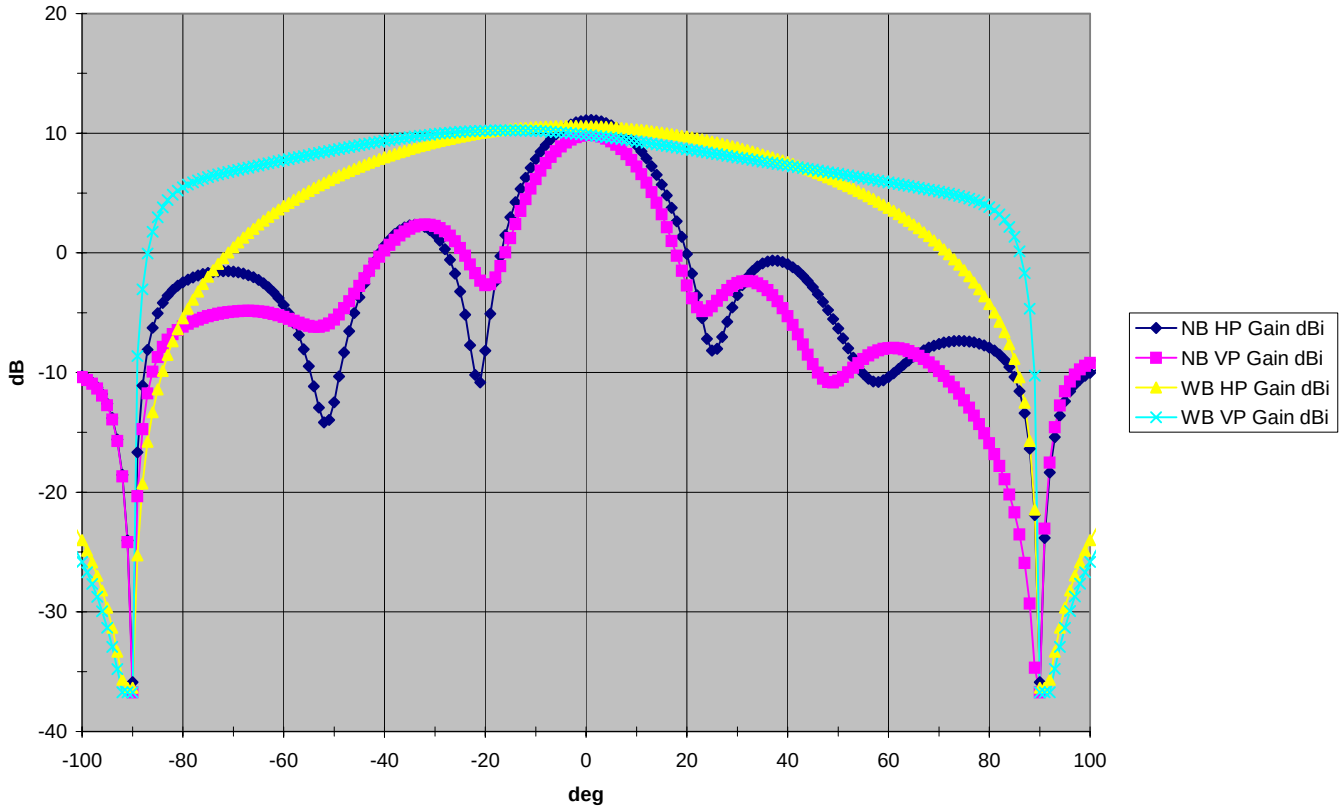

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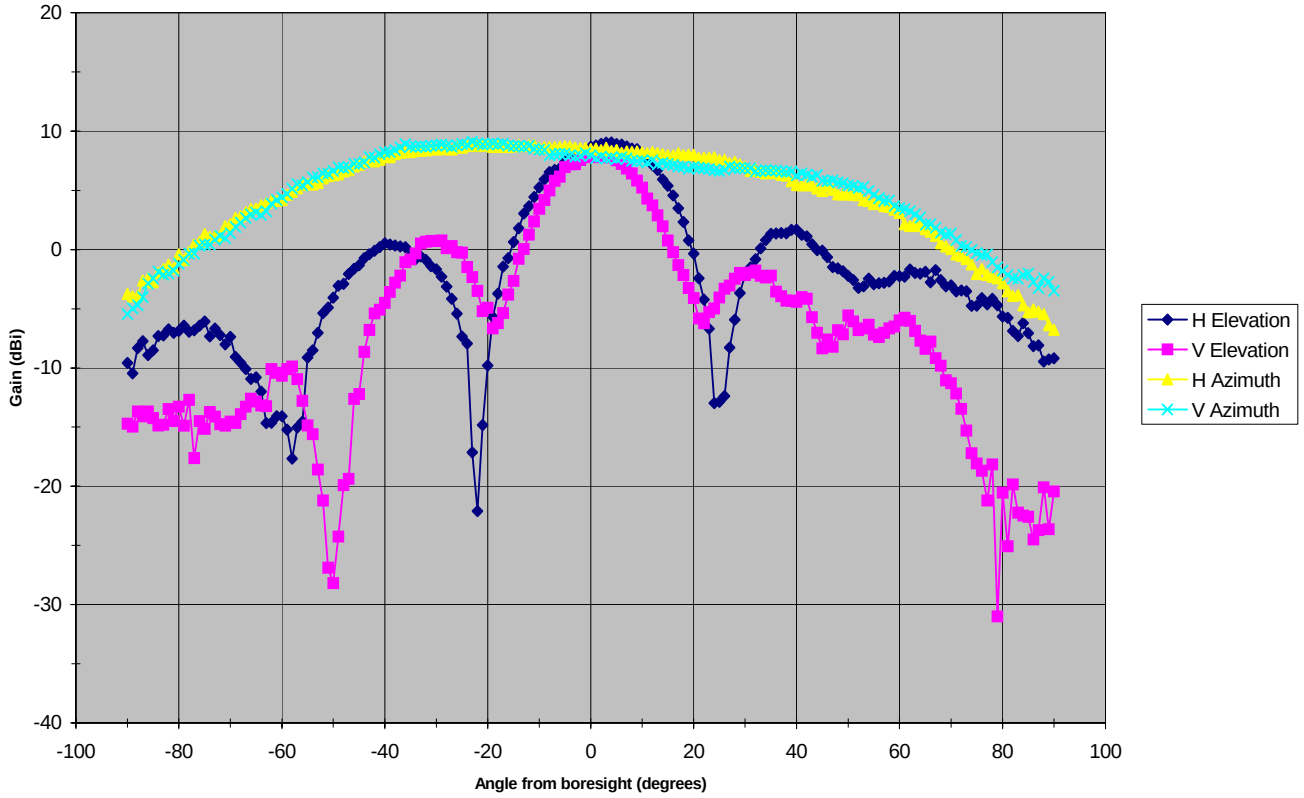

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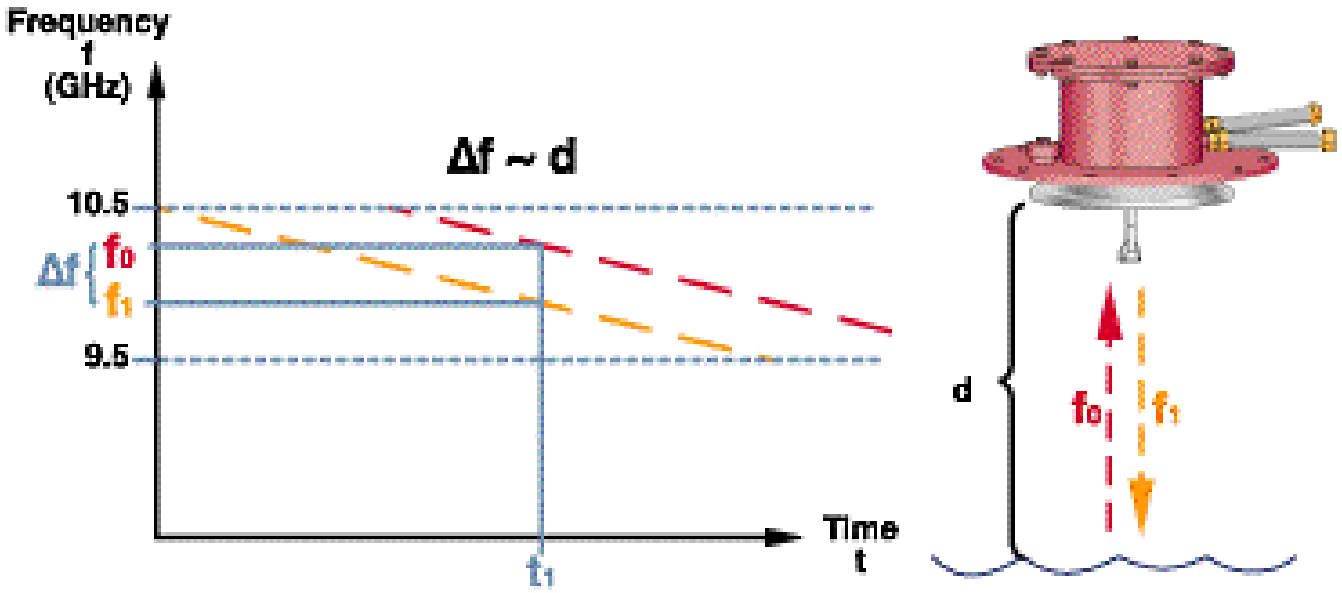

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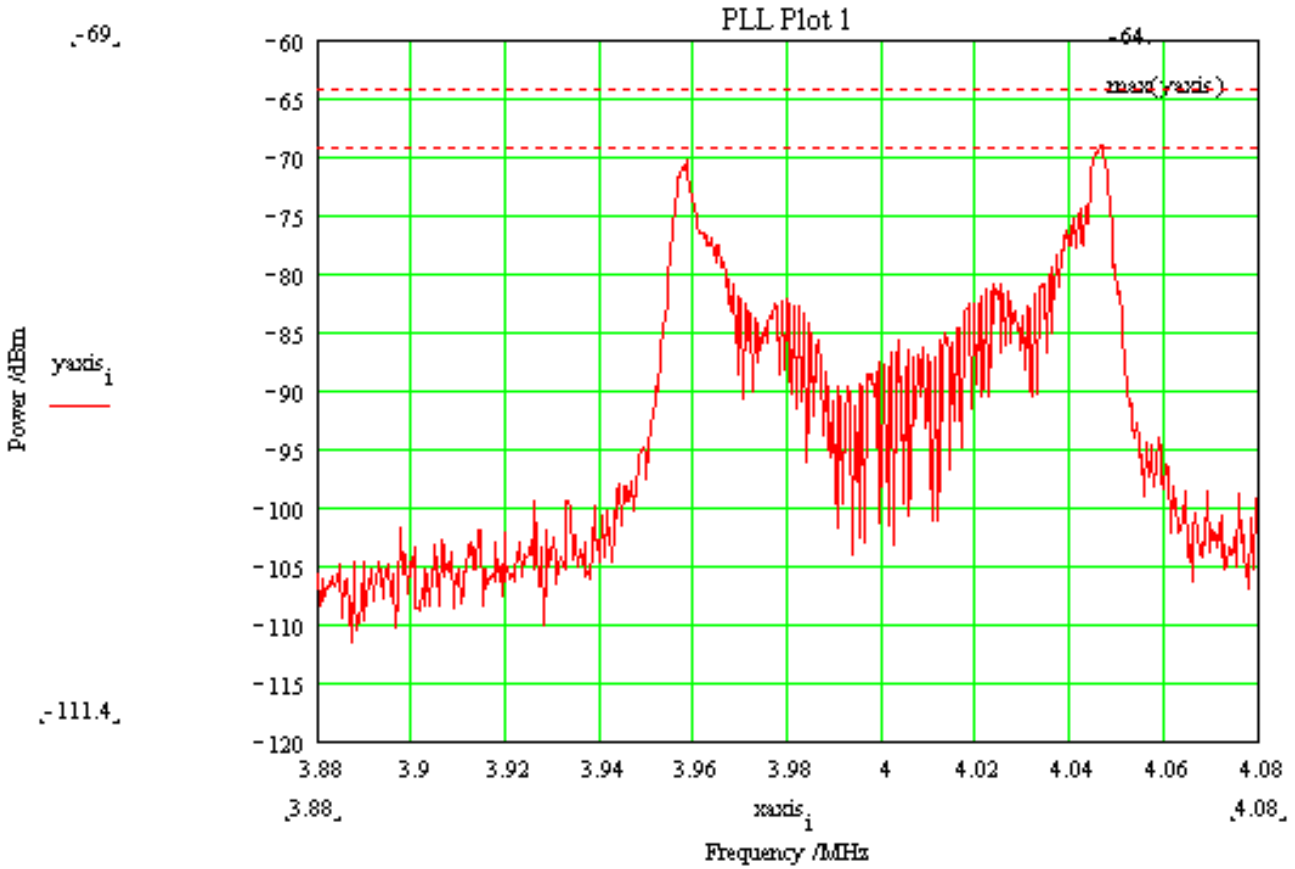

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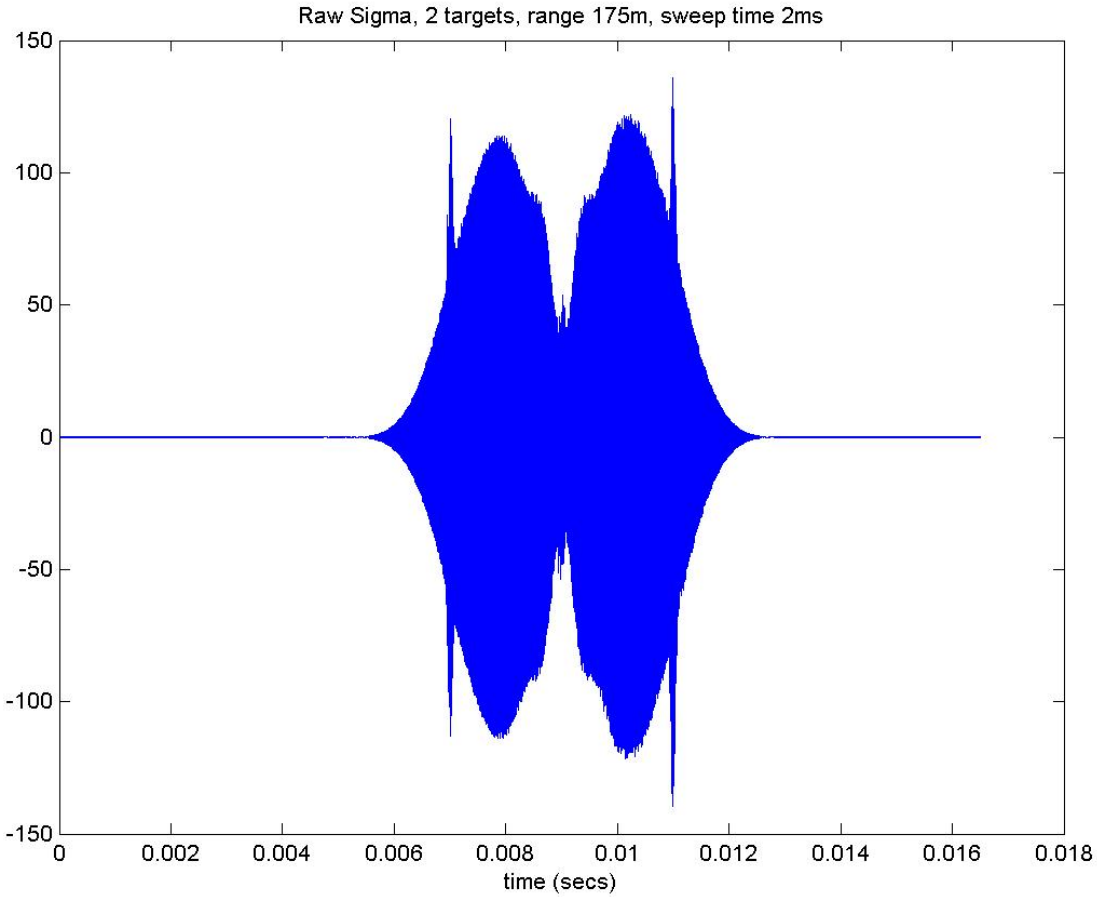

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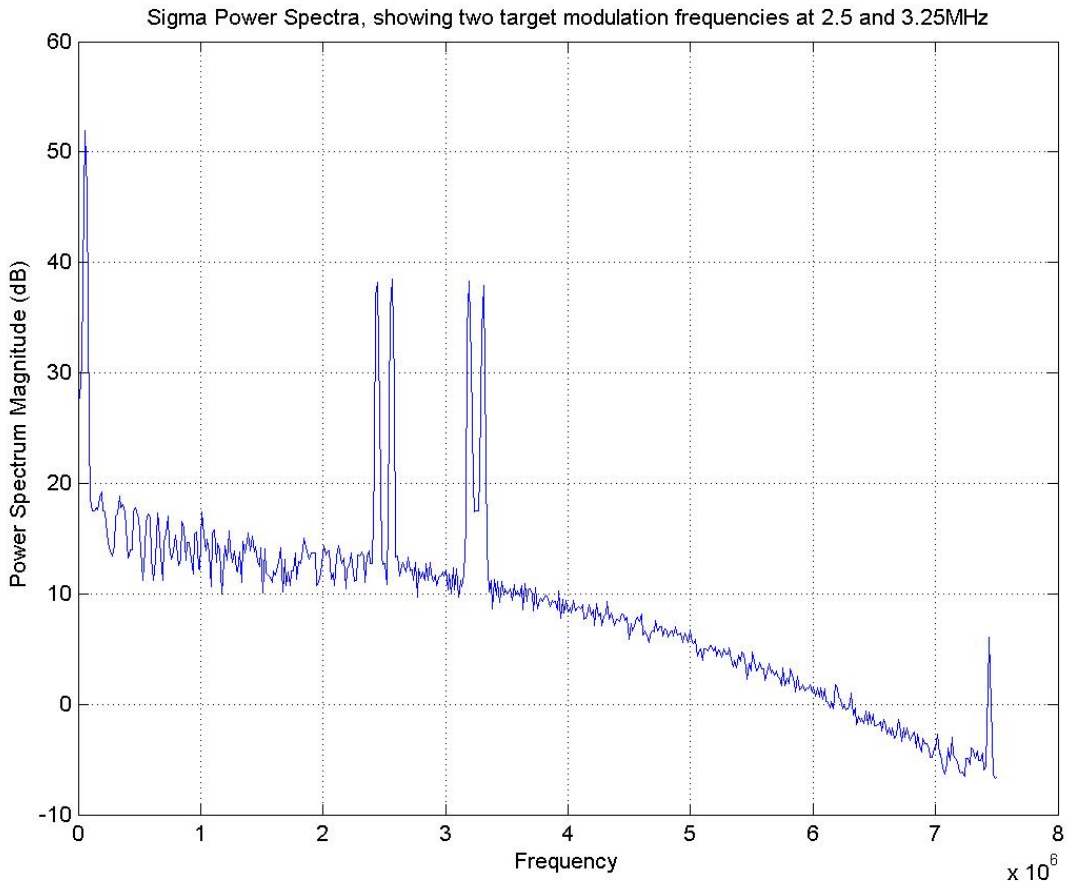

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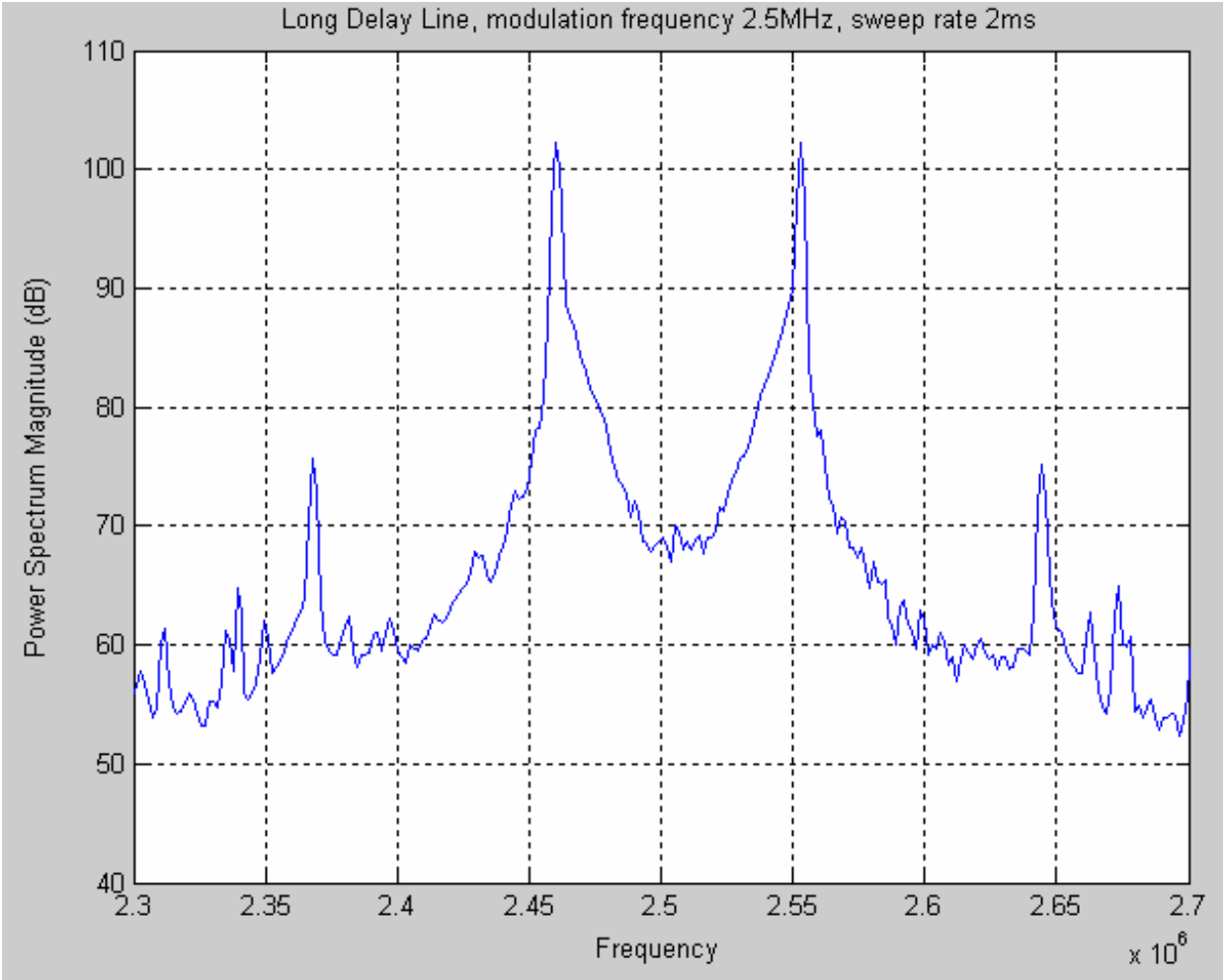

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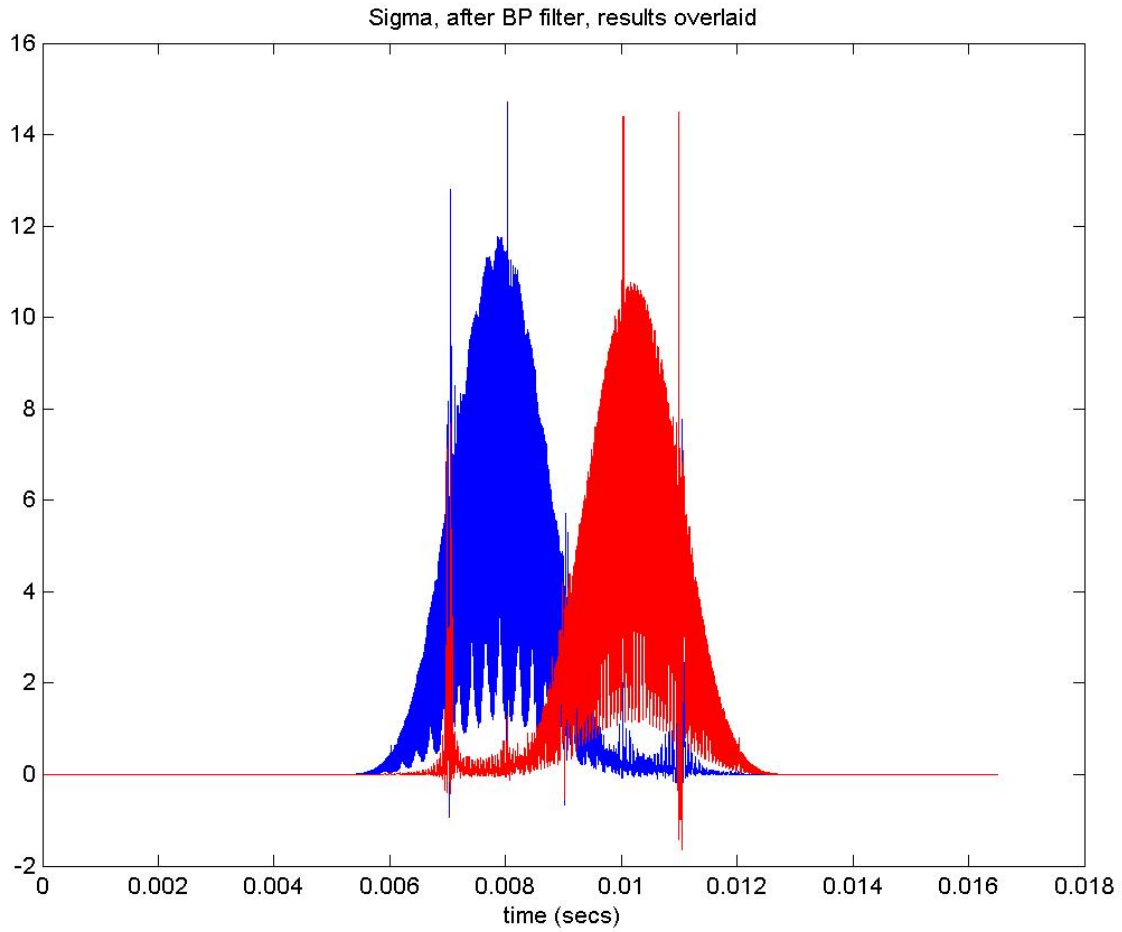

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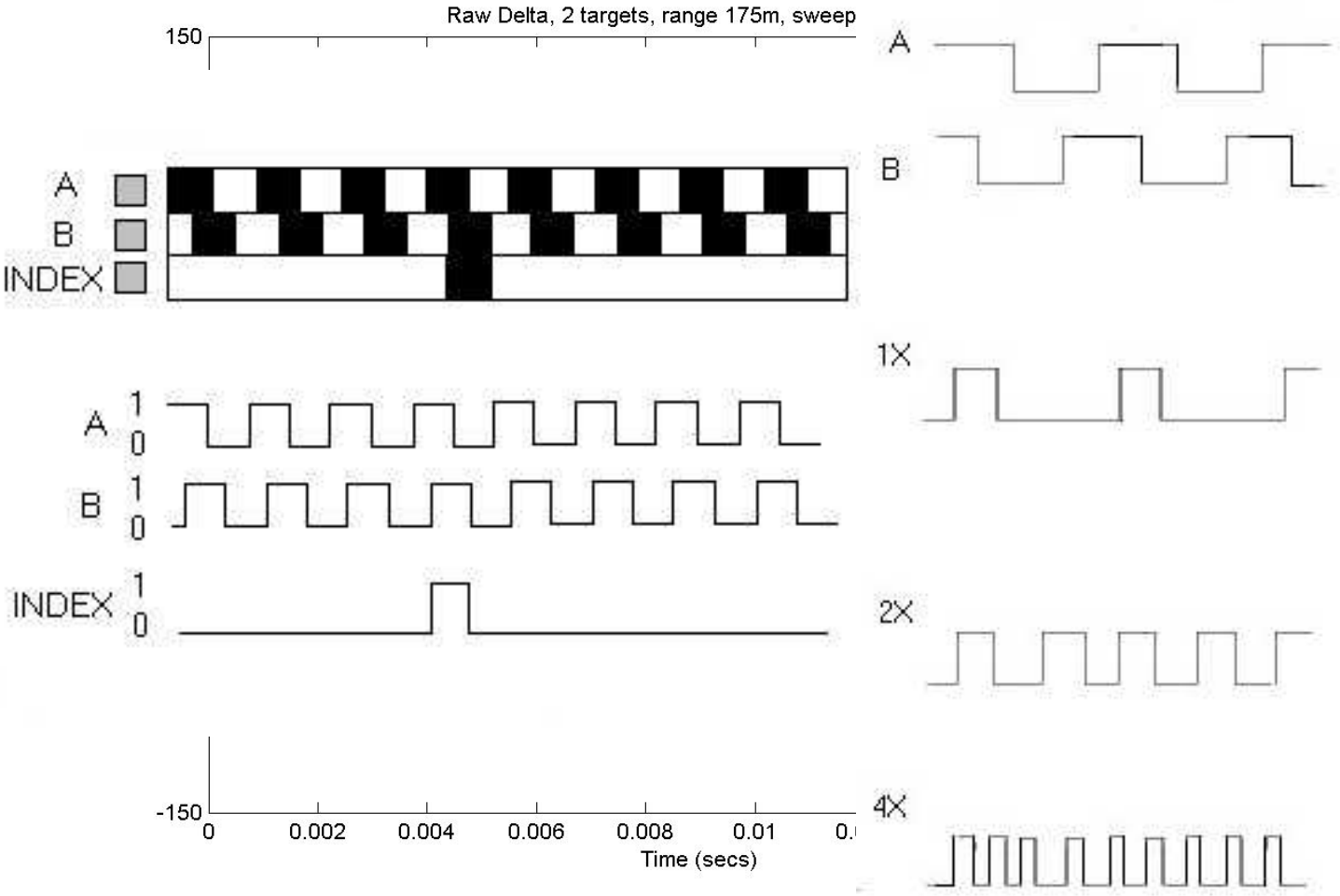

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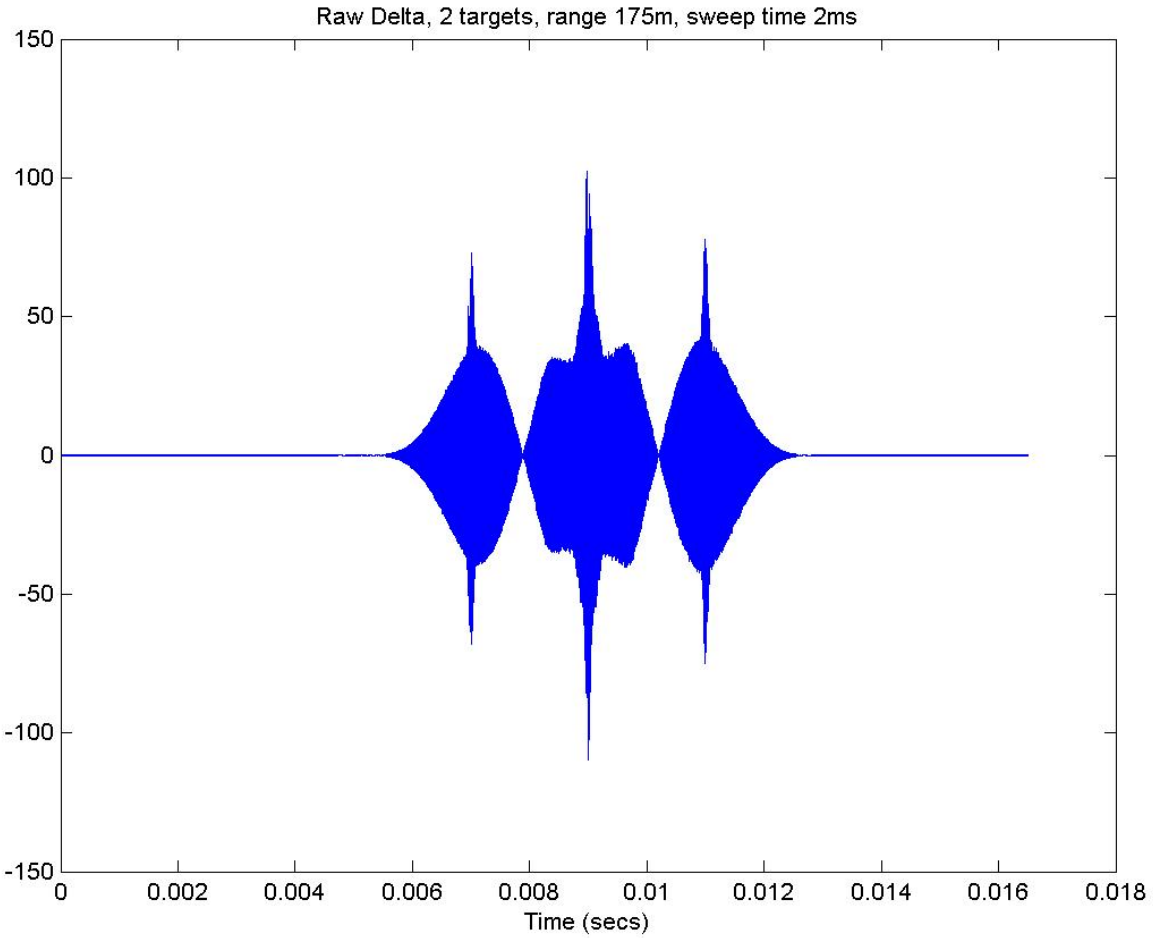

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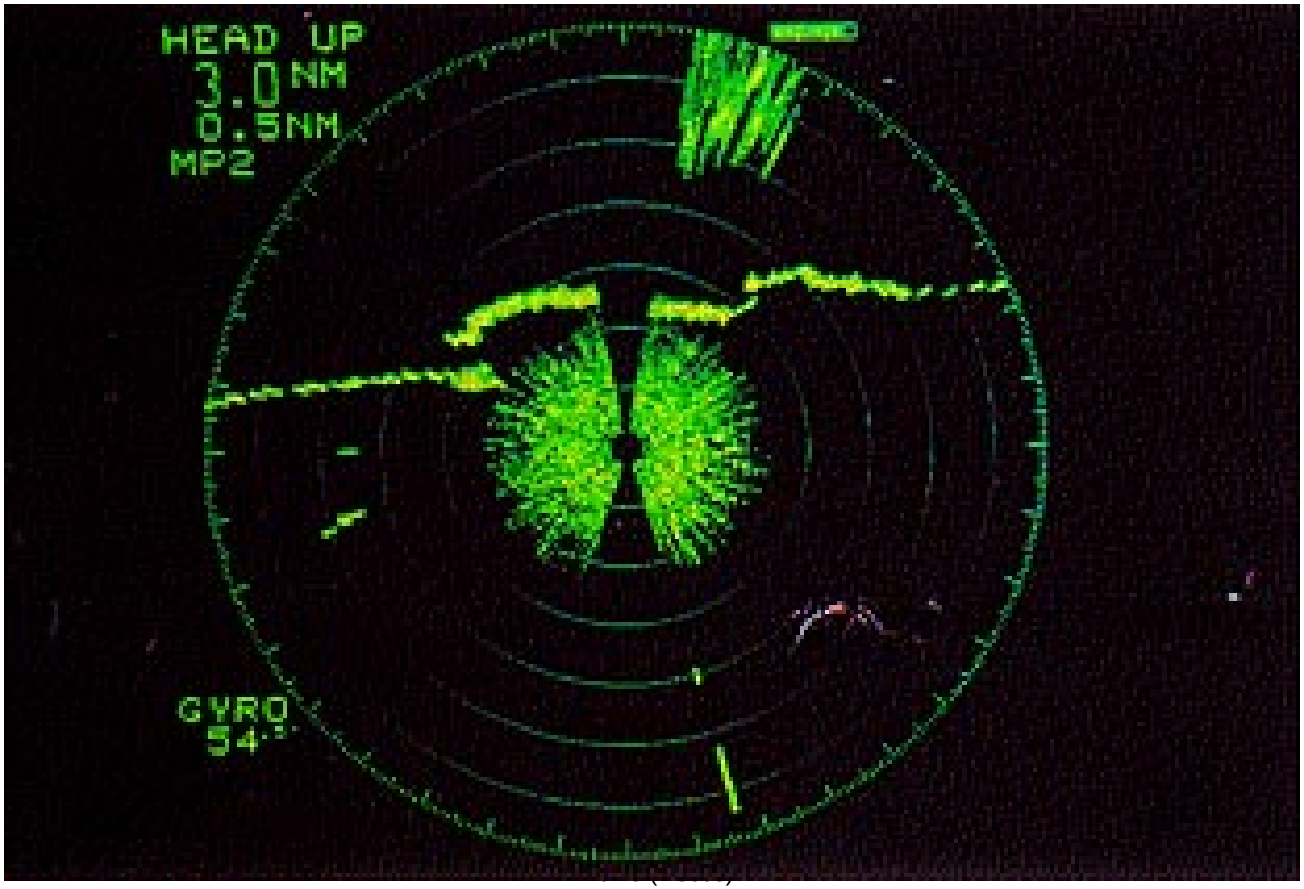

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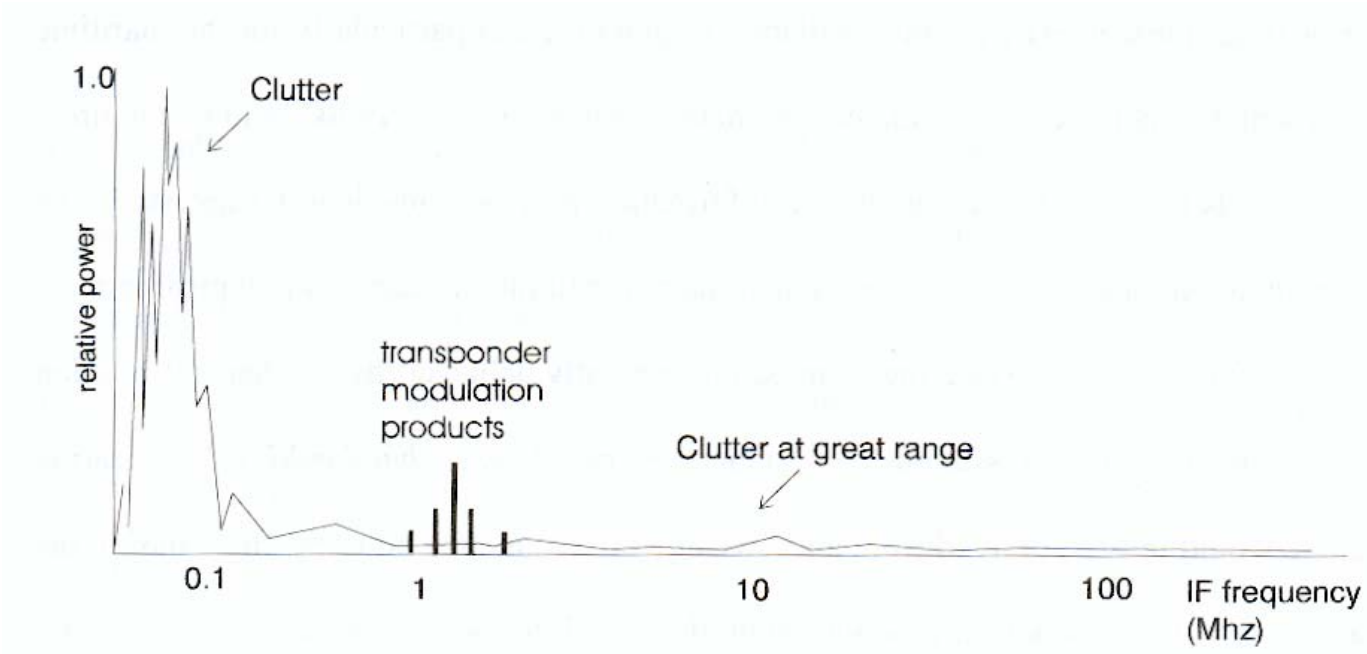

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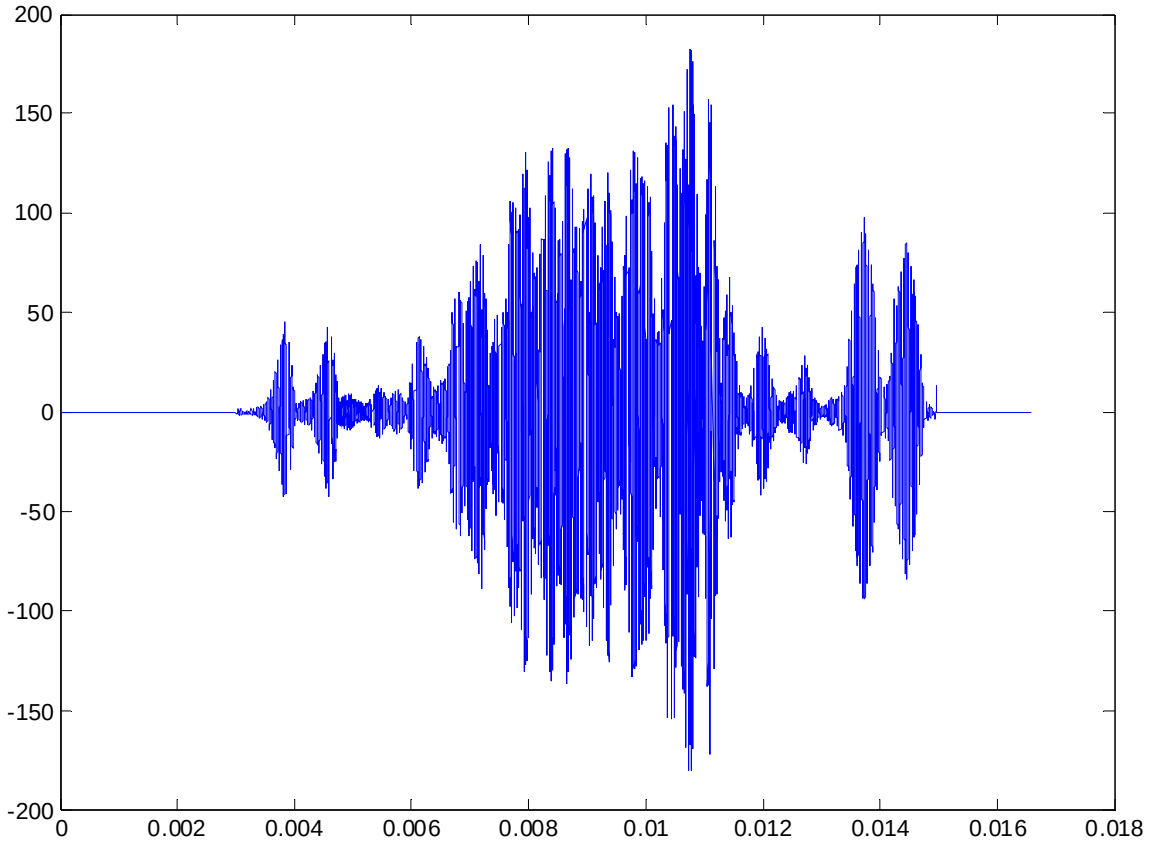

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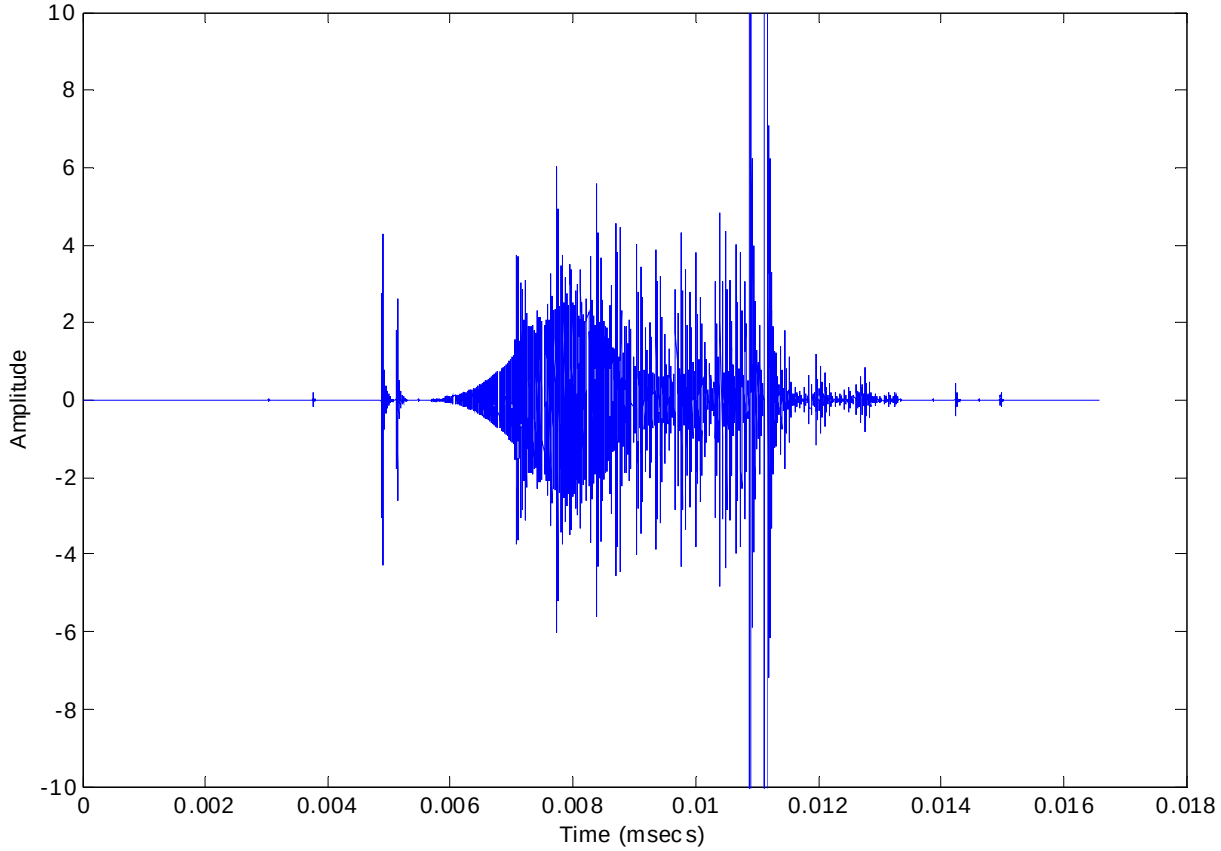

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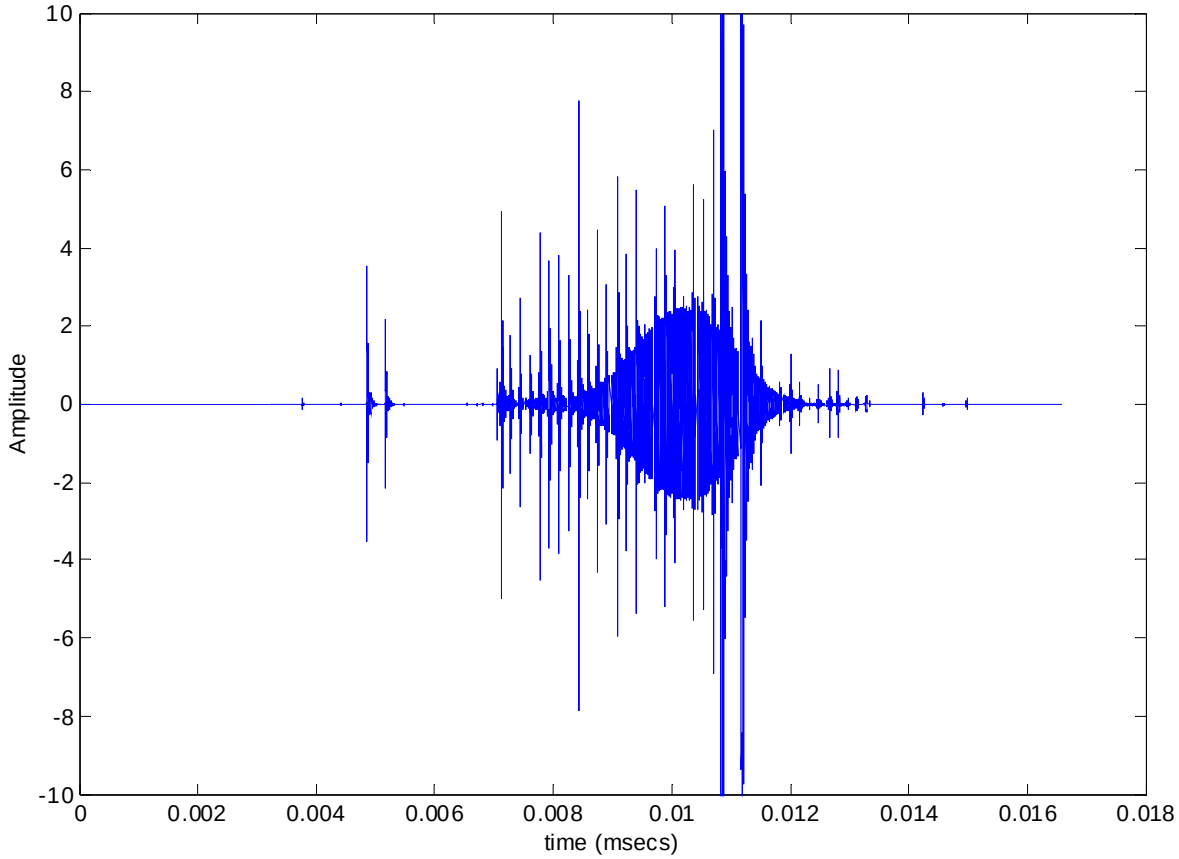

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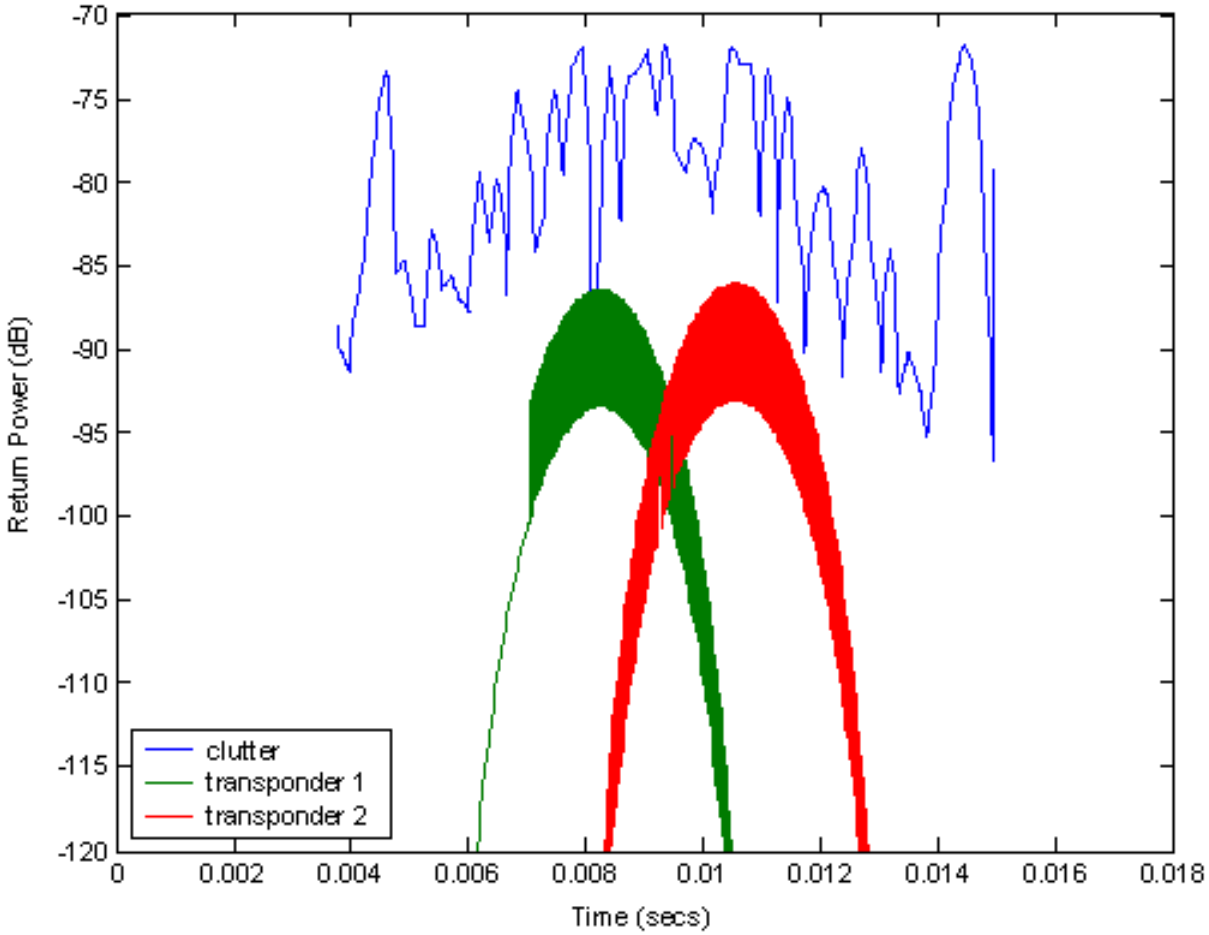

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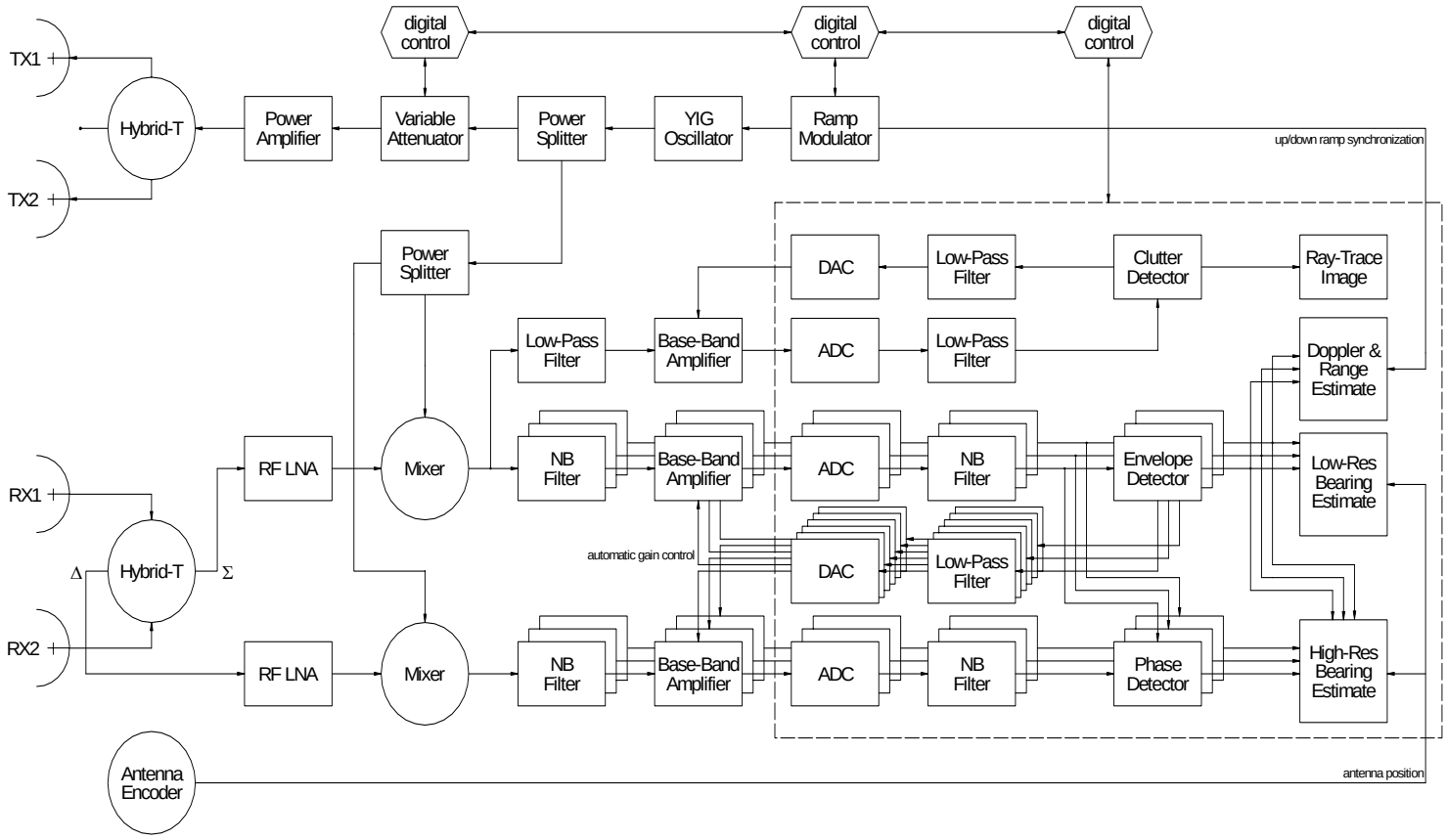

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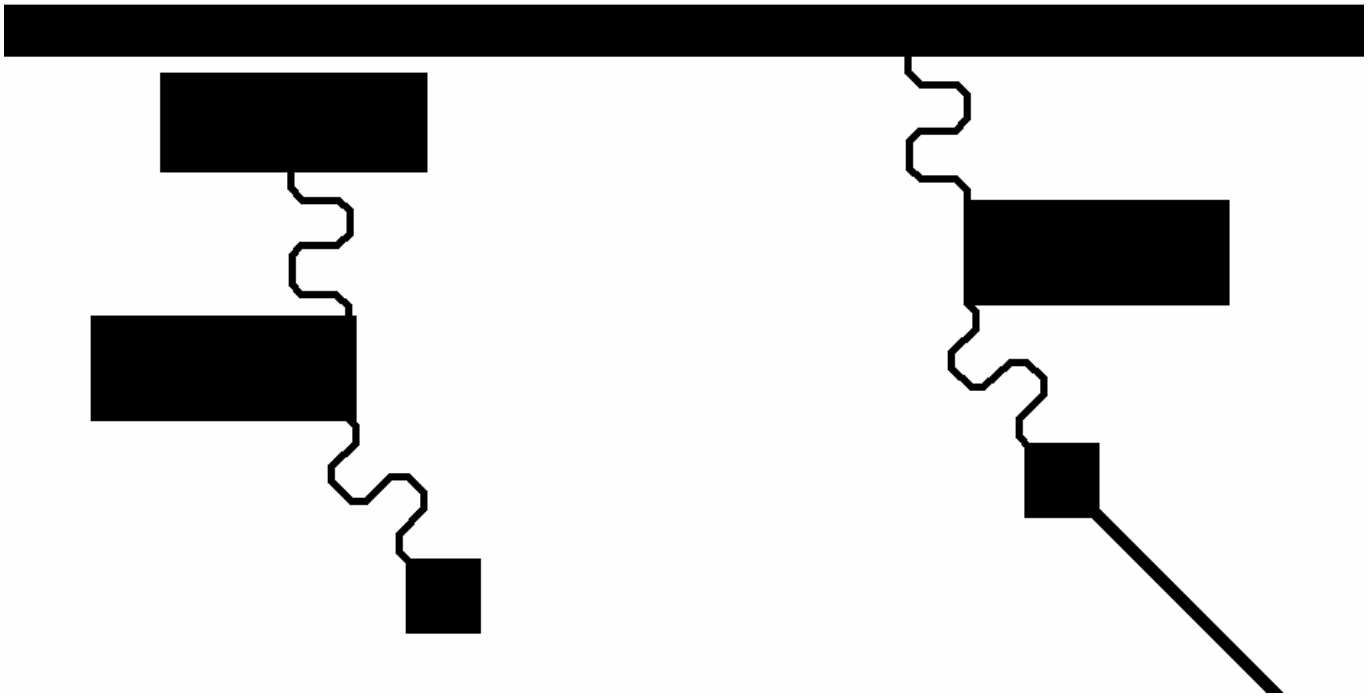

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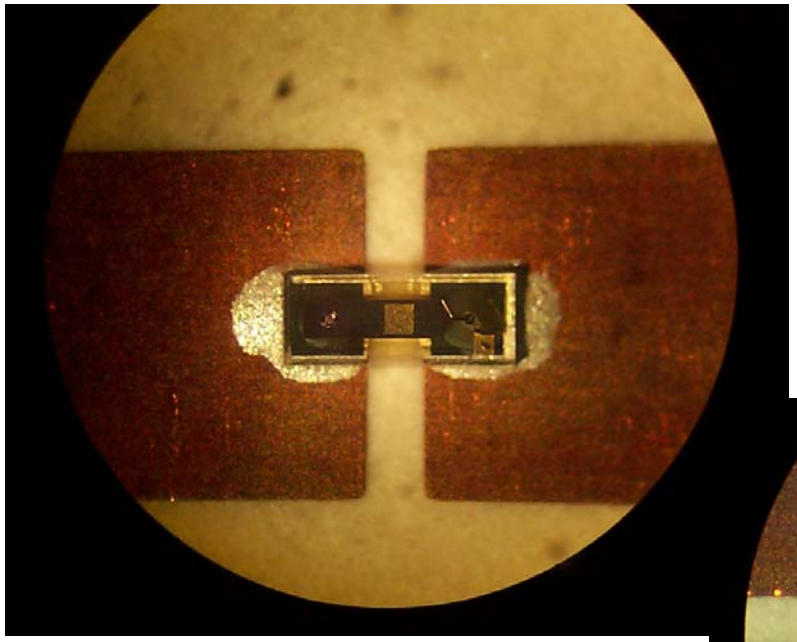

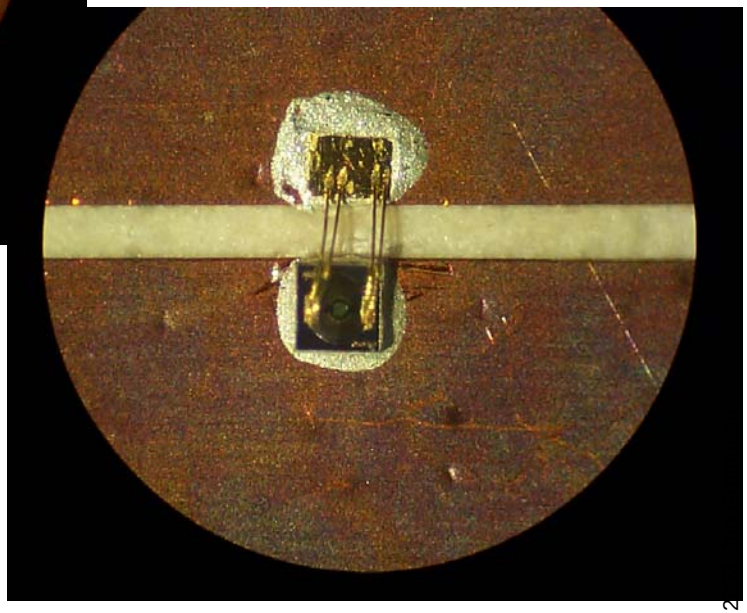

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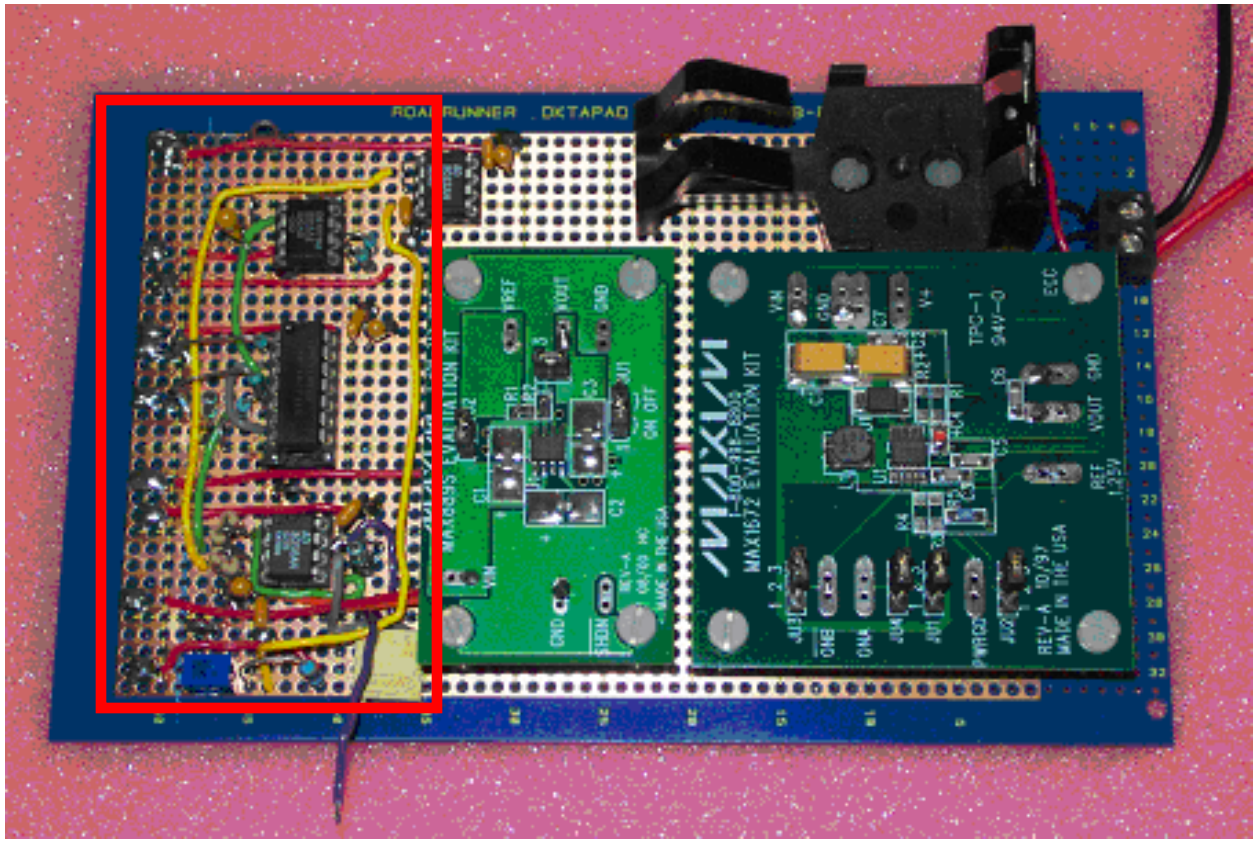

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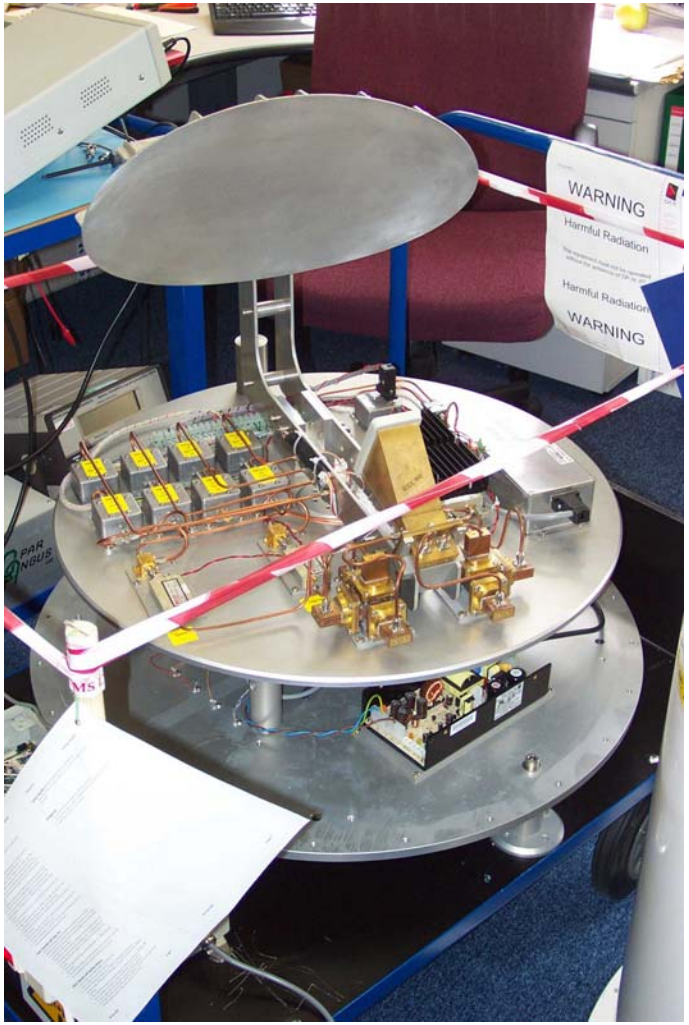

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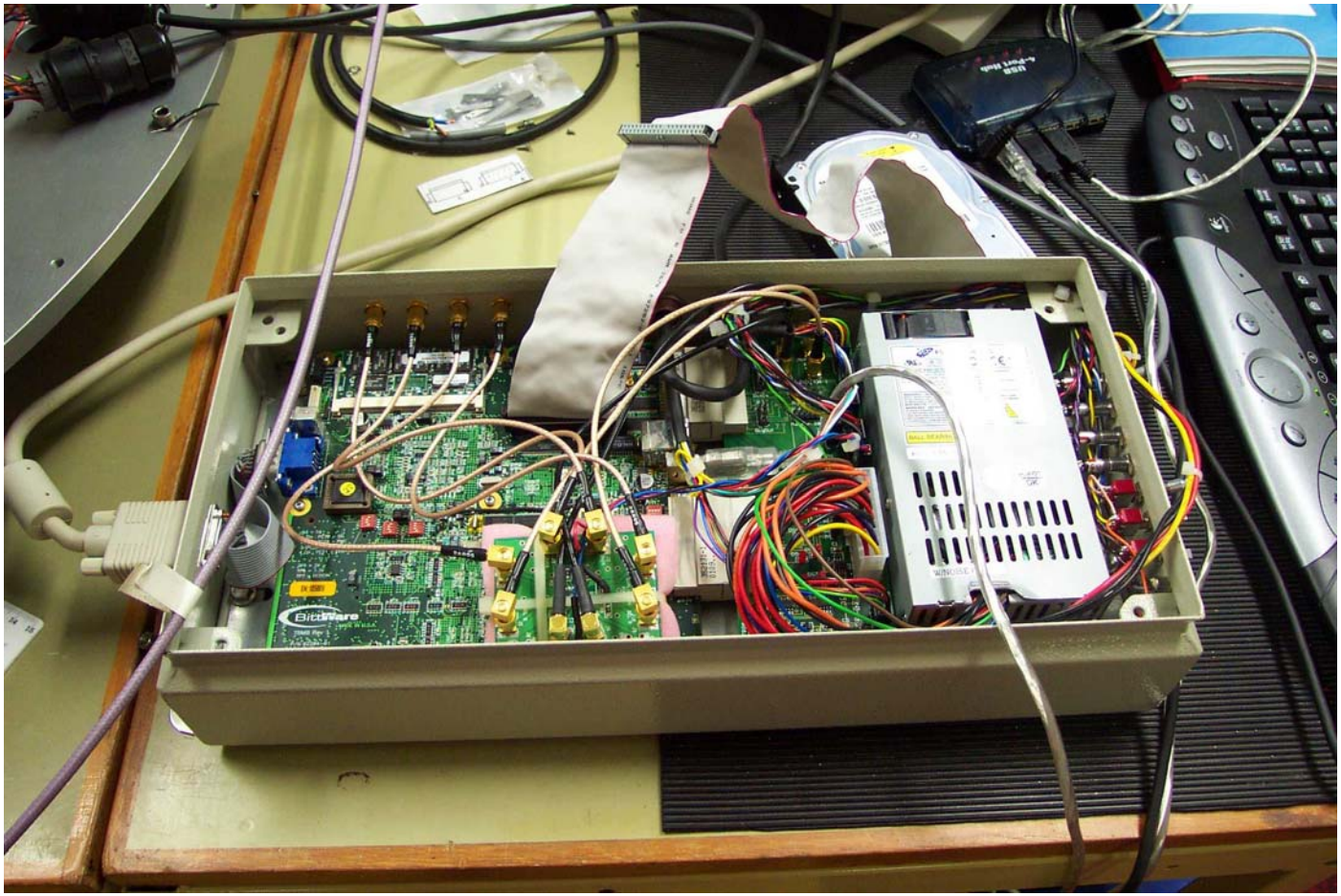

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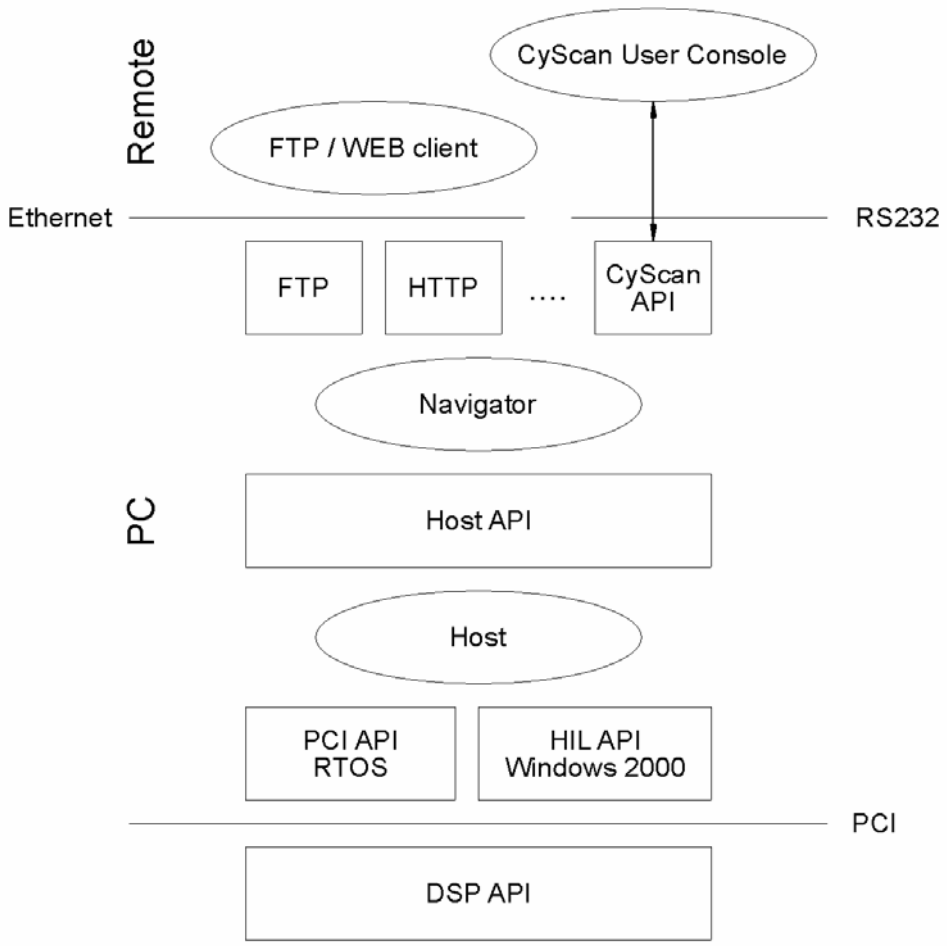

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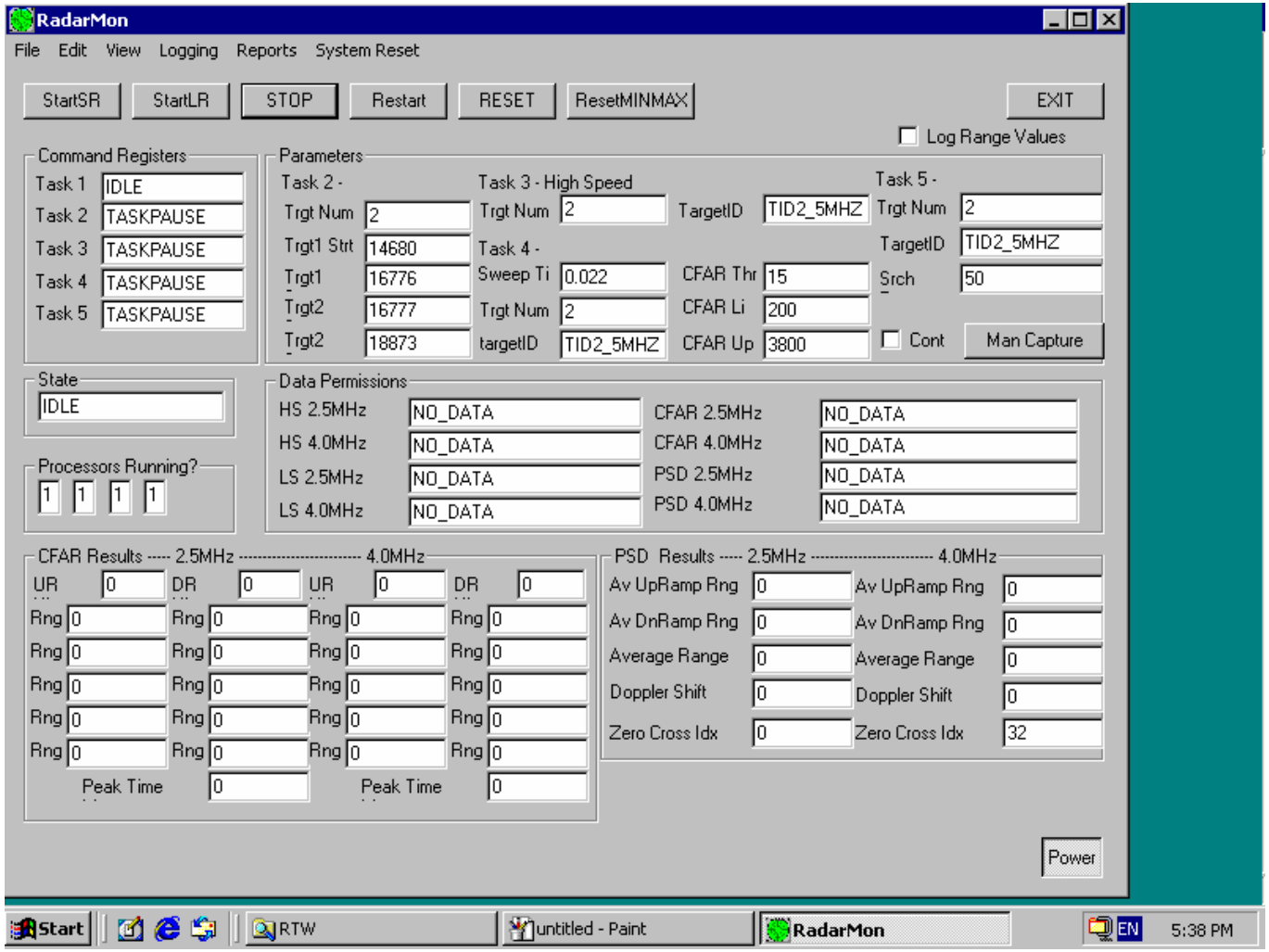

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Marine Technology Society

DP CONFERENCE
September 16-17, 2003

Objectives
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Challenges
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Passive Targets
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Range Measurement
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Bearing Measurement
•
Radar Clutter
•
Embedded System
•
Summary

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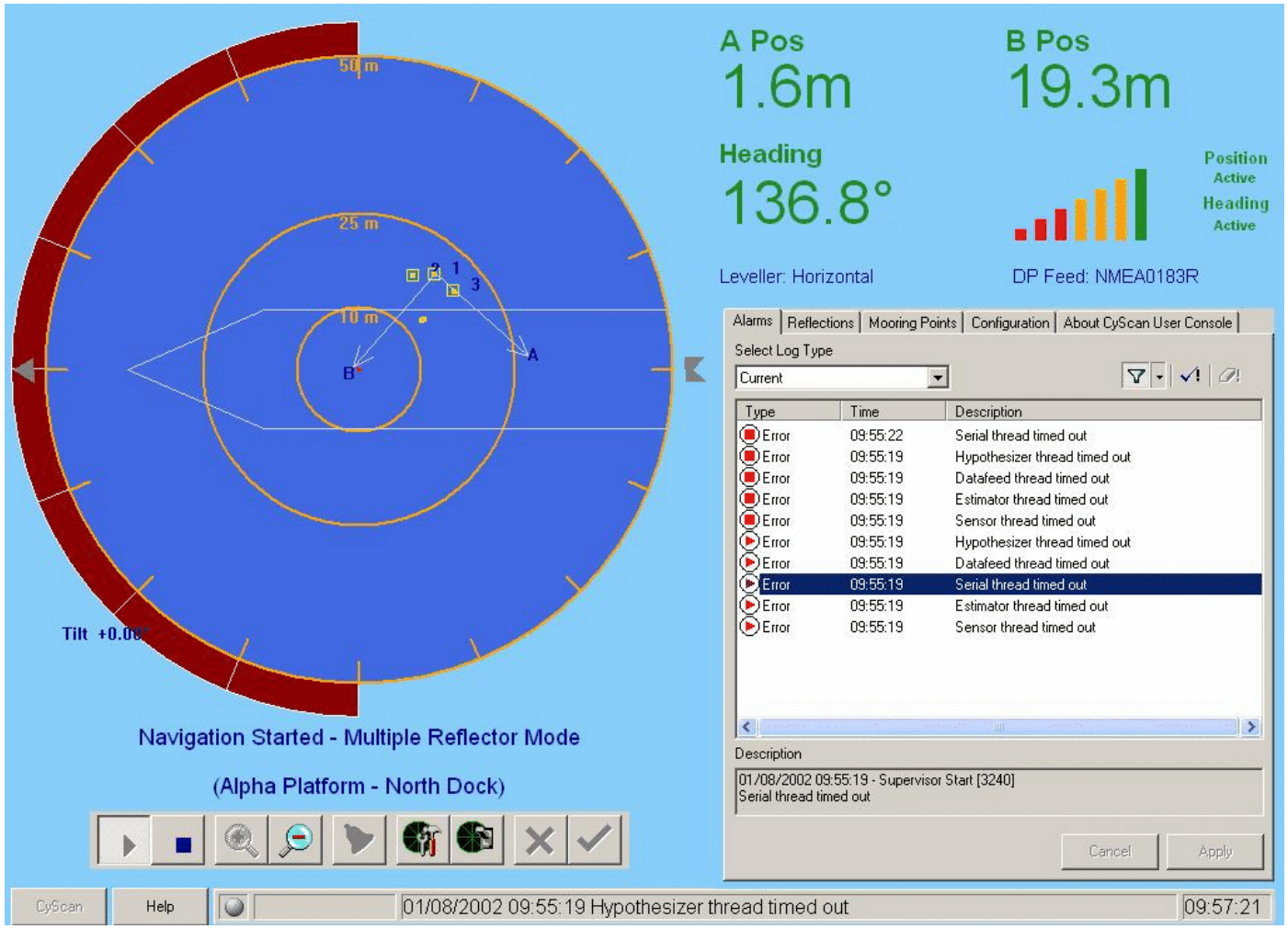
RadarScan

Modulated Microwave Position & Heading Sensor



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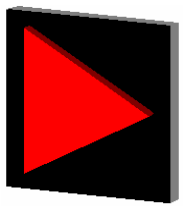
RadarScan

Modulated Microwave Position & Heading Sensor

- X-Band FMCW multi-target tracking radar
- Position & Heading Update @ 4 Hz
- Weather independent range >> 2km
- Environment profile scan
- Unique & automatic target identification
- Passive non-radiating targets
- Patent pending



Guidance Control Systems Limited
4 Dominus Way • Meridian Business Park • Leicester • Leics • LE19 1RP • U.K.
Tel: 44 (0)116 229 2600 • Fax: 44 (0)116 229 2604
E-mail: sales@gcsltd.co.uk • Website: http://www.gcsltd.co.uk/

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