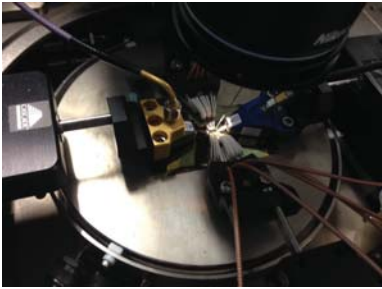



<b>Activity Title:</b>	<i>Develop a 94GHz Chipset</i>		
<b>Contract type</b>	<b>GSTP</b>	<b>Budget (k€)</b>	<b>250</b>
<b>Company (-ies)</b> <i>(including country)</i>	Ireland		
<b>Team</b> <i>(name of the participants in the project)</i>	Eamonn Boland, Arralis Oscar Gomez, Arralis Denver Humphrey, Arralis Barry Lunn, Arralis Mike Gleaves, Arralis		
<b>(*) Speaker (s)</b>	Denver Humphrey	<b>Email</b>	denver.humphrey@arralis.com
<b>Short Speaker Information</b> <i>(experience and involvement in this project – maximum 60 words)</i>	Since graduating with a doctorate in High Frequency Electronics in 1996, Denver Humphrey has worked in the RF sector specializing in power amplifier design, MMIC design and in antenna array design up to 24GHz. He was the chief designer for this project and was responsible for the MMIC and overall system design.		
<b>Summary of the activity</b> <i>(maximum 400 words and 2 pictures)</i>	<p>In this activity the main objective has been the development of 6 different MMIC chips to complete a 92-96GHz frequency band RADAR chipset. These chips included:-</p> <ol style="list-style-type: none"> <li>1) High Power Amplifier (HPA)</li> <li>2) Medium Power Amplifier (MPA)</li> <li>3) Multiplier</li> <li>4) Mixer (Upconverter / Downconverter)</li> <li>5) Low Noise Amplifier (LNA)</li> <li>6) SPST Switch</li> </ol> <p>Using these chips, the RADAR concept is based around an amplitude comparison monopulse system and uses IF frequencies which are compatible with existing lower frequency RADAR systems.</p> <p>The MMICs were designed using WIN Semiconductor's PP10 technology with the project consisting of 3 fabrication runs and over which all 6 designs were completed. All measurements were performed at chip level and compared to the performance required for the proposed amplitude comparison monopulse RADAR system.</p>		
			

(\*) The speaker needs to do the registration through this website