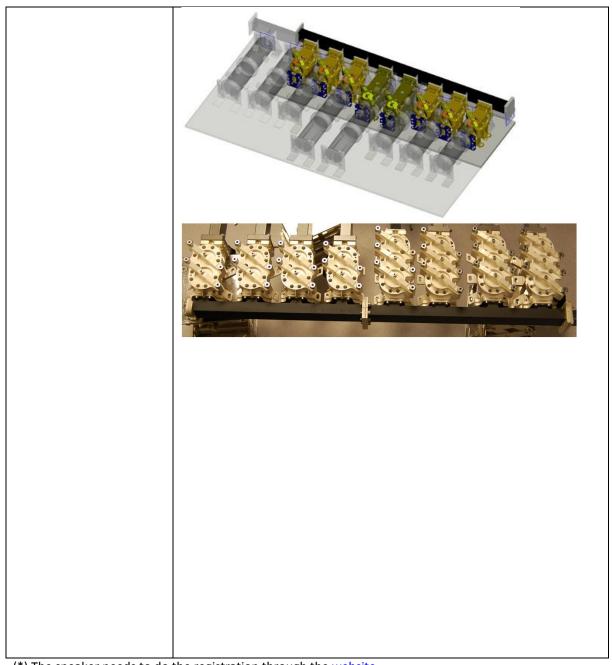
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| Title: | "Compact High Power Ku-Band Output Multiplexers" | | |
|--|---|----------------|----------------------------|
| Contract type | ARTES 5.2 | Budget (K€) | 1000K€+65K€ (CCN) |
| Company (-ies) (including country) | COM DEV International (Canada) | | |
| Team (name of the participant in the project) | Antonio Panariello Mihai Vladimirescu Van Dokas William Fitzpatrick | | |
| (*) Speaker (s) | William Fitzpatrick | Email | Bill.fitzpatrick@comdev.ca |
| Short Speaker Information (experience and involvement in this project) | William has been in the space business for 25 years and has been a part of COMDEV research and development for over 20 years. During this time he has been active in numerous technical roles and is currently a project manager. Involvement in the subject activity has been in that capacity. | | |
| Summary of the activity (maximum 400 words) | The 'Compact High Power Ku-Band Output Multiplexer' project was a natural extension of a previous successful development of a new family of dielectrically loaded output filters at Ku-Band (ESA contract 19923/06/NL/GLC). The scope of this activity focused on leveraging the strengths of the novel dielectric filter design into a comprehensive multiplexer package. Tasks included power handling to 150W/Channel, demonstration of filter orders of 4, 5 and 6 poles, and finally presenting a wide band multiplexer showcasing the mux bandwidth capabilities and filter performance. Performance objectives focused on mass and size optimization of the filters (and correspondingly multiplexer), while improving the in-band RF performance and overall multiplexer performance and packaging. The project has been successful in meeting the performance objectives. Along the way much was learned regarding the mechanical and high power design of dielectrically loaded output filters. Key performance achievements include: Filter mass 140g (4 Pole) Filter Q 16,000 Multiplexer Bandwidth 1.8GHz Temperature compensated performance <1ppm/°C Multiplexer footprint 40% smaller than comparable TE114 | | |

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