

Development, Realisation and Validation of a Baseband Equipment Dual-Channel

by Mr. Olivier Chef, Mr. Stefaan Serlet & Mr. Peter Gijsemans (Antwerp Space)

The Antwerp Space product "Integrated Baseband" (IBB) RF modem product has been further developed to improve its performance, versatility and competitiveness in the S-band market. Using a Proba-3 ground system deployment as a target scenario, support has been added for a number of important features: Fully dual chain (2TM+2TC) modem capacity in a single box, new coding scheme support, higher data rates, support for industry standard archive file formats and EGSERouter interfaces to the MCS. This has been validated against the actual Proba3 MCS (Spacebel), the Proba3 on-board transmitter and OBC, and working a live ProbaV pass at the ESA Redu ground station.