## ST Engineering

## CLEAN CHANNEL TECHNOLOGY ®

IMPROVING DVB-S2 EFFICIENCY WITH SMALL ROLL-OFFS AND ADVANCED FILTERING TECHNOLOGY

Clean Channel Technology® further improves satellite efficiency by up to 15% compared to the current DVB-S2 standard for trunking, backhauling and government networks, as well as broadcast contribution.

Clean Channel Technology applies a range of small roll-off percentages to leave maximum flexibility when designing the satellite network. In previous DVB-S2 standards, the 20% and 25% roll-off percentages were common, which basically means these percentages need to be added to the desired bandwidth over satellite. Reducing these roll-offs to 5%, 10% and 15% results in a direct gain in bandwidth. Looking at the spectral image when implementing smaller roll-offs, the slope of the carrier becomes steeper when compared to DVB-S2 but still fits nicely in the allocated bandwidth.

Our Clean Channel Technology feature also allows flexibility when adjusting the noise levels (side lobes) on both sides of the carrier. These side lobes prevent satellite carriers being put close to each other. Applying advanced filter solutions has an immediate effect on bandwidth savings as the spacing between carriers can be put as close as 1.05 times their symbol rates.

Clean Channel Technology can be applied in satellite links with single carriers, multiple carriers or carriers sharing the same transponder with other providers. It allows you to do more with available bandwidth or cut OPEX costs.



ST Engineering iDirect customers can benefit from Clean Channel Technology on Dialog, Evolution and Velocity networks.

Benefits

- A combination of improved roll-offs (5%, 10%, 15%) for DVB-S2 and advanced filtering technologies to allow optimal carrier spacing.
- Improves satellite efficiency by up to 15% when compared to the DVB-S2 standard and ensures an optimized modulator output spectral shape.
- Applications include all multiple carriers per transponder scenarios. Also single carrier per transponder in case the service provider or network operator needs to optimize the carrier size.

