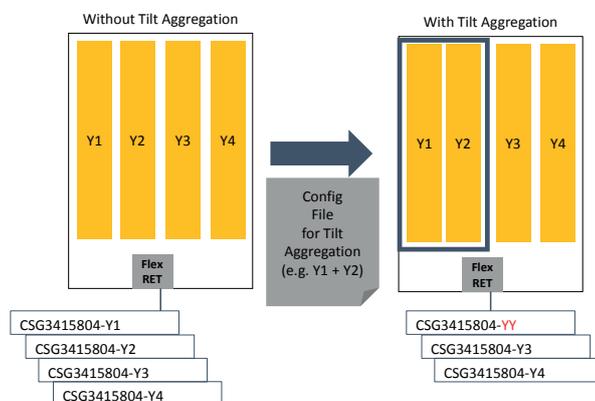


In modern networks, the use of MIMO applications is an important factor. If it comes to higher order MIMO scenarios, more than one antenna array is used (e.g. 4x4 MIMO or higher). Thus, it becomes reasonable to control these arrays together. With the new feature of Tilt Aggregation, different arrays of a FlexRET antenna can be combined in order to provide a common tilt control.

## Functionality

- Typically, all antenna columns (R1, R2, Y1, Y2 etc.) are shown as independent RETs via the AISG communication
- With Tilt Aggregation: two or more antenna arrays from one FlexRET antenna can be combined in order to adjust these array with one common tilt value simultaneously. Only arrays with the same frequency band can be combined (e.g. a combination of R1 + Y1 is not possible)
- The combined arrays always provide the same tilt
- The combined arrays are controlled as one common RET instead of multiple independent ones
- For the combined arrays, the serial number of the FlexRET module is extended by a user defined colour code instead of the single colour coding extension (e.g. "-YY" instead of "Y1" and "Y2" as shown in the picture below)
- Tilt Aggregation is realised via a customer specific configuration file (\*.bin) provided by Kathrein
- Tilt Aggregation can be performed with all FlexRET modules (86010153 and 86010153V01)
- Tilt Aggregation can be used in Single and Multi-RET mode



If you wish to use Tilt Aggregation, a configuration will to be created for you. For this, please mail to [mobilcom@kathrein.de](mailto:mobilcom@kathrein.de) indicating the following information:

- FlexRET antenna type number
- Colour coding extension of arrays which should be combined (e.g. "Y1 + Y2" or "R1 + R2")
- User-defined colour code for the combined arrays