

The GSTP project started end of 2016 and was finished end of 2019 successfully. TTTech developed a testbed (TSB) that validates and stresses the TTE IP Core on Airbus' developed Reference End System board (Ref ES).

In total 9 different test cases were realized and executed. Time measurements for Initial-, Ongoing- and Re- Synchronization of the Reference End System were performed. Precision tests of transmitting and receiving frames were done and compared with scheduled figures of the TTE - Tools. Max Throughput tests were executed. The Reference End System were stressed by bubbling idiot bus traffic, failed Synch Master (SM) and Time Shifted or corrupt PCF files. The observed behavior was compared with the predefined configuration. A thermal sensor has been connected to the Ref ES and temperature data transmitted using TTE protocol.

The GSTP project supported the TTE maturation process. The tests did not reveal unexpected behavior of the Ref ES and its integrated IP. Reference End System behave as expected and build a "Reference" for future architectures. The modular TSB architecture concept allows functional extension of test and test architecture. The developed hardware supports the development of next generation of space equipment (SPINAS).