Use Case 4 – Faster Than Real Time Operation

The fourth JETS use case is to support faster than real time operation of the physiology engine. While the synchronous and asynchronous demonstrations are conducted in real time to simulate real training events, the JETS architecture enables systems to run faster than real time, if the system is capable of such operation. This capability is critical for prolonged field care training where the patient is simulated for a long period of time without requiring the training event to occupy that much time.
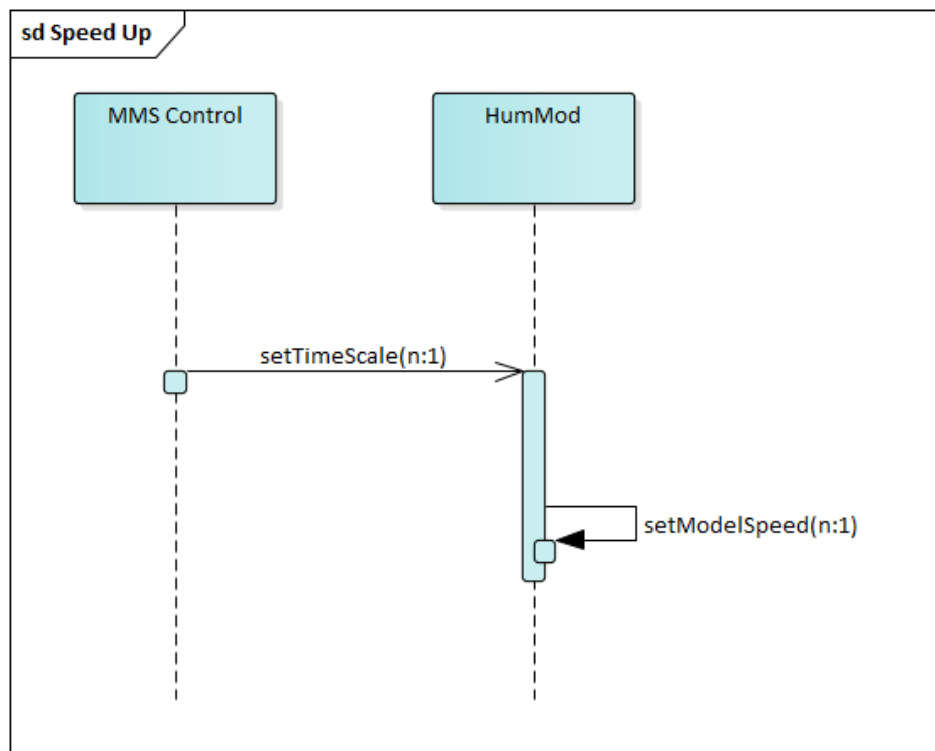

Figure 1. Sequence diagram for speeding up the physiology engine.

Using the MMS Control system and the HumMod physiology engine, a user can set the desired time scale for the federation. This is set as an integer, for example a 10:1 scale translates to 10 simulated minutes per 1 real world minute. When the scale is set, the value is published to the federation and the physiology engine updates its model speed to reflect the chosen time scale.