



Convergentia

ANTENNA

San Marco

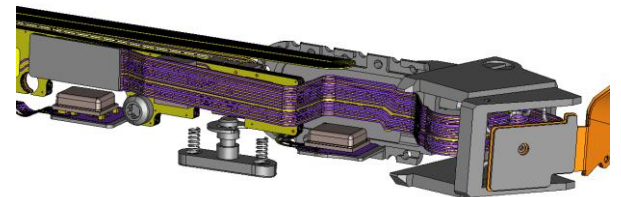
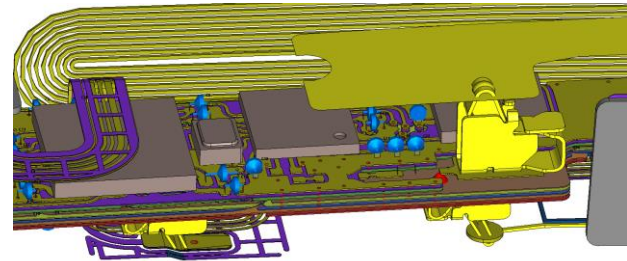
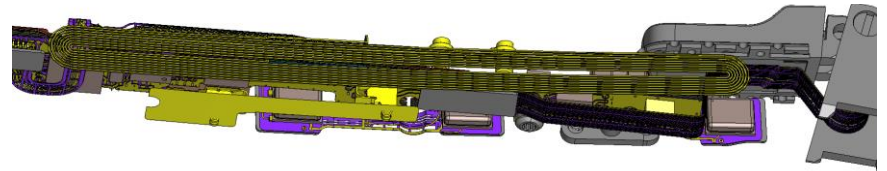
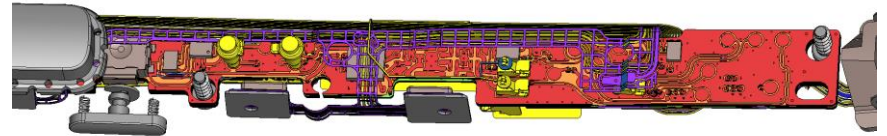
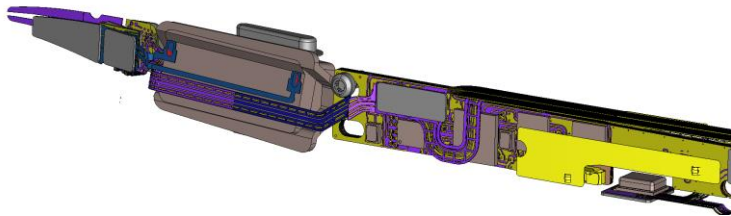
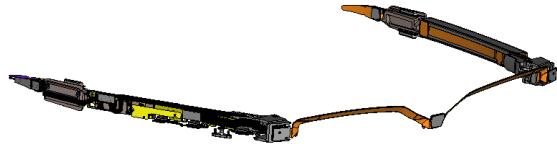
hybrid loop gain patterns

- SFR12 i.e EVT1 simulation

27th Sep 2024, Sami Hienonen

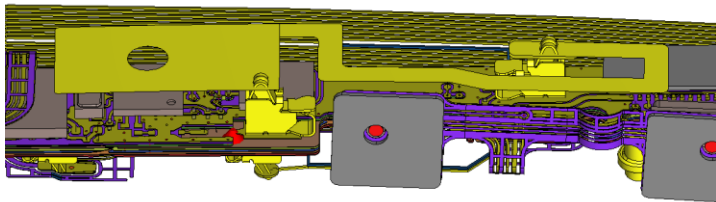
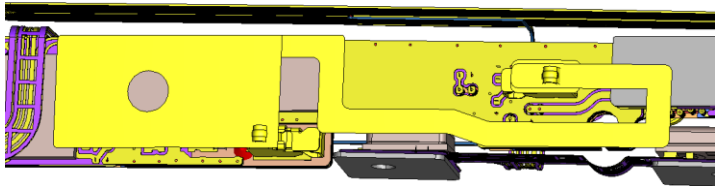
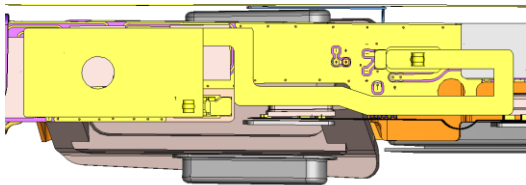
SFR12 simulation model for EVT1

All layouts included

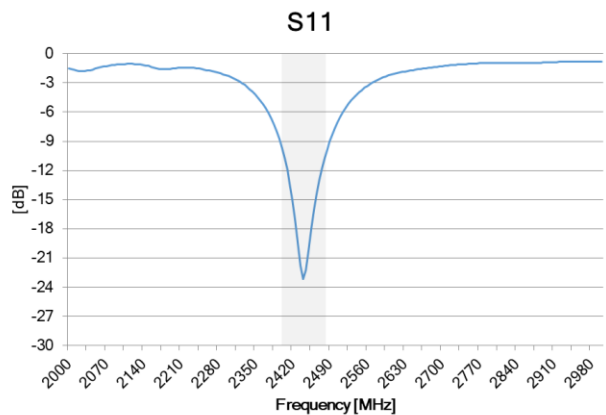
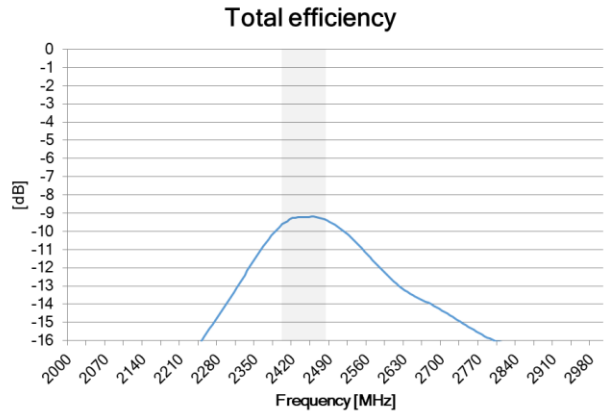


Antenna

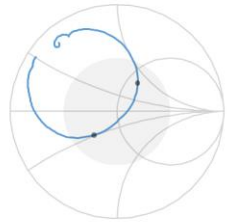
Hybrid loop



Simulated S11 and total efficiency, hybrid loop - SAM

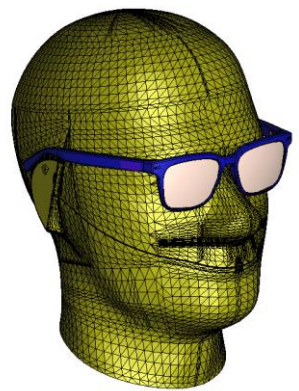


2000 - 3000 MHz



— SFR12, Base3, Rstem, Rmic, center and WLC fpc layouts, Hybrid Loop antenna pattern, layout matched (SAM)

Simulated total efficiency is -9.3 dB.

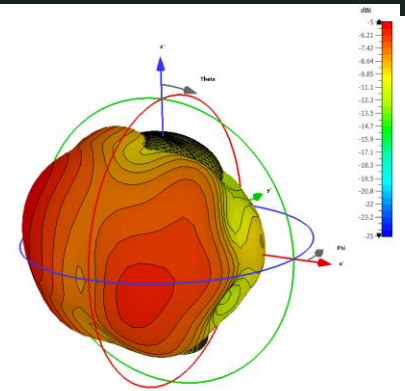
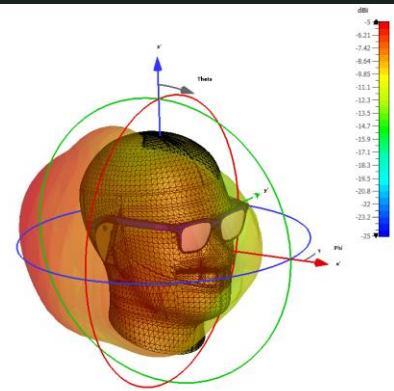
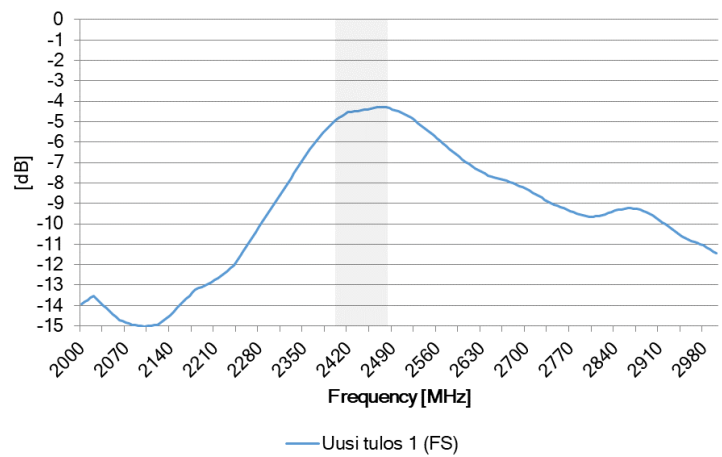


— SFR12, Base3, Rstem, Rmic, center and WLC fpc layouts, Hybrid Loop antenna pattern, layout matched (SAM)

Simulated gain patterns – 3D

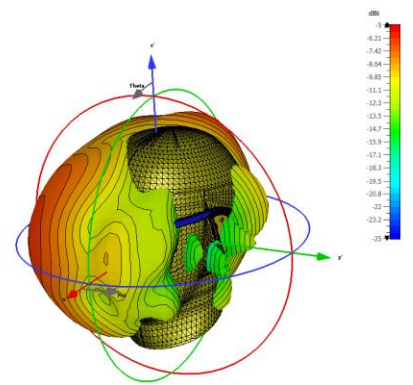
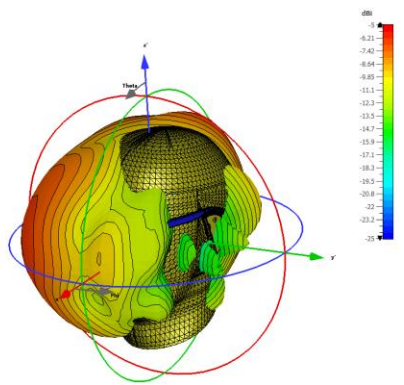
Simulated peak gain is -4.3 dBi

Gain plot - BLE



Farfield (f=2.44) [Matched]
 Type Farfield
 Approximation enabled (SR >= 1)
 Component Abs
 Output Realized Gain
 Frequency 2.44 GHz
 System Rad. Eff. [Matched] -0.197 dB
 System Tot. Eff. [Matched] -0.218 dB
 Root Gain -4.482 dBi

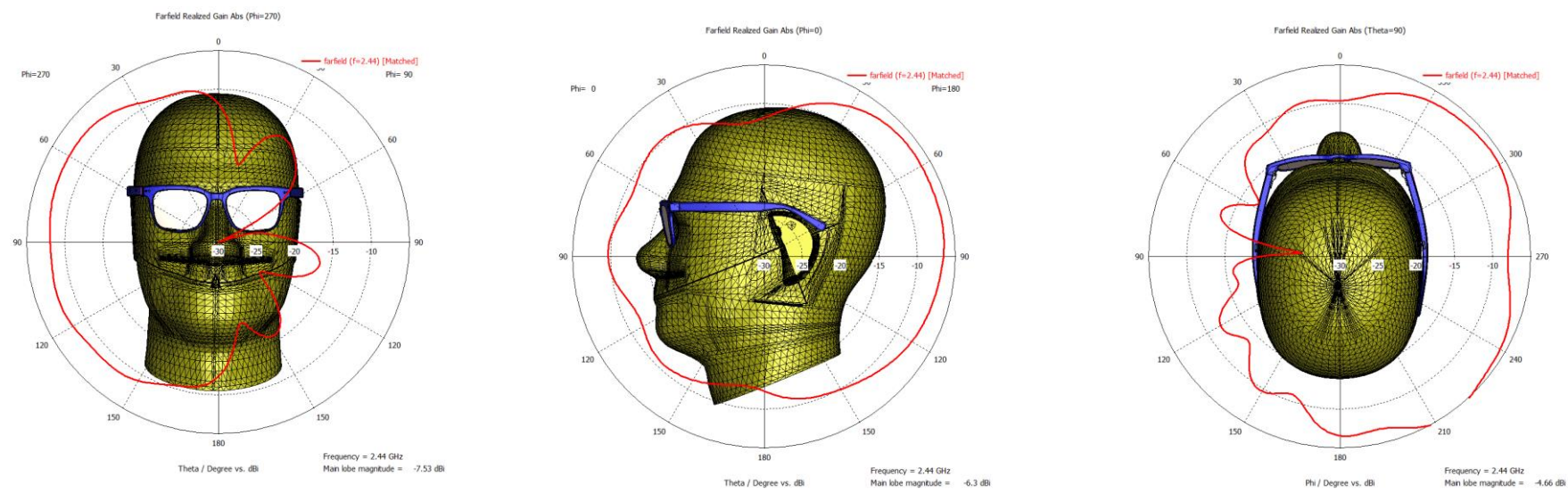
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 Approximation enabled (SR >= 1)
 Component Abs
 Output Realized Gain
 Frequency 2.44 GHz
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Simulated gain patterns cuts



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