



Feedback on SOIS Reference Communications Architecture. Streaming Data Service

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Streaming Data Traffic Examples

- Video streams
- IF images streams
- High-rate telemetry streams
- High-rate sensor array streams (SAR, etc.)

Streaming Data Traffic Features

- Regular data flow
- Periodic SDU issue with stable intensity and characteristics
- Fixed SDU size and format in the flow
- Tolerant to sporadic corruption of SDUs
- Multicasting/broadcasting options
- Merging coherent streams options
- Slicing and tiling SDU options

Protocols for Streaming Data Examples

- RTSP - Real Time Streaming Protocol
- RTMP – Real Time Messaging Protocol
- MPEG-TS – MPEG Transport Stream
- HLS - Apple HTTP Live Streaming
- HDS - Adobe HTTP Dynamic Streaming
- A818-2 – Avionics Digital Video Bus Digital Video Bus (ADVB)
High Data Rate
- ...

Protocols for Streaming Data

- SDU size and issue timing control
- Another flow control methods
 - Agreed and preset flow instead of credit-based message/packet flow control or polling
 - Command control of data streaming: (Start, Stop, Pause, Resume, etc.)
- Allow to predict buffer size, optimise and streamline sender\receiver equipment
- Monitoring the network operation and data streaming service adaptation

Message Transfer Service for Data Streaming

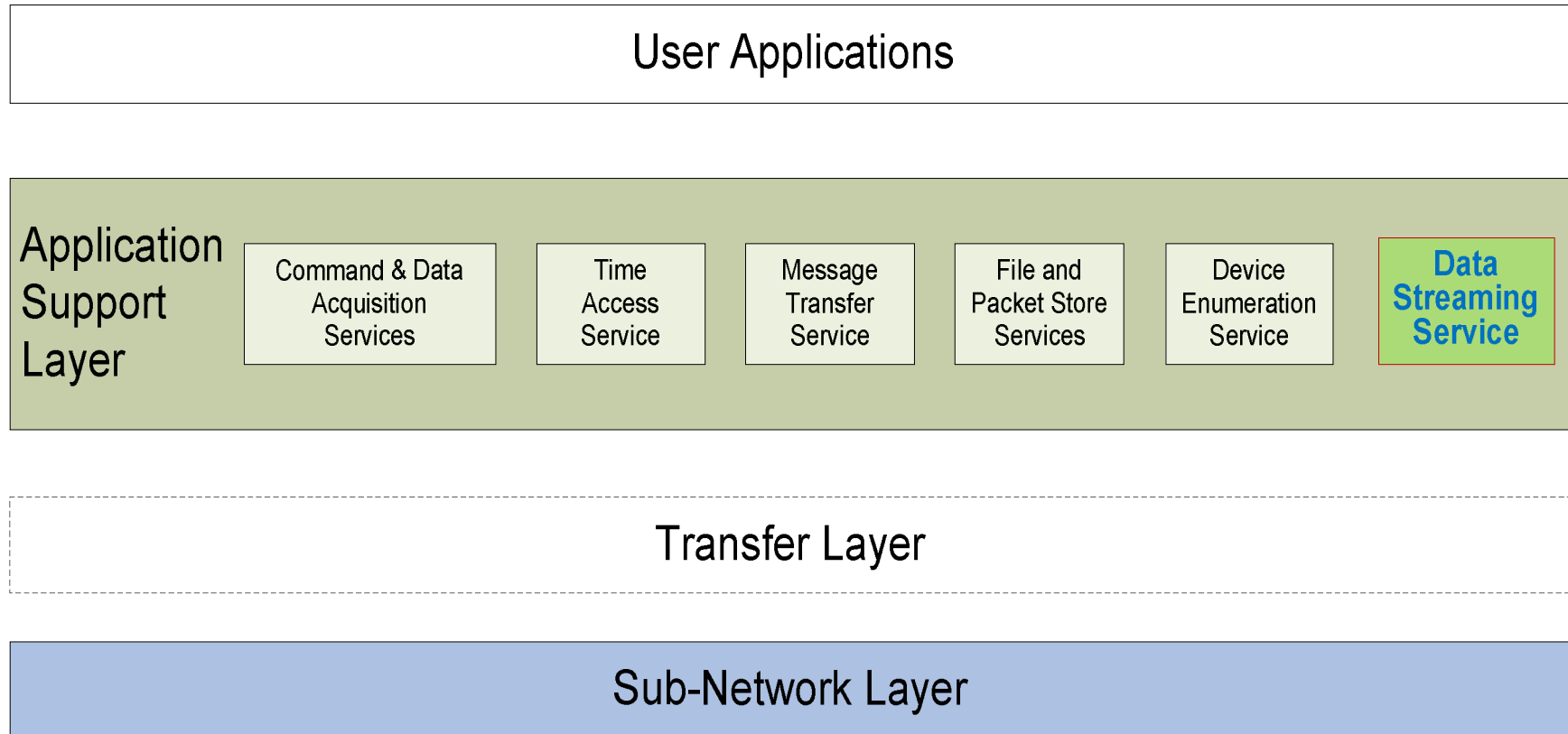
The MTS – for sporadic and pulsating traffic

- Fixed SDU size and format in the flow – Yes, could be
- SDU Flow control – No
- Periodic SDU issue support – No
- Multicast, Broadcast - Yes
- SDU transfer timing and timeouts – No
- SDUs sequence control and ensuring – No
- Merging coherent streams support – No
- SDU Slicing and tiling support – No

Data Streaming Service

- May be implemented
 - As the ASS – Data Streaming Service
 - As Application level, by Mission Specific Applications
- To be a unified interoperable service it should be specified as an Application Support Service
 - Specify DSS as an ASS
 - Specify requirements for DSS support by Subnetwork layer
 - Analyse/develop subnetwork services and protocols

Data Streaming Service in the Application Support Layer



Thank you!

