

# **Study of GSE application to the DVB-family standards**

ARTES-1 Intended ITT

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# Introduction

- The second generation of DVB standards shall features backwards compatibility modes for carrying MPEG-TS as well as generic modes for carrying arbitrary packets of variable length. These are referred to as Generic Streams (GS).
- The Generic Stream Encapsulation (GSE) protocol [ETSI TS 102606], initially devised for DVB-S2 Generic Streams, was introduced to improve the efficiency of carriage of IP data over DVB-S2 Generic Streams.
- GSE provides a generic encapsulation mechanism potentially applicable to other second generation DVB standards.
- ESA will issue in 2008 an open Invitation To Tender for an ARTES 1 activity called “Study of GSE application to the DVB-family standards”.
- The aim of this activity is to provide DVB with inputs (technical recommendations, performance assessments) on this aspect.
- This activity will use as inputs the current work done by DVB on GSE and IP-based signalling (e.g. GBS-CMT work on IP based signalling)
- All interested parties in the ESA member countries and Canada are warmly invited to join in.

# Activity description (1/2)

## Objective 1 : To study the application of GSE to DVB standards

- DVB-S2 for pure broadcast system (GSE initially defined for DVB-S2 interactive applications)
- DVB-T2
- DVB-SH
- DVB-RCS (forward and return links, for Fixed and Mobile applications)
- DVB-C2
- DVB Next Generation Handheld (NGH) future standard
- Identification of technical issues & definition of solutions
  - e.g. proposition of GSE protocol or physical layer adaptations, new mechanisms and functionalities, adaptations of existing mechanisms to GSE (SFN, time slicing, Link-layer FEC...) , etc
  - General recommendation for the activity : to propose as much as possible technical solutions common to the different standards
- Recommendations for an optimised use of GSE
  - E.g. Use of specific label format or extension header for overhead reduction
- Performances assessment

## Activity description(2/2)

Objective 2: To investigate IP-based signalling for GSE generic streams only systems

- Identification of the requirements and proposition of an IP signalling scheme
- DVB-RCS signalling shall be addressed too.

Objective 3 : To provide the relevant DVB standardisation bodies, e.g. DVB-GBS, S2, T2, SSP, RCS, C2, NGH with inputs (technical recommendations and performance assessments)

## Conclusion

- Present intended ITT is under preparation, should be issued in end of Q3/ beginning of Q4 2008.
- Ideas and feedback are welcomed

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