



TF14 Dissemination and TF15 Standardization

iTEAM-UPVLC DISSEMINATION AND STANDARDIZATION ACTIVITIES

1st September 2011



Abstract – This report describes the dissemination and standardization activities within the ENGINES project of the Institute of Telecommunications and Multimedia Applications of the Universidad Politécnic de Valencia, Spain (iTEAM-UPVLC).

At the time of writing this document, iTEAM-UPVLC has made 41 technical contributions to the DVB-NGH standardization process and organized one plenary meeting. iTEAM-UPVCL has published two international journals, five international conference papers, and one national conference paper. Furthermore, iTEAM-UPVCL has made one seminars about DVB-T2 network planning and deployment in Colombia.

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1 STANDARDIZATION

1.1 Contributions to the DVB-NGH Standardization Process

1.1.1 Response to the Call for Technologies

- [1] TM-NGH096, *Call for Technologies Reply: Base Band inter-frame FEC (BB-iFEC) for Next Generation Handheld DVB-NGH*, February 2010.
- [2] TM-NGH119, *Call for Technologies Presentation: Base Band inter-frame FEC (BB-iFEC) for Next Generation Handheld DVB-NGH*, Frankfurt (Germany), March 2010.

1.1.2 Technical Contributions

- [3] TM-NGH049, *Link Layer FEC for DVB-T2*, Geneva (Switzerland), January 2010.
- [4] TM-NGH175, *MIMO Comparison for DVB-NGH*, Geneva (Switzerland), May 2010.
- [5] TM-NGH250, *First Results on the Performance of DVB-T2 over LMS Channel model*, Helsinki (Finland), June 2010.
- [6] TM-NGH251, *Initial Considerations on the use of DVB-SH Time Interleaver for the DVB-T2 Physical Layer*, Helsinki (Finland), June 2010.
- [7] TM-NGH277, *MIMO Comparison for DVB-NGH*, Helsinki (Finland), June 2010.
- [8] TM-NGH353, *Preliminary Performance Results of DVB-T2 with BB-iFEC in LMS Channel*, London (UK), September 2010.
- [9] TM-NGH380, *NGH MIMO Simulation Results Indoor and SFN*, London (United Kingdom), September 2010.
- [10] TM-NGH475, *BB-iFEC with Soft LDPC Decoding: Preliminary Performance Results*, Jeju (South Korea), October 2010.
- [11] TM-NGH515, *BB-iFEC: Upper or Physical Layer FEC?*, October 2010.
- [12] TM-NGH537, *iFEC Time Interleaving: an Overview*, November 2010.
- [13] TM-NGH547, *MIMO Simulations with New Channel Model*, November 2010.
- [14] TM-NGH553, *BB-iFEC: Preliminary Complexity Analysis*, November 2010.
- [15] TM-NGH554, *BB-iFEC with LDPC Soft Decoding: Performance Results*, November 2010.
- [16] TM-NGH555, *Coverage Estimation for Multiburst FEC Mobile TV Services in DVB-H Systems*, November 2010.
- [17] TM-NGH556, *Application Layer FEC for Mobile TV Delivery in IP Datacast Over DVB-H Systems*, November 2010.
- [18] TM-NGH590, *MIMO Simulation Results for DVB-NGH in the New Channel Model*, Valencia (Spain), December 2010.

- [19] TM-NGH598, *Terrestrial Use Cases for Long Time Interleaving in DVB-NGH*, Valencia (Spain), December 2010.
- [20] TM-NGH603, *BB-iFEC Performance in Terrestrial Channels with High Time Diversity*, Valencia (Spain), December 2010.
- [21] TM-NGH645, *Optimized BB-iFEC Memory Requirements*, January 2011.
- [22] TM-NGH677, *BB-iFEC Usage with the T2 TI Memory*, January 2011.
- [23] TM-NGH696, *Rate 2 MIMO Simulation Results*, February 2011.
- [24] TM-NGH714, *BB-iFEC: iFEC PLP and Receiver Implementation*, Paris (France), February 2011.
- [25] TM-NGH723, *Rate 2 MIMO Simulation Results - Round 2*, February 2011.
- [26] TM-NGH761, *MIMO Simulations Results for DVB-NGH - Rate 2 MIMO Codes*, Paris (France), February 2011.
- [27] TM-NGH 775, *LDPC Performance with Heavy Puncturing – Some Simulation Results*, February 2011.
- [28] TM-NGH 797, *BB-iFEC Fast Zapping*, March 2011.
- [29] TM-NGH 830, *BB-iFEC, CI and IR: Performance Comparison Discussion*, March 2011.
- [30] TM-NGH 885, *Performance Comparison CI, BB-iFEC and IR*, Munich (Germany), April 2011.
- [31] TM-NGH 932, *Real Channel Estimation for NGH – Simulation Results*, May 2011.
- [32] TM-NGH 985 and TM-NGH993, *Performance Comparison CI, IR and BB-iFEC in LMS Channel*, June 2011.
- [33] TM-NGH 986, *Memory Analysis for the Hybrid Satellite-Terrestrial Use Case*, June 2011.
- [34] TM-NGH 987, *Signalling for Long TI in the Hybrid Satellite-Terrestrial Use Case*, June 2011.
- [35] TM-NGH 991, *Evaluation of the TFS Gain from an Information Theory point of view based on Field Measurements*, June 2011.
- Joint contribution with Teracom.
- [36] TM-NGH 1008, *Backwards-Compatibility of Long Time Interleaving*, June 2011.
- [37] TM-NGH 1009 and TM-NGH1028, *Optimal Code Rate Distributions for BB-iFEC*, Helsinki (Finland), June 2011.
- [38] TM-NGH 1029, *Long Time Interleaving for DVB-NGH – Summary*, Helsinki (Finland), June 2011.
- [39] TM-NGH XYZ, *Evaluation of the TFS Gain as a function of the Number of RF Channels and the Channel Spacing*, July 2011.
- Joint contribution with Teracom.
- [40] TM-NGH XYZ, *Performance Comparison of BB-iFEC and Complementary PLP*, July 2011.
- [41] TM-NGH XYZ, *Figure of Merit for Long Time Interleaving*, August 2011.

1.1.3 Others

Organization of the 38th TM-H technical module meeting in Valencia, Spain. 14th-16th December 2010.

2 DISSEMINATION

2.1 Journal Articles

- [1] D. Gozálvez, D. Gómez-Barquero, D. E. Vargas, and N. Cardona, "Time Diversity in Mobile DVB-T2 Systems," *to appear in IEEE Transactions on Broadcasting*, 2011.
- [2] D. Gómez-Barquero, D. Gozálvez, P. F. Gómez, and N. Cardona, "Fading Margin Reduction due to Inter-Burst Upper Layer FEC in Terrestrial Mobile Broadcast Systems," *to appear in IEEE Transactions on Vehicular Technology*, 2011.

2.2 Conference Papers

- [1] D. Gómez-Barquero, K. Nybom, D. Vukobratovic, and V. Stankovic, "Scalable Video Coding for Mobile Broadcasting DVB Systems," *Proc. IEEE International Conference on Multimedia & Expo (ICME)*, Singapore, Singapore 2010.
 - Joint publication with Abo Akademy.
- [2] D. Gozálvez, D. E. Vargas, D. Gómez-Barquero, and N. Cardona, "Performance Evaluation of DVB-T2 Time Interleaving in Mobile Environments," *Proc. IEEE Vehicular Technology Conference (VTC) Fall*, Ottawa, Canada 2010.
- [3] D. Gozálvez, V. Pauli, S. Moon, and W.-S. Ko, "Transmit Diversity Based on Subcarrier Diversity for OFDM Broadcasting Systems," *Proc. IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB)*, Erlangen, Germany, 2011.
- [4] D. Gómez-Barquero, P. F. Gómez, D. Gozálvez, B. Sayadi, and L. Roullet, "Base Band inter-frame FER (BB-iFEC) for Next Generation Handhelds DVB-NGH," *Proc. IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB)*, Erlangen, Germany, 2011.
- [5] J. Poikonen, J. Ojaniemi, D. Gómez-Barquero, K. Nybom, and T. Jokela, "A Computationally Efficient Simulation Chain for OFDM-based Wireless Systems," *Proc. IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB)*, Erlangen, Germany, 2011.
 - Joint publication with University of Turku and Abo Akademy.
- [6] D. Gómez-Barquero, D. E. Vargas, P. F. Gómez, J. Llorca, C. Romero, J. Puig, J. J. Giménez, J. López, D. Gozálvez, and N. Cardona, "DVB-NGH, La Nueva Generación de Televisión Digital Móvil," *Jornadas Telecom I+D*, Santander, Spain, 2011.

2.3 Seminars

- [1] "Planificación y Despliegue de Redes DVB-T2," Universidad ICESI, Cali, Colombia, 12nd-16th September 2011.