

# DVB-H

Digital Video Broadcast for Handheld

This one day course builds on the OFDM principles and introduces the physical layer of **Digital Video Broadcast for Handheld (DVB-H)**. This technology, based on DVB-T, facilitates the delivery of digital TV services to handheld devices. The key OFDM parameters for DVB-T and DVB-H are presented.



developed and  
presented by

*steepest ascent*

<http://www.steepestascent.com>

30. May 2008  
12. December 2008

Munich, Germany  
Munich, Germany

## DVB-H

### Course objective

In this course the necessary mathematical theory is presented on a “need to know basis” in a intuitive style. Through the use of simulation and DSP demonstrations attendees shall quickly learn the key principles required for a more complete understanding.

### Audience

This course has been carefully designed to present the complex mathematical theory often associated with wireless systems in an intuitive and straightforward style to a wide audience of engineers and project managers. A good understanding of OFDM shall be required. Ideal setting is subsequent to the three day OFDM course.

### Course Presentation

- 45 % lectures and presentations
- 15 % Tutorial discussion
- 40 % Workshop with DSP Software hand-on simulation
- Multimedia CD: hypertext of all notes, multimedia presentations, demos, DSP simulation software support
- Course documentation: comprehensive set of materials



### Instructor

This course will be led by the team of Professor Bob Stewart and integrate presentations and design sessions from other experienced design engineers from Steepest Ascent.

**Prof Bob Stewart** has extensive experience presenting industry DSP courses in the USA and Europe. He is currently a faculty member of the Department of Electronic and Electrical Engineering at the University of Strathclyde. Prior to joining the University of Strathclyde, Prof Stewart was a visiting professor in Dept of Electrical Engineering at the University of Minnesota in 1990, and a visiting scholar at the University of Southern California in 1986/7. Since 1997 he has been a part-time visiting professor at UCLA.

### Services

Following services are included in the fee for this 1-day technical course: participation at the course/workshop, catering during coffee breaks , soft drinks, lunch, course documentation

The lectures are given in English. The course will be held from 9.00 a.m. to 6.00 p.m. The hotel has allocated a number of rooms. Please make your booking directly with the hotel referring to "hueggenberg gbr".

### Upcoming Training Courses

- **DSP, DSP for FPGAs and OFDM** in Munich and Scotland
- **In House:** All courses are available for on-site presentation for your company.

## Syllabus

### DVB-T – Digital Video Broadcasting – Terrestrial

- Multiple Frequency Networks
- Single Frequency Networks
- Channel Coding
- Channel Modulation
- Supported Operating Modes
- OFDM Frame Structure
- Reference Signals
- Transmission Parameter Signalling
- Spectral Characteristics

### DVB-H – Digital Video Broadcasting – Handheld

- Backward compatibility to DVB-T
- Additional operating modes
- Time slicing techniques for power saving
- Multiprotocol Encapsulation (MPE)
- MPE Forward Error Correction (MPE-FEC)
- Physical Layer additions – signalling & interleaving
- Frequency Domain Parameters for DVB-H
- Typical link budget
- DVB-H signal acquisition

### Mobile TV Standard (Overview)

- Introduction to digital TV
- Media Flo
- T-DMB
- ISDB-T
- MBMS
- DVB-H+



### Achievable Skills

On completion of this course, attendees will have a good understanding of:

- Differences between DVB-T and DVB-H
- DVB-T and DVB-H physical layer understanding
- Introduction to other mobile TV standards

## Registration

This written registration is effective. The number of participants is limited. The invoice will be mailed with the confirmation of course registration. Please register minimum two weeks before the course starts

- via mail to hueggenberg gbr, Maximilianstraße 8, DE-82319 Starnberg – or –
- via fax to: +49-8151-55 50 09-10 – or –
- via e-mail to [info@hueggenberg.com](mailto:info@hueggenberg.com).

Terms and Conditions: Invoices have to be settled for participation. For a written cancellation within six weeks before course starts a fee of 200 € plus VAT per person is due. A deregistration within two weeks before the course will cost 50 % of registration fee plus VAT per person. For non-attendance or late notice the whole fee plus VAT per person will be charged. A substitute of the registered participant will be accepted. hueggenberg gbr reserves the right to cancel or modify the course and place at short notice and will not accept liability for costs incurred by participants or their organisations for cancelled travel arrangements and/or accommodation reservations.

Herewith I bindingly register for **the 1-day technical course DVB-H** at the following date. I accept the terms and conditions.

- 30. May 2008 in Munich, Germany
- 12. December 2008 in Munich, Germany
  
- € 620,00 regular fee
- € 560,00 early registration until 49 days before course
- € 530,00 per participant of two from the same company
- € 500,00 per participant of three or more from the same company
- € 350,00 University Rate (Please enclose evidence.)

Herewith I bindingly register for the **4-day technical course OFDM including DVB-H** at the following date. I accept the terms and conditions.

- 27. – 30. May 2008 in Munich, Germany
- 09. – 12. December 2007 in Munich, Germany
  
- € 2.450,00 regular fee
- € 2.210,00 early registration until 49 days before course
- € 2.090,00 per participant of two from the same company
- € 1.960,00 per participant of three or more from the same company
- € 1.350,00 University Rate (Please enclose evidence.)

All fees exclude state value added tax.

Name \_\_\_\_\_

Company \_\_\_\_\_

Title / Position / Department \_\_\_\_\_

Street / Mail box \_\_\_\_\_

Country-Zip Code-Town \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

Email \_\_\_\_\_

Date Signature \_\_\_\_\_

hueggenberg gbr  
Maximilianstraße 8  
82319 Starnberg  
Germany  
T +49 8151 55 50 09-11  
F +49 8151 55 50 09-10  
E <mailto:info@hueggenberg.com>  
W <http://www.hueggenberg.com>