
***Standards of excellence
War & peace In The Battle Over Digital
and Interactive technologies***

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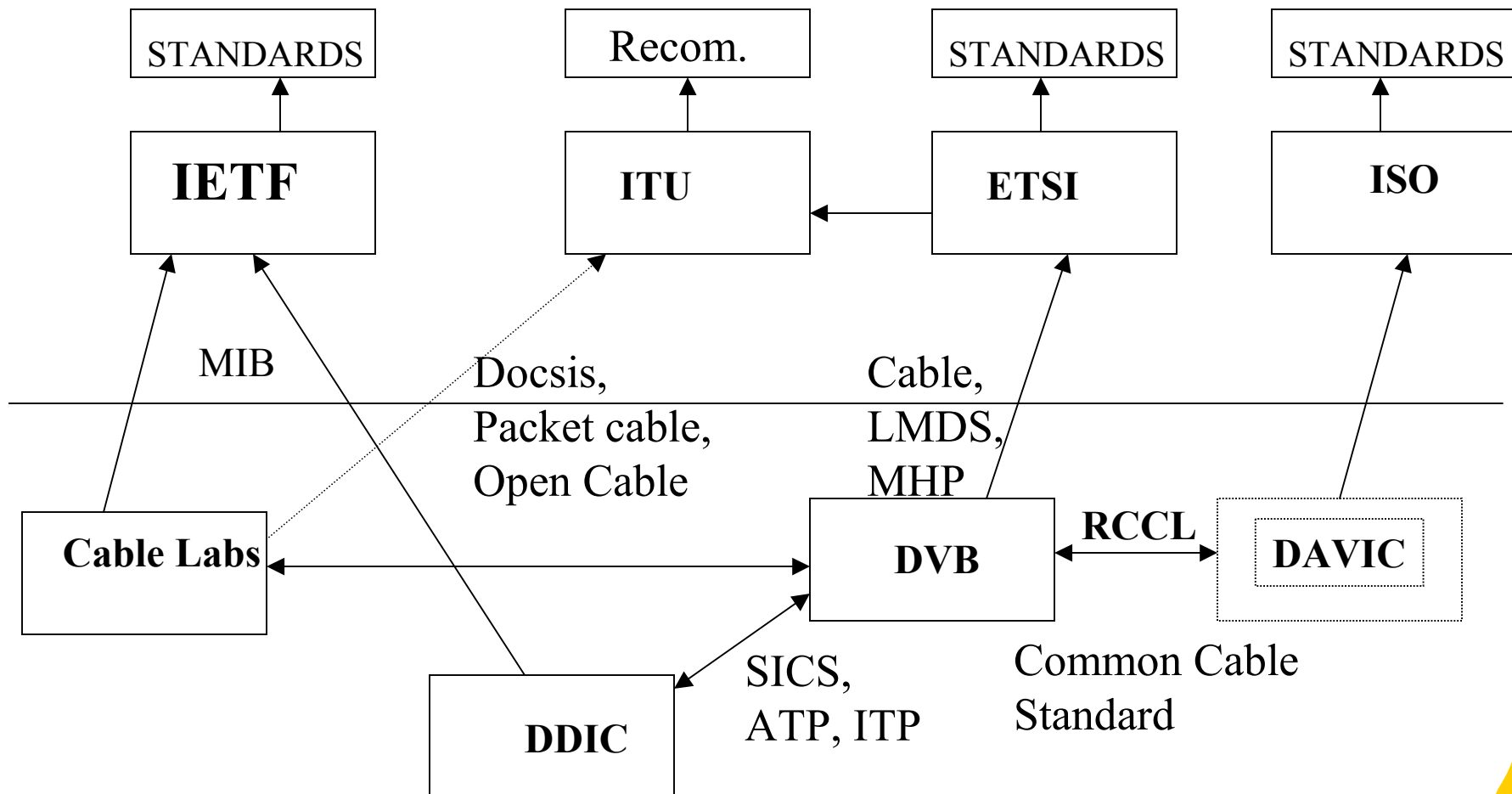
***Director European technology and
Standards***

COM21

COM 21

- 450 PEOPLE, LOCATED IN MILPITAS (US), CORK (IRELAND), ISRAEL**
- DEVELOP AND DELIVER DATA/VOICE/VIDEO TRANSMISSION SYSTEMS ON CABLE AND WIRELESS**
- DELIVERED 500 000 + CABLE MODEMS**

Standardisation bodies and consortiums for interactive services



STANDARDS STATUS

→ DVB :

ONE STANDARD FOR STB AND CABLE MODEM, UNIFIED FOR CABLE AND LMDS

LMDS AND CABLE RATIFIED BY ETSI (UNIQUE STANDARDS)

PROVIDE A UNIFIED TRANSPORT AND SIGNALLING FORMATS

SUPPORTS QOS

CERTIFICATION ENSURED BY BRAUSCHWEIG TECH. UNIVERSITY

→ FOR STB :

CONVERGENT WITH DAVIC; ALMOST IDENTICAL WITH PART OF OPEN CABLE

→ FOR CABLE MODEM :

SAME AS DAVIC; IN COMPETITION WITH DOCSIS/EURODOCSIS SPECS

Standards situation, upper layer protocols

- ➔ ***MULTIMEDIA APPLICATIONS REQUIRING QOS :***
 - PACKET CABLE LOOKS DOMINANT IN US***
 - DISCUSSION ONGOING BETWEEN DVB AND PACKET CABLE FOR CONVERGENT PROTOCOLS***
 - CONCLUSION : FULL CONVERGENCE MAY APPEAR IN THAT AREA***

- ➔ ***FUTURE ISSUES :***
 - UNBUNDLING***
 - CONTENT FORMAT***
 - END TO END QOS***
 - CONNECTION WITH HOME ACCESS***
 - SECURITY***

Interoperability verification process

→ DVB DAVIC INTEROPERABILITY CONSORTIUM CREATED 11/98

→ GOAL :

PRODUCE INTEROPERABILITY DOC : SICS, ATP, ITP

PROMOTES DVB RC STANDARD

PRODUCE MIB'S

→ PHILOSOPHY :

LIGHT PROCESS WHERE STANDARD COMPLIANT PRODUCTS ARE CERTIFIED

→ BRAUNSCHWEIG TECHNICAL UNIVERSITY PERFORMS CERTIFICATION

Impact of Multiple standards for PHY&MAC

→ GOOD STANDARDS QUALITY

→ MARKET DISSEMINATION; ISSUES FOR :

VENDORS : SEVERAL PRODUCT RANGES, ADDITIONAL R&D

**IC MANUFACTURERS : MULTISTANDARD DVB-DOCSIS CHIPS
NOW AVAILABLE; COST IMPACT AFFORDABLE**

OPERATORS

→ TO SUPPORT DIFFERENT PHY IS A MUST :

CABLE + ADSL (FT, DT, ..)

CABLE + WIRELESS

➔ IMPORTANT ASPECTS :

SAME CONTENT ENCAPSULATION IN DOWNSTREAM

UNIFIED LOW LAYER API'S

UNIFIED UPPER LAYER PROTOCOLS

UNIFIED HIGH LEVEL API'S (DVB-MHP)

DVB vs DAVIC

→ DVB : CREATED IN 1993, AROUND 300 COMPANIES; PRIVILEGED LINK TO ETSI

STANDARDISATION OF DIGITAL VIDEO AND MULTIMEDIA PROTOCOLS FOR DIFFERENT MEDIA

PROVIDE A UNIFIED SET OF STANDARDS FOR DELIVERY OF MULTIMEDIA CONTENT

EVOLVING TOWARDS INTEGRATION OF VIDEO/DATA/VOICE INTEROPERABILITY WORK ENSURED BY DDIC

→ DAVIC :

MORE MULTIMEDIA ORIENTED; NUMBER OF DAVIC SPECIFICATION WERE ENDORSED BY DVB

GOOD TO PROVIDE TECHNICAL WORK, BAD TO PROVIDE STANDARDS..

DVB DAVIC INTEROPERABILITY CONSORTIUM

**➔ INVOLVED COMPANIES : ALCATEL, CISCO, COM21, DIVICOM,
HUGHES NETWORK SYSTEMS, NOKIA, PACE, PHILIPS, COMATLAS,
SAGEM, SAMSUNG, THE INDUSTREE, THOMSON MULTIMEDIA,
THOMSON BROADCAST SYSTEMS**

➔ WEB SITE :

DDIC [*http://www.dvb-davic.org*](http://www.dvb-davic.org)

DVB [*http://www.dvb.org*](http://www.dvb.org)

ETSI [*http://www.etsi.fr*](http://www.etsi.fr)

DAVIC [*http://www.davic.org*](http://www.davic.org)

EuroCable Labs [*http://ifn03.ifn.ing.tu-bs.de/ecl/EuroCableLabs.html*](http://ifn03.ifn.ing.tu-bs.de/ecl/EuroCableLabs.html)

ECCA [*http://www.ecca.be*](http://www.ecca.be)

THANK YOU ! QUESTIONS?