

Cable-Tv in the Western Europe  
and the Case of Finland

by Jaakko Hannuksela, Visiting Scholar  
Center for Telecommunications and Information Studies  
Graduate School of Business, Columbia University  
(November 1987)

## I. Western Europe

### A. General

Europe is a patchwork of countries, nationalities, languages and regulatory structures. All this, naturally, is reflected in it's media including cable television. In describing a multi-faceted subject I can fortunately use the uniform and well-known US cable industry as a reference point. I also apply American terms and concepts since they are better established than their European counterparts.

### B. History

The beginnings of European cable television can be traced back to late 50's when television arrived in Europe. It became clear that forests of antennas would soon grow on the roofs of apartment buildings unless something was done. In Scandinavia the building codes were changed to require a single antenna and high quality cable network to distribute signals inside the building. A basis for future cable television industry thus started to emerge.

The UK, Holland, Belgium, Switzerland and Denmark were the first to start cable television as business. In the UK ,the existing radio signal relay companies started distributing TV signals over their old-fashioned twisted wire networks. Signal quality was poor and capacity was typically 4 channels. In the rest of this group, the lure of the extra channels from the

neighboring countries was strong enough to give a financial return to cable companies performing this relay function. In the 1970's even Germany and Ireland followed the same route. However, in all these countries their own indigenous programming was prohibited over cable systems. This was mainly due to the strong lobbying of broadcasters.

In Helsinki, Finland a new cable television company started local program origination in 1975. This was certainly not due to idle creative potential but rather because it was legally possible. Helsinki Cable thus became the forerunner of a new breed of companies emulating the models established in North America. Swiss and Norwegian companies soon followed suit, although the freedom to produce locally originated programs grew more slowly.

In the early 1980's, the European cable industry was still struggling. The financial burdens of debt and new construction were heavy and the importation of distant signals had by then, lost its novelty in the marketing of network connections. This changed overnight in March of 1982 with the advent of satellite television in the form of Sky Channel. The lobbying forces of broadcasters were not strong enough prevent this english-language light entertainment channel from taking hold. Within months the regulators of most of the countries had yielded and given permission to the distribution of Sky. The idea of having international programming available but no distribution outlets did not sit well with the general public.

The arrival of international satellite television had an impact on several levels. It added "zip" to the marketing of cable and demoralized the up till then effective lobbying organizations of broadcasters. The regulators found out that a liberal policy in cable and satellite matters was the only one that could be managed without continuous debate and intervention. Soon the laws and regulations were changed to allow even local origination and pay-TV. Swedish cable is a good example of this trend.

The European cable television industry is still financially on soft ground in the same sense as its counterpart in America was in the times before liberalization and the dawn of satellite-distributed networks. In Europe, the subscriber fees have been too low to support the costs of the modern cable networks with addressable technology and 40 channels. The adjustment to higher revenue levels will be done with the help of new channels and services. However, the speed with which this occurs depends largely on the unique regulatory structure of each country.

### C. Regulation

Broadcasting in Europe is rigidly regulated. The industry's main lobbying body European Broadcasting Union (EBU) consists mainly of state-owned or -controlled member companies owning rights to broadcast licenses within national boundaries. Everybody who owns a TV set pays an annual licence fee (typically about 100\$) for the right to watch. Advertising is allowed only in some countries (UK, Germany, France, Finland among others).

The telecommunication market is dominated by the PTT's, many of these being both service providers and regulators at the same time. An exception is the UK which has a conscious policy of privatising and deregulating the telecommunications market. In Finland the bulk of the telephone service has always been offered by private companies.

In general terms, the European legislative control of cable television is a mixture of broadcasting and telecommunications regulation with a dash of American franchising procedure thrown in. Advertising and local origination has normally not been allowed. The countries with new cable television laws (UK, Finland, Sweden) tend to have the most liberal regulation.

The technical side of cable network construction is regulated, too. The objective has been to ensure good signal quality and minimum stray radiation. The frequencies used in cable networks are allocated by the same bodies that allocate the other frequencies of telecommunications and broadcasting.

The European cable television regulation philosophies can roughly be divided in three main groups:

	<u>Analogous to</u>	<u>Countries</u>
1 Utility	Water-, gas company	Belgium, Holland
2 Telecom service	Telephone company	Germany
3 Business	US cable companies	UK, Switzerland, Finland, Sweden, Norway

To make matters even more complicated, supranational organisations have also become active in this field. The EEC tries to ensure that companies from all the member countries can effectively exploit the new markets without artificial barriers in the form of national regulations. The Council of Europe coordinates the aspect of content (advertising, matters of decency and violence in programming) Altogether there are over twenty international conventions and treaties at least marginally concerning European cable (copyright, trans frontier issues etc.). Many of these are so esoteric and theoretical that their practical importance is small.

The general trend ,in the short term anyway, is towards more liberalisation.

#### D. Programming

In general local origination was not allowed in Europe until the early 1980's. Helsinki Cable was the only exception as it began to offer local programming beginning in 1975 .Moreover, pay-TV was started in Helsinki in 1978. The advent of satellite television in 1982 began to slowly change attitudes towards local origination in Switzerland, UK and Norway. Today local programming is allowed on most of the European cable systems.

In terms of broadcasting hours, the bulk of the programming is satellite-distributed, in the english language, and is originated in London. The most important of these are:

<u>Service</u>	<u>Revenue source</u>	<u>Availability in:</u>
Sky Channel	Advertising	Over 9 mill. homes
Super Channel	Advertising	About 8 mill. homes
Arts Channel	Adv. and pay	400.000 homes
Screen Sport	Pay	300.000 homes
Children's Channel	Pay & adv.	300.000 homes
Lifestyle	Adv. & pay	300.000 homes

The three major german-language basic services are Eins Plus, 3Sat and Rtl Plus all reaching over 2 million homes.

The only french language general interest channel is TV5 with total distribution to about 5 million homes. The programming is provided by the broadcasters of France, Switzerland, Belgium, Luxemburg and Canada on a rotation basis.

The "European HBO" FilmNet is operated by the Swedish conglomerate Esselte using a Dutch satellite transponder. The films are subtitled in hidden teletext form in several languages. The cable operator chooses the language and outputs the subtitles automatically. The channel has only about 100.000 paying customers, a reflection of the slow development of adressability in Europe.

In all, there are over 20 program services, most of them are operating only 4-12 hours a day. Most are basic service channels similar to Superstation TBS. In practical terms, all of the services are unprofitable and will remain so for

years. Selling pan-European advertising has proved to be tough.

#### E. Technology

The European cable network topology is traditional tree and branch, implemented with coaxial cable. During the past 10 years there has been discussion of requiring a switched star system in new construction. The UK has gone furthest and requires a star configuration but leaves the implementation method to the operator. High-tech is promoted in the UK by giving longer franchise times to operators using modern approaches.

2-way systems are still a curiosity. The French Biarritz trial network is an example. It is also fiber-optic, prohibitively expensive and subsidised from government research funds.

American cable systems use microwawe links extensively to distribute the signal to sub-headends. This is also a normal procedure in Europe. The fiber-optic technology has however now reached a stage which enables it to compete with the links. Since the bulk of new cable construction will take place in the coming 15 years, it seems certain that Europe will end up using fiber optics on a large scale (both digital and analog).

Pay-TV equipment is manufactured locally but based on American and Japanese designs (e.g. Zenith, Jerrold, Pioneer). The exceptions are some British experimental systems based on video switching.

The network capacity varies from 6 to 40 channels depending on amplifiers, and channel allocation (VHF, UHF, S-channels). A

limiting factor on the capacity can be the tuner of the TV-set. The actual number of channels carried is between 6 and 20 channels. Descrambler-converters are only now coming into extensive use.

#### F. OWNERSHIP

In contrast to North American cable, the ownership in Europe is largely in the hands of governments, cities and city-owned utilities. The following table explains the situation in approximate terms.

<u>Nature of enterprise</u>	<u>Owners</u>	<u>Countries</u>
1 Local utility	City, local util., some private money	Belgium, Holland
2 Local telecom service	State/Federal	Germany, Sweden
3. Private company	Private investors Private companies Financial institut. Teleph. companies	UK, Switzerland, Finland, Norway, Austria, Ireland

There is no established market for buying and selling of cable television companies in Europe. Most of the original investors are still shareholders.

### C. Business

It is perhaps easiest to understand the nature of cable television in Europe by comparing it to the US cable television industry of the 1970's. Analogies abound:

- Market coverage is low, 9.5% (12 million of the 127 million homes)
- Subscriber fees are low, under 5\$/month on average
- Cash-flow after investments is negative and will remain so for a number of years. The exceptions are some old systems but even they will require a lot of capital when upgrading their technology.

There are differences, too :

- Subscribers pay a high connection-fee (typically 500\$)-- this radically decreases net capital required from the operator.
- Penetration figures are high and reach 50% in 3 years (homes connected/homes passed), the highest are about 95%. An exception is the UK
- Most of the construction is underground
- Video rental market is well established thus diminishing the potential of pay cable
- Off-air subscription television is a success in France with about 2 million subscribers, limiting the cable market there.

## II Finland

### A. History

The Finnish building code requires a tree and branch radio and television cable network to be built within all apartment buildings. This gives residents access to two national networks. In the early 1970's, it became quite natural to add another antenna to the network and receive two Swedish channels in western Finland and an Estonian channel in the south.

Since there was no cable television law, it was easy to set up a cable company and to start interconnecting house complexes. This was the case in Helsinki in 1973. To garner interest in the system, a local current affairs channel was started in 1975 and a pay channel in 1978. The company had about 100 shareholders including major banks and financial institutions, so obtaining external financing was not a problem. The construction proceeded briskly and the system had 50,000 homes connected in 1982 when the company reached the limit in available credit. At that point, Helsinki Cable was sold to a major media company Sanoma Corporation and within two years it was a profitable enterprise.

The first pan-European satellite channel, Sky Channel, started in 1982 and caused a veritable gold-rush of new cable companies in Finland. Typically, a joint-venture was formed between the telephone company and the newspaper and other local interests. The PTT took the task of network construction and operation in the eastern and northern parts of the country where

it has telephone monopoly. Currently there are 85 cable systems.

#### B. Regulation and programming

Until June of 1987 the Finnish cable-TV was not regulated. This did not cause any problems, a fact which perhaps reflects on the real need for media regulation in general. The only case that was widely discussed was how clearly a promotional film should be marked as advertising. More recently there has been a debate on the just allocation of connection fees in tenant-owned apartment buildings.

The cable law of 1987 as delivered by the Parliament stipulates the following:

-The Department of communications grants licenses to operate cable-TV systems. The operator must have the financial resources to build the entire area. Competitive licenses can and must be granted if there are several applicants.

Concentration of media ownership is in practice the only grounds to refuse an operating license.

-Channels must be reserved for outside programmers on equal terms and first come- first served basis

-The locally originated programming must be at least 15% Finnish . Satellite programming and distribution of broadcast channels is free from regulation.

-The upper limit for local cable tv advertising is 11% of programming time.

The new law will have very little impact on the established cable operators.

A typical cable system carries the following channels:

1. Finnish national channel 1.
2.                "-                2.
3. A Swedish or an Estonian channel
4. The new Finnish Channel 3, 3-6 hours of entertainment/day
5. Sky Channel, 24 hours of mixed "Superstation" fare
6. Superchannel, 24 hours of British-created programming
7. TV5, French channel
8. Arts Channel, British, high-brow
9. Worldnet, an USIA channel
10. Local advertising-financed channel (bicycled by Helsinki Cable, but normally including local news)
11. Entertainment Channel, pay, (mixed fare of films and series, bicycled by Helsinki Cable)
12. Filmnet, satellite-delivered pay (films)
13. Screen Sport, pay ( European Sportschannel)
14. Childrens Channel (mainly British fare)

CNN will start distributing in Finland in the beginning of 1988.

The Finnish national channels have more than 80% of the audience. While this number is coming down fast, the lack of understanding of the english language by the audience and the lack of availability of pay-tv technology are still limiting factors. The only alternative open for the broadcasters to compete with cable programming is to make more interesting programs.

Since advertising is one source of income their situation is similar to that of the US networks.

### C. Ownership and the Business

More than 50 of the systems are incorporated and have predominantly local ownership including the telephone company and newspaper. The PTT is the only MSO and it operates 32 non-incorporated systems in its telephone franchise areas. The number of cable systems thus exceeds 80.

Helsinki Cable is the largest system and almost 15 years old. It is also one of the few operating in the black. Other systems are in the construction phase and their revenue base can not yet carry the capital costs. Projections are good, however. They call for a growth of 20% in each of the coming 5 years [4].

### III. Concluding remarks

The cable television industry in Europe is still in its formative stages and more than 10 years behind American cable both in terms of penetration and revenue. The ownership structure is not favorable to business efficiency. There are also competitive threats that can seriously affect the budding industry: DBS, medium power satellites and off-air subscription television.

In spite of all that, the situation is far from hopeless. Competition from the broadcasters is weak, especially in the smaller countries, and there is a pent-up demand for more television. Only cable has the potential to arrange all available

programming channels, even competitors', to neat packages for customers to watch, enjoy and pay for.

#### REFERENCES

(1) CIT Research, Cable TV Communications in Western Europe. London, 1987.

(2) PK Associates, The Kagan Cable TV financial Databook. Carmel, Ca, June 1987.

(3) Mueller, Juergen, "Cable Policy in Europe, the Role of Transborder Broadcasting and its Effects on CATV," Telecommunication Policy, September 1987: 259-268.

(4) The Finnish Cable-TV Association, a private communication.

THE COVERAGE OF CABLE-TV IN EUROPE, 1987

<u>Rank</u>	<u>Country</u>	<u>Coverage, %</u>	<u>Cable homes, mil</u>
1.	Belgium	84	2.9
2.	Luxemburg	77	.1
3.	Holland	58	3.1
4.	Switzerland	56	1.4
5.	Ireland	29	.29
6.	Norway	20	.33
7.	Finland	14	.27
8.	Denmark	14	.29
9.	Austria	11	.31
10.	Germany	9	2.3
11.	Sweden	6	.22
12.	U.K.	2	.40
13.	France	1	.21

European average      9.5 % (incl. non-cable countries)

Will grow by ca.      0.8 %-points/year

( CIT Research 1987 )

MAJOR MSO'S IN EUROPE

Deutsche Bundespost (PTT)	Germany	2.3 million subs.
Intercom	Belgium	.75
Casema	Holland	.53
EBES	Belgium	.47
Rediffusion	Switzerland	.35
Amsterdam Kabeltelevisie	Holland	.34
UNERC	Belgium	.30
Sanoma Corp.	Finland, Norway	.26
Rotterdam Energy	Holland	.23
Cablelink	Ireland	.22
Total 10 largest		5.75 million

COMPARISON OF AMERICAN AND EUROPEAN CABLE

	<u>USA</u>	<u>EUROPE</u>
Regulation	FCC, Liberal	Patchwork, Generally restrictive
Nature of industry	Entrepreneurial	Utility Telecom service Entrepreneurial
Programming	Distribution, local Distrib., distant signals Superstations Local programming Satellite, basic Satellite, pay Satellite, PPV	Distr., local Distr., neighboring countries Satellite, basic Satellite, pay Local programming
Coverage (1)	50%	10%
Subscribers	41 million	12 million
Volume of business	\$ 11 Billion	\$ 0.7 Billion

(1) = homes connected/all TV homes

Source of numeric estimates: CIT Research 1987.