

**SPANISH CABLE TV MARKET DIFFUSION MODEL:  
PROFITABILITY ANALYSIS OF COMPETITIVE TELECOMMUNICATIONS  
BUSINESSES**

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**INTRODUCTION**

The development of the cable television market, a very late comer in Spain, has been hindered by a number of factors, while its future depends largely on both legal issues and the appearance of the competition platform, satellite TV.

It has been assumed for the purposes of this paper that the cable TV offering will be clearly distinguishable from satellite TV - a highly questionable presumption - in terms of the number of channels offered and in particular of the potential for interactivity that cable affords, as well as of the complementary telephone services that cable TV operators will be in a position to offer. We will, then, focus on the unique existence of a "cable platform", to, in a later stage of the model - perhaps to become available via an Internet home page -, broach the impact of satellite TV as a replacement for cable.

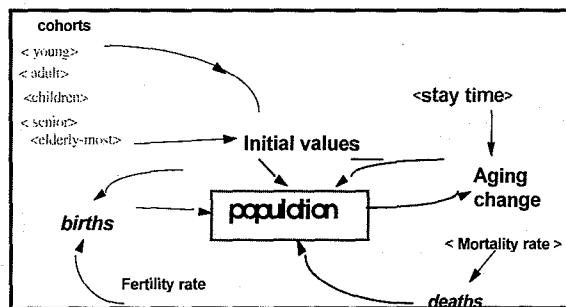
**MODEL STRUCTURE**

In this overview we will discuss the various steps that help comprehend cable TV business diffusion in an area or region with two cable operators; using revenue and associated cost mechanisms, we will also set up various scenarios that will enable us to evaluate the profitability of the business from the standpoint of only one of the competitors, since a similar procedure

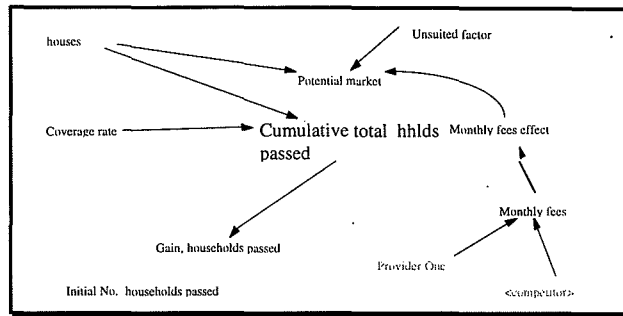
would be followed in assessing the other's performance as well.

The model comprises the following modules:

**Potential market.** formulated on the basis of statistical trends for populations, divided into cohorts with their respective fertility and mortality



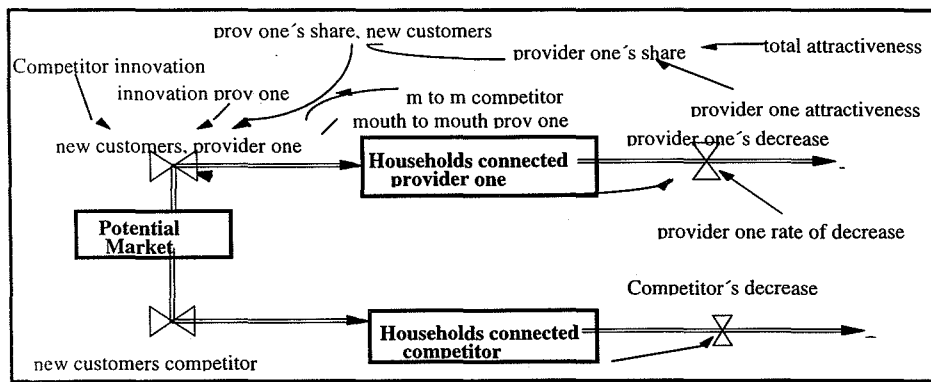
rates and the number of homes resulting therefrom, drawing a distinction between the various kinds of dwelling on the basis of the number of families they accommodate. This is used to deduce the maximum



number of families willing to subscribe to cable TV, based on planned interviews conducted to research the potential market. Such ceiling is dependent upon monthly fees, initial connection costs, the range of thematic channels and product offerings. Investment is time-scaled, taking account of the legal commitments that broadcasters must meet with respect to coverage in terms of population density.

**CTV (cable TV) subscription module.** A diffusion structure (Bass, Mahajan, et al.) was tested for this module, in accordance with the innovation and mouth-to-mouth principles.

Each operator's share is based on their respective ability to attract potential customers: coverage, fees for the various services (pay-per-view, premium programmes, monthly and initial fees, range of thematic channels, brand prevalence, quality, complementary telephone services in the same package, interactivity or otherwise...). All of this makes for a marketing mix that tilts the scales one way or the other, and the cumulative effect over several years results in the total number of customers for the operator in question.



**Revenue module.** Revenue is computed on the basis of the above ceiling and the services purchased by such customers, multiplied by the prices.

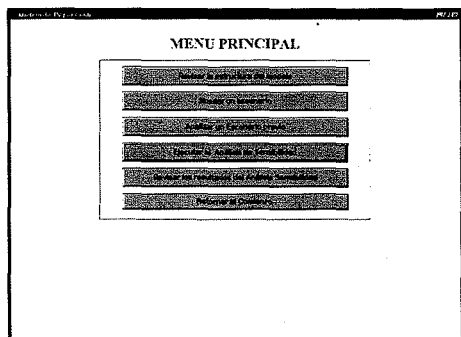
**Cost module.** Here we estimate the various kinds of investment required for networks or facilities, sales organisation, personnel, publicity, financial costs and cable company start-up costs... along with the respective amortisation and depreciation expenses.

**Results, profit, loss, cash-flow and ratio module.** This is a combination of the above modules, formulated pursuant to standard equations relating these parameters.

Taken together, these modules make up the system that enables us to simulate different scenarios while maintaining the competitor's strategy unchanged or even varying it in terms of presumed criteria or those observed to be followed by other agents, countries, ...

### **USER-FRIENDLY INTERFACE**

Taking the process one step farther, we can facilitate handling a model built under these conditions for users unfamiliar with system dynamics and the tools that support it, via a friendly interface that guides or drives the Business Manager, using readily understood menus in connection with the various options, together with utilities for simulation (under the various possible formats, including policy optimisation, analysis of sensitivity to variations in parameters, calibration, reality check...), results analysis and print-outs, scenario changes, etc. All this is available through the program using standard Windows programming (Visual Basic, Delphi...) or even the tools included in the SD software itself (applications generator, multi-media effects, friendly icons and/or windows).

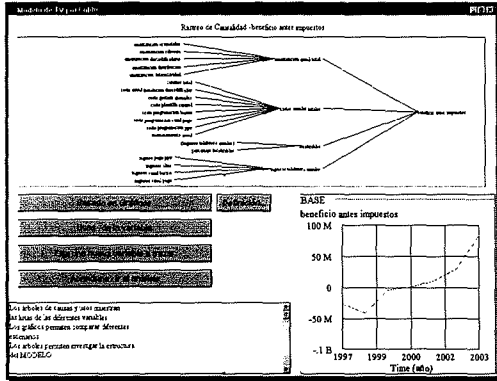


*"Translation":*

Main menu

- review structure
- run a scenario
- analyse a previous run
- run sensitivity analysis
- review sensitivity analysis
- return to starting point

Some sample displays or screens for the above interface are shown below. It will be noted from these illustrations that combining these techniques with the appropriate tools that support them can be both very powerful and useful for both professionals with SD expertise accustomed to working with such methods and final users for whom the application is intended and which is closed from their standpoint, although easily amended and maintained by its skilful builder.



This display shows causal tracing for a selected variable, and a graph of its evolution.

We can choose: Tabulated (numerical) format results, variable definitions or equations, the print function,...

Comments are included to help users understand each phase or step as they work through the model.

This screen summarises the results of a comparison of the various scenarios implemented, considering different hypothesis, strategies,... This enables users to contrast the results of the major variables, thereby helping them to reach decisions: Cash flow, profit, cost, investment, customers,... or even the competitor's business figures.

	BASIS	BASIS2	BASIS2000	BASIS
<b>Hipótesis</b>				
Clientes Regio	2.23	2.21	3.85	3.23
Clientes de negocio	27.800	27.800	25.800	25.100
Clientes al por mayor	22.000	22.000	22.000	22.000
Clientes al por menor	23.200	23.200	23.200	23.200
<b>Estrategias</b>				
Costo general Telefonía	2.000	2.000	3.220	
Costo material competencia	2.000	2.000	4.420	
Yemas por cliente	2	2	2	
<b>Results</b>				
ROI	13%	13%	13%	13%
VAE (M\$)	13%	13%	13%	13%
Costo Telefonía (M\$)	13%	13%	13%	13%
ROI	14.66%	13.98%	14.30%	14.30%
ROI Telefónica	576.16	665.07	331.04	331.04
ROI Comercial	4.581	5.702	5.164	5.164

## INFORMATION VIA INTERNET

I trust you will find this information - expanded and updated - together with other related items of interest on my web page:

<http://ourworld.compuserve.com/homepages/telinges/tve.htm>

If you wish to correct something there, or enlighten me with your advice and experience, please do not hesitate to contact me at the following e-mail address: **100407.2170@compuserve.com** or by telephone: 34 29 13 19 31.