

## **Proposal for a Joint Venture (GTK-7)**

**Between the *International Interactive Television Group* (IITG) and the *Cooper Union iTV Team* (CUITV)**

Proposed JV Name: ***Interactive Innovations*** (I<sup>2</sup> )

### **The Cooper Union iTV Team:**

Jason Brown (brown5@cooper.edu) — Group leader  
Patricia Setti (setti@cooper.edu) — Social & Political consultant  
Atif Kidwai (kidwai@cooper.edu) — Financial officer  
Ari Welner (welner@cooper.edu) — Technological advisor

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**Contact Information:**

We may be contacted at the following mailing address, or more readily, at our respective e-mail addresses listed on the front page of this document.

The Cooper Union iTV Team

c/o Professor Roxanne Jacoby

The Cooper Union for the Advancement of Science and Art

51 Astor Place

New York, NY 10003

## **I. Introduction:**

In keeping with the goals and standards of the IITG, we, The Cooper Union iTV Team, are pleased to propose a Joint Venture between our respective organizations that will maximize mutual benefits. Our establishment of an iTV distribution network within Italy is the first concrete step toward a wider standard of interactive television throughout the world. We also believe that future expansion in other European countries and beyond is not only a distinct possibility, but in fact, a major goal of our joint venture. The only question that remains is what corporation(s) will be the leaders in this new trend and will dominate world markets. We hope that our future joint venture will be one of the world leaders in this field.

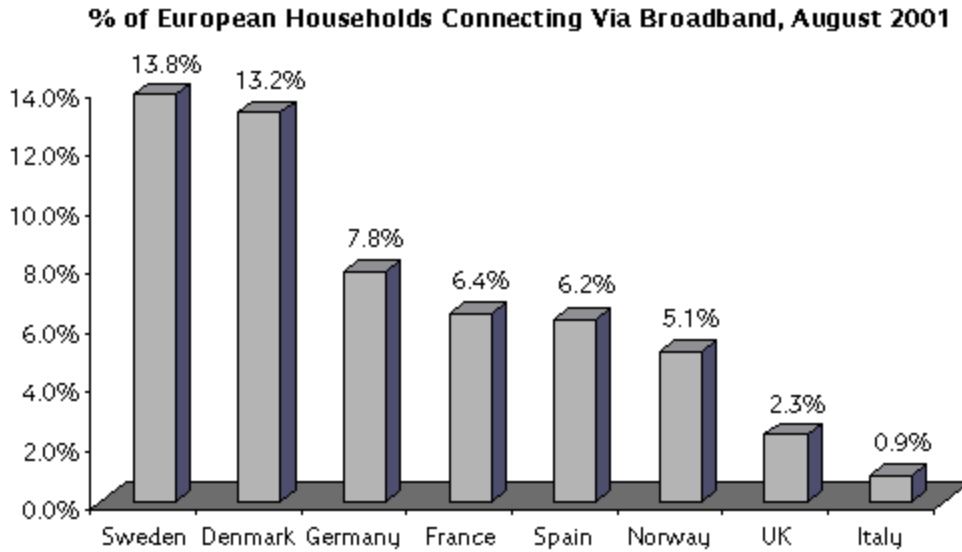
With today's advances in broadcasting technology, the future can be summed up in one word: expansion. Italy's cable network growth process is expected to continue on course, and will eventually reach well over 100 cable sites, and over 5 million Italian homes by the year 2003. The number of channels offered to these viewers is expected to grow as demand increases.

Another important reason for which we suggest Italy as the base for our joint venture is because CUITV has a long, very successful experience in the telecommunications industry in Italy. As such, it is able to provide invaluable local political, law, tax, economic, etc. expertise and advice to the joint venture.

## **II. Social & Economic concerns:**

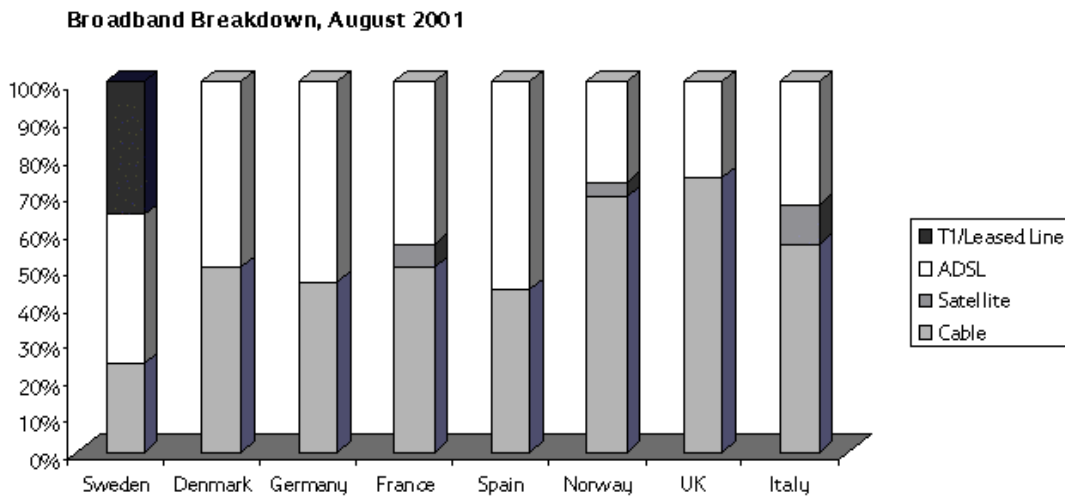
The market for interactive TV in Italy has been slower to develop than elsewhere in Europe, with only around 16% penetration for digital TV. However, with this figure set to reach 48% penetration by 2005, the race is on to capture market share and establish an effective presence in the iTV market (Broadcasting Strategy & Finance Week). Interactive Innovations (I<sup>2</sup>) will be poised to take full advantage of the opportunities in the Italian market and beyond.

- Italy's broadband usage compared with other Western European nations:



Source: NetValue

- Italy's broadband breakdown (i.e. T1/Leased Line, Satellite, Cable, and ADSL):



Source: NetValue

Unfortunately, interactive television doesn't come cheap. The costs associated with laying new fiber optic and coaxial cable alone have been staggering. Why then is this venture considered so promising? In addition to increased viewing options and clearer picture, Italian viewers may soon be able to directly take part in talk shows and other interactive programs, using the television remote from the comfort of their living rooms. Interactive technology may also allow Video on Demand (VOD) services, where viewers can choose the movie they want to see and when they want to see it, without running out to their local video rental outlet (This is not dissimilar to the current system of Pay-per-view in the U.S, except here the selection will be on the scale of a traditional video store). Our system will also anticipate new changes in technology. This means that when it comes time to add new functionality, such as the extremely high picture quality of high-definition television (HDTV), the distribution head end sites will be ready.

**Several factors have made Italy a promising market for interactive TV technology:**

- A highly trained labor force (50,000 new graduates in professional/technology sectors).
- High productivity (highest productivity in the sector after Germany).
- Relatively low labor costs (high flexibility and low turnover rates).
- High innovation rate (research and development spending & investment increasing steadily).
- High tech eruption in the South of Italy (low labor cost, skilled labor force, low real estate costs).

**Some key figures for Italy:**

Total Area	301,230 sq. km
Population	57,679,825 (July 2001 est.)
Age Structure	0-14 years: 14.17% 15-64 years: 67.48% 65 years and older: 18.35%
Television broadcast stations	358 (plus 4,728 repeaters) (Year: 1995)
Televisions	24 million (Year: 1997)
Internet Service Providers (ISPs)	93 (Year: 2000)
Internet users	11.6 million (Year: 2000)

Source: *CIA Factbook*, 2000

**Comparison of iTV take-up rates in Italy and the UK, Europe's leading market**

	UK	Italy
Total TV households 2001ii	20mn	24mn
Total digital TV households end 2001 (forecast)	3.2mn	9.2mn
Total digital TV households end 2005	9.7mn	15.8mn
Source: Datamonitor		

**Wage Rates:**

Wage rates in Italy are established by collective contract, by agreement with employers or, in the absence of either, by a court of law. Wages may be supplemented by fringe benefits, such as cafeteria facilities or, in the case of management, the right to specific utilities (company cars, accommodation, insurance policies, and concessionaire loans). Each December, all employees are paid a Christmas bonus, the "tredicesima", equal to a month's salary. Set holidays and national holidays are paid, as is annual leave for a minimum of three weeks.

**Average Salaries:**

The following gross salaries for key positions in foreign-owned companies in Italy are mean figures reflecting 0-10 years experience and 12 salaries plus two bonuses a year. In the case of clerks, secretaries and managers the employer is assumed to be paying a premium for foreign language skills.

Bookkeeper	1.7mn - 4.2mn ITL (\$770 - \$1905)
Chartered	3mn - 7mn ITL (\$1360 - \$3175)
Clerk	1.7mn - 2.1mn ITL (\$770 - \$953)
Engineer	3.2mn - 7mn ITL (\$1451 - \$3175)
Foreman	2.4mn - 3.8mn ITL (\$1088 - \$1723)
Laborer	1.3mn - 2mn ITL (\$589 - \$907)
Manager	5.2mn -11.5mn ITL (\$2358 - \$5215)
Secretary	1.9mn - 3.8mn ITL (\$862 - \$1723)
Specialized mechanic	1.9mn - 2.9mn ITL (\$862 - \$1315)

Source: *EUI Estimates, 2000*

(Note also that *mn* = million & ITL = Italian Lira)

## **Locations within Italy:**

Based on the above factors as well as technological limitations requiring at least three bases to cover all of northern and most of central Italy, CUITV proposes the following three locations for the company. 2 in northern Italy: 1 outside Milan, 1 outside Trento and 1 in central Italy: Rome. Due to the extensive benefits of the location listed below, CUITV proposes the Scrivia Valley, outside Milan for its headquarters.

The Valle Scrivia Telecommunications Park is located in Tortona near the motorway junction, in a strategic position for the main trunk routes, making it easily accessible from Milan, Genoa and Turin. It is part of the much larger Equipped Industrial Area of Tortona opposite the Rivalta Scrivia Interporto rail/road transport terminal.

This vast location is dedicated to a Scientific, Technological, and Telecommunications companies and set up by the Italian Government as an incentive for growth and investment.

## **More Advantages:**

- Possibility of access to innovative services for applied research and technological innovation as well as for strategic company management, with particular attention to information and access to grants and funding;
- Possibility of enjoying particularly competitive rents, and laboratories and offices equipped with special high tech equipment;
- Availability of common spaces (videoconference room, multimedia room, classrooms) for training, conferences and seminars;
- Possibility of location in premises with a customized lay-out, with fiber optic cabling and advanced security systems;
- Possibility of access to specific technological equipment at advantageous conditions;
- Easier contact with other companies as well as close and rapid links with university institutes and research centers, thanks to the laboratories present in the Park.

## Italian Government Incentives:

Additional government incentives exist for new companies seeking out Italian markets, especially in the less-favored Southern region of Italy. Expansion of the JV should include thorough research of these figures (including extensive tax credits) and consider establishing a branch in the South (Naples, Bari, Palermo, Cagliari, etc.).

Provided below is a graphic of Italy, indicated our respective starting locations, as well as areas for proposed expansion:





### **III. Joint Venture Financial Analysis:**

Our approach here is guided by the principles of our global outlook. One of the primary concerns in this Joint Venture is to standardize the utilization and distribution of iTV technologies. In our technical outline, we are allowing for future advances in technology (therefore leading to significant upgrades in our services) as well as territorial expansion into other regions and countries, as appropriate, based on the same developmental model. First however, we note that there are of course several aspects to the cost analysis of this project. They are as follows:

- Computer equipment
- Licensing
- Networking
- Human/Structural Infrastructure
- Marketing/Marketing
- Other costs

#### **Computer Equipment:**

This part outlines the necessary computer equipment. This includes the mini-mainframes, servers and workstations to make the project successful. We allocated a number of workstations for content as well as costs for licensing most of the content.

#### **Licensing:**

In order to achieve the multiple redundancy fiber optic system, a contract deal with Sprint International is being established. In order to achieve the multiple platform system, we are licensing software from Spartan Networks and obtaining licenses for Open TV/Liberate TV and World Gate. We feel this level of multi-functionality is sufficient in meeting the demands of the Italian people, as well as a practical solution for further expansion and development within the iTV market.

#### **Networking:**

This portion details the fiscal aspects of the network environment needed to span across northern Italy. The approximate cost of the internal and external hardware is given in this subsection.

#### **Infrastructure:**

These costs are primarily concerned with the housing, security and maintenance of the mini-mainframes and servers. Five network specialists will be hired for each location. Building costs in and around Italy were researched and we found competitive pricing for the size we are looking for. We also intend to provide content for Italy's special interests and issues, i.e. soccer. Content providers, Network administrators and Managers will be paid competitive prices compared against the average Italian salary.

**Joint venture Advertising/Marketing:**

To avoid prior mistakes that digital and satellite companies have made in Italy, we intend to pervade a strong marketing and advertising campaign, including appealing rebates and/or incentives for early service subscribers, prior to our release to ensure a strong customer base. This marketing campaign will commence six to nine months prior to commencement of the iTV program. We will also undertake through our outside contractors, a further research of the market to establish the size and demographic composition of our customer base and the correct pricing of our services.

We expect the special soccer-related content and movies will attract a large customer base approximately equal to the current satellite and digital cable users. While only 24% of Italians currently have access to the Internet, the market is wide open for development. Through an aggressive advertising and incentives campaign, we feel that we will be able to capture the market successfully.

**Other expenses:**

First of all for the interest and for the unexpected costs, there are ratios linked with the cost of the general project. Other costs are usually hard to account for, yet one may assume that other licensing costs and building maintenance costs and such are to be expected and accounted for.

Further, we assume that subscriptions will be for 120 Euros/year and with the special content bonus package will be 156 Euros/year (for a total extra charge of 36 Euros/year). This translates to 108 dollars/year per subscriber and 140.4 dollars/year per subscriber, respectively. This rate is competitive against Stream's 9 Euros/month and Teipei's 15 Euros/month plans. Teipei has special soccer TV channels as well, which forces its price to be higher. Since we don't have to actually provide extra TV content (only extra Internet coverage), it should keep our plan more attractive to the average Italian consumer. Our service will also be providing Internet coverage (via the iTV connection), which is a rare commodity in Italy (only 24% of Italians are wired).

Thus, by providing the Internet and special content at such a low rate, we should see a very high demand. Using this knowledge we assumed an initial customer base of 160,000 (100,000 normal/60,000 special) and 4% subscription growth rate in both areas. Using these calculations, we devised a strong nine-year plan. This robust plan assumes a one year set up time before coming out on to the market and includes pay increases for workers and some inflationary costs. All figures are given in dollars. As you can see, an initial return on the investment can be seen by the second year, under our fairly modest customer base assumptions.

We estimate that the initial investment into this project will be around 14 million dollars (see Table 1). Since we are providing much of the technical, financial and local market expertise, we propose that we should hold 55% of the equity. This will also give IITG a strong standing in the Joint Venture, without losing out on the vast potential gain that we have to offer. 60% of the initial investment will be comprised of debt, and that number amounts to approximately \$8,400,000. We propose to raise the debt requirements through investment banks such as Credit Suisse First Boston and other local Italian lending corporations (see Chart 1). Currently, we have a relationship with CSFB that offers us favorable interest rates.

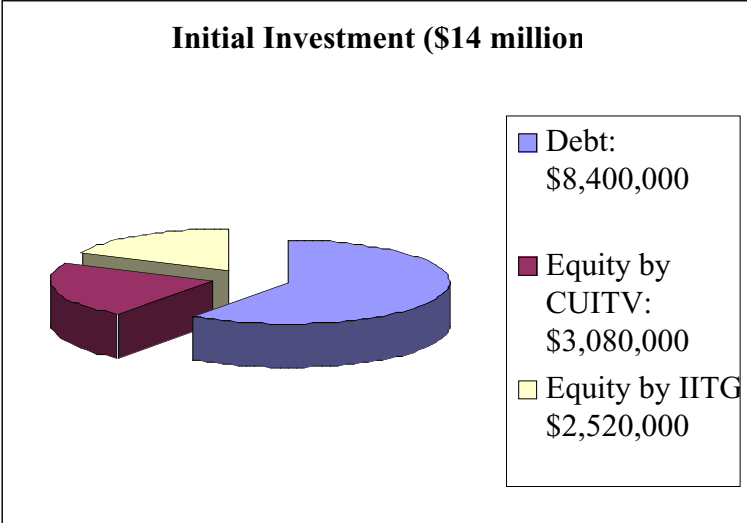


Chart 1: *Division of \$14 million investment among members of JV*

Lastly, we project that if our contract is signed by December 31<sup>st</sup> of 2001, that our facilities will be fully operational within 12 months, thereby yielding a date of January 1<sup>st</sup>, 2003 for the start of operations. This allows us 6 — 9 months for our advertising campaign, as well as 6 months for equipment set-up and the finalization of our facilities. We would plan on beginning physical preparation after the first three months of our advertising inception, allowing us to meet the one-year start date.

Note: The detailed **Cost Analysis Tables** follow; also note that the figures quoted herein are estimated for a network capacity of 10 million users. They cover all associated hardware and software/licensing costs, as appropriate. So, it is in the joint venture s advantage to enlarge its customer base as fast as possible. All our efforts will be geared towards this very important goal. Please see our assumed customer base for our financial calculations.

<b>Cost Analysis — (including start-up costs)</b>				
<b>Investment Costs:</b>	<b>Item:</b>	<b>Quantity:</b>	<b>Cost/Item:</b>	<b>Amount:</b>
<b>Computer Equipment</b>				
IBM Mini Mainframes	Equipment	3	\$250,000	\$750,000
DELL Servers	Equipment	42	\$7,500	\$315,000
Content Workstations	Equipment	25	\$10,000	\$250,000
	<b>Subtotal (a):</b>			<b>\$1,315,000</b>
<b>Licensing</b>				
Sprint International Fiber Optic Network	License	1	\$674,000	\$674,000
Spartan Networks	License	3	\$575,000	\$1,725,000
Liberate TV	License	1	\$250,000	\$250,000
Open TV Software	License	1	\$426,000	\$426,000
World Gate Software	License	1	\$50,000	\$50,000
Cable License	License	1	\$0	\$0
	<b>Subtotal (b):</b>			<b>\$ 3,125,000</b>
<b>Networking</b>				
Internal Network (cables, hubs, switches)	Equipment	3	\$400,000	\$1,200,000
External Network (installation costs)	Equipment	1	\$100,000	\$100,000
Set Top Boxes	Equipment	0	\$0	\$0
	<b>Subtotal (c):</b>			<b>\$1,300,000</b>
<b>Advertising</b>				
Television	Propagation	1	\$3,000,000	\$3,000,000
Magazines	Propagation	1	\$1,000,000	\$1,000,000
	<b>Subtotal (d):</b>			<b>\$4,000,000</b>
<b>Infrastructure</b>				
Building Space (1500 sq. ft)	Land	3	\$150,000	\$450,000
Management	Human	12	\$60,000 / year	\$720,000
Training costs	Human	30	\$10,000 / year	\$300,000
Network Specialists	Human	15	\$30,000 / year	\$450,000
Content Programmers	Human	25	\$30,000 / year	\$750,000
Advertising Specialists	Human	2	\$60,000 / year	\$120,000
	<b>Subtotal (e):</b>			<b>\$2,790,000</b>
<b>Other costs</b>				
Other Licensing	License	1	\$200,000	\$200,000
Interest	%	5% of	\$12,530,000	\$626,500
Unexpected costs	%	5% of	\$12,530,000	\$626,500
	<b>Subtotal (f):</b>			<b>\$1,253,000</b>
			<b>Total Investment Cost:</b>	<b>\$13,783,000</b>

Table 1: Forecasted Initial Investment