



Wireless Revolution

An official exhibit of the Italian National Committee
for the First Centennial Celebrations of the Invention of the Radio

Sponsoring Agencies

City of Bologna - Department of Culture
University of Bologna
Guglielmo Marconi Foundation
Merchants' Association of the Province of Bologna

General Organization

Consorzium of the University and City of Bologna
Italian Academy for Advanced Studies in America

With the assistance of

IBM RAI International S.T.E.I.

In collaboration with

The Italian National Academy of the Lincei (AIM) - The Italian Ministry of
Foreign Affairs - CNR - Columbia University - Florence of Television and Radio
Politecnico (Ira) USA, Province of Bologna - Department of Tourism

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Conceived by:

Science or Magic? a group established by the sponsoring agencies
for the diffusion of scientific culture

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Exhibition design

Stefano Pozzi - Architect, Bologna
Alessandro Ruggi
Alessandro Ruggi - Chief Architect
Andrea Tancibotti - Graphic Design

English translations

Jona Bonetti, Tim Coquer, Michael Eve, Susan Kenner, Emma Topper-Carey

Staging

Xilografia, Padova, Milano

Graphics production

Flavia Milano

Historical replicas and working exhibits

Manzoni Bigazzi

Antique radio and television sets

Univisio, Padova, Milano, Roma, Firenze, Roma

Hypertext for «Guglielmo Marconi: the Legend of the Inventor»

conception and coordination: Andrea Fava, Pippino Ottoboni
and Caracciolo Testaceo
with the collaboration of Chiara Ottaviano e Burkhard Schwetje
graphics: Bruno Scarsini
production and development: Chromedia Officina Bologna

Hypertext for «Guglielmo Marconi: the Notebooks Recovered»

conception: Gaetano Pirelli and Barbara Vabotti
research: CIS, University of Bologna
production: Com & Media, Milano

CD-ROM «Sounds and Voices from the Italian Radio Broadcasting System»

conception and coordination: Franco Monteleone
adaptation for the bilingual version: RAI International
material drawn from the RAI Radio Televisione Italiana Historical Archives
production and development: Audio Equipment, Milano

Organization

Edoardo Antonio, Patrizia Ballardini, with the collaboration of Valentina Culloni
and Stefano Mancotti

Special thanks to

Beatrice Accenna, Luciano Baldoni, Carmine Mancini, Alberto Martini, Erica
Mazzoni, Francesco Palmieri, Bruno Ricci, Maria Roschella, Gaetano Spezia,
Dante Tozzi, Marco Zinghi

Wireless Revolution

An official exhibit of the Italian National Committee
for the First Centennial Celebrations of the Invention of the Radio
New York City, Columbia Play 2 - June 30, 1996

Hours: Tuesday 10 am - 4 pm

Free Admission

Please call 212 851 2300 for further information

Wireless Revolution

Even though we do not realize it, every day our lives are profoundly affected by the use of radio waves. How? Let's make a list: radio and television transmissions, radio controlled devices, mobile telephones, satellite communications, radar, and systems of radionavigation, weather forecasts, radiotelescopes. Less than a hundred years ago, none of these existed.

The telegraph and telephone could send long distance messages, but only to places linked by wires.

Around 1895 an Italian scientist, Guglielmo Marconi, began experiments using radio waves for communication. These invisible waves traveled in air, and since the receiving and transmitting equipment was not connected by wires, the system became known as *wireless communication*. As Marconi gradually increased the power of his apparatus, he was able to send radio messages over ever greater distances. By 1920 radio circled the globe, and the first radio transmitters broadcast programs for the public. Later, they were joined by television, radar, and all the rest. This peaceful revolution of radio communication, or wireless communication, is one of the most extraordinary changes underlying our contemporary world.

Guglielmo Marconi was born in Bologna, Italy, in 1874. In 1895, when he was only 21, at his family home in the country near Bologna, he conducted the important experiments which proved the possibility of using radio waves to transmit long distance messages. Last year in Bologna, the historic-interactive exhibition, *Radio: From Marconi to the Music of the Universe*, was presented to celebrate the hundredth anniversary of these first experiments. A new version of this exhibit, entitled *Wireless Revolution*, will be presented in New York, beginning May 2nd.

The Path of the Exhibit

The ambitious goal of *Wireless Revolution* is to tell the story of a curious and extraordinarily talented youth who was so bewitched by the magic of radio waves that he built strange scientific contraptions - made of wires, door bells, and metal plates - to use them.

To really understand Marconi's invention, it seemed necessary that a visitor to the exhibit do more than just look at photographs and historic equipment. Using a hands-on approach, the visitor can actually relive the magic of invention. Thus, in this



- 1 Introduction to the exhibition
- 2 Hypertext for Guglielmo Marconi: the Blackboard Project
- 3 The notebook, with the first laboratory, and the technical sketches of the young Marconi (original documents of Italian Academy of Lincei, Marconi Archives)
- 4 Hypertext for Guglielmo Marconi: the Legend of the Invention
- 5 The transmitter apparatus, and nearby the receiver used by Guglielmo Marconi for the first experiments in radiotelegraphy in 1895 (historical replicas)
- 6 The transmitting and receiving equipment used by the young Marconi at Pontecchio in 1895 (historical replicas)
- 7 Marconi Magnetic Detection: prototype of receiver built by Marconi in his laboratory in Pontecchio in 1902 (historical replica)
- 8 A modern working version of the receiver for transmitting radio waves, which Marconi constructed in 1902 using a vacuum tube base and two magnets (historical replica)
- 9 The evolution of the household radio receivers
- 10 C.I.R.O.M.I. "Sound and Voice from the Italian Radio Broadcasting System"
- 11 The reproduction of a little living room dotted with frames on which - in background slides - run images of radio in the golden age
- 12 The *infosphere*: a three-dimensional historical and technological map, showing the relationships between the different information technologies developed by mankind

exhibit, precious historic reproductions of the 1895 transmitting and receiving apparatus are accompanied by interactive models with which the public can try, first-hand, to repeat Marconi's experiments.

The exhibit also makes it possible to trace the scientific development of the young Marconi by consulting the multimedia collection of his lab notes leading up to the 1895 experiments, which were uncovered in the National Academy of the Lincei in Rome.

Marconi, however, is also a myth. From his early years, the actual facts concerning his life and activities have been surrounded by a mythic halo, which lingers even now, almost 60 years after his death. Along with Thomas Edison, Alexander Graham Bell,

and the Lumière brothers, Guglielmo Marconi has taken part in the creation of one of the most durable modern myths, that of the inventor, a demigod who is the incarnation of all the promises and threats implicit in technology. The hypertext, *Guglielmo Marconi: the Legend of the Inventor* will let the more interested visitor follow the life of the scientist, using a wide variety of print, film and photo sources, as well as Marconi's own words. The hypertext also will allow the visitor to compare Marconi's legend with those that surround the personalities of other inventors.

The impact of the radio on the world has been so great that describing the work of Guglielmo Marconi is almost like recounting the history of the principal events of the beginning of this century. The first public radio transmissions were heard in the 1920s, and the years between 1925 and 1950 were considered the golden age of radio. News broadcasts, variety shows, musical programs, plays, and interviews filled the air. Using the five cd-roms, it is possible to go back in time, to discover or rediscover the voices and faces of Italian radio from the Roaring Twenties, when the magic box made its explosive entrance into people's lives.

The field of telecommunications has made continuous progress in this century and a half, with a pronounced acceleration in the last twenty years. This evolution has infinitely expanded the boundaries of our lives and of human consciousness. Our planet has progressively been covered by thousands of invisible networks, across which are exchanged an amount of information unprecedented in the history of humanity. At the end of the exhibit, the *infosphere*, a three-dimensional historical and technological map, demonstrates the relationships between the different information technologies developed by mankind.

For those who want further information on and more detailed explanations of the themes addressed in the exhibit, two excellent publications have been developed. They are the English/Italian version of the hypertext, *Guglielmo Marconi: the Legend of the Inventor*, published by Marsilio - Consortium of the University and City of Bologna, and the book *From Amber to Radio*, edited by Franco Foresta Martin and published by Editoriale Scienza, a fascinating story of electricity and magnetism with interesting experiments that can be performed at home.

Scheda Nr.	118
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Località	BOLOGNA
Data	5 luglio 1996
In collaborazione con	Consiglio Nazionale delle Ricerche
Descrizione	Inaugurazione della Area di Ricerca CNR di Bologna, intitolata a Guglielmo Marconi.

Scheda Nr.	119
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Località	SUD AFRICA - Johannesburg
Data	9-13 luglio 1996
In collaborazione con	ICE - Istituto nazionale per il Commercio Estero
Descrizione	Manifestazione "Communications Africa '96 - Celebrating the centenary of the discovery of radio by Guglielmo Marconi", organizzata dall'ICE. - Conferenza marconiana nell'ambito del "Seminar on Italian Telecommunications and Related Applications" svoltosi il giorno 12 luglio.



ITALIAN TRADE COMMISSION
JOHANNESBURG



COMMUNICATIONS AFRICA '96

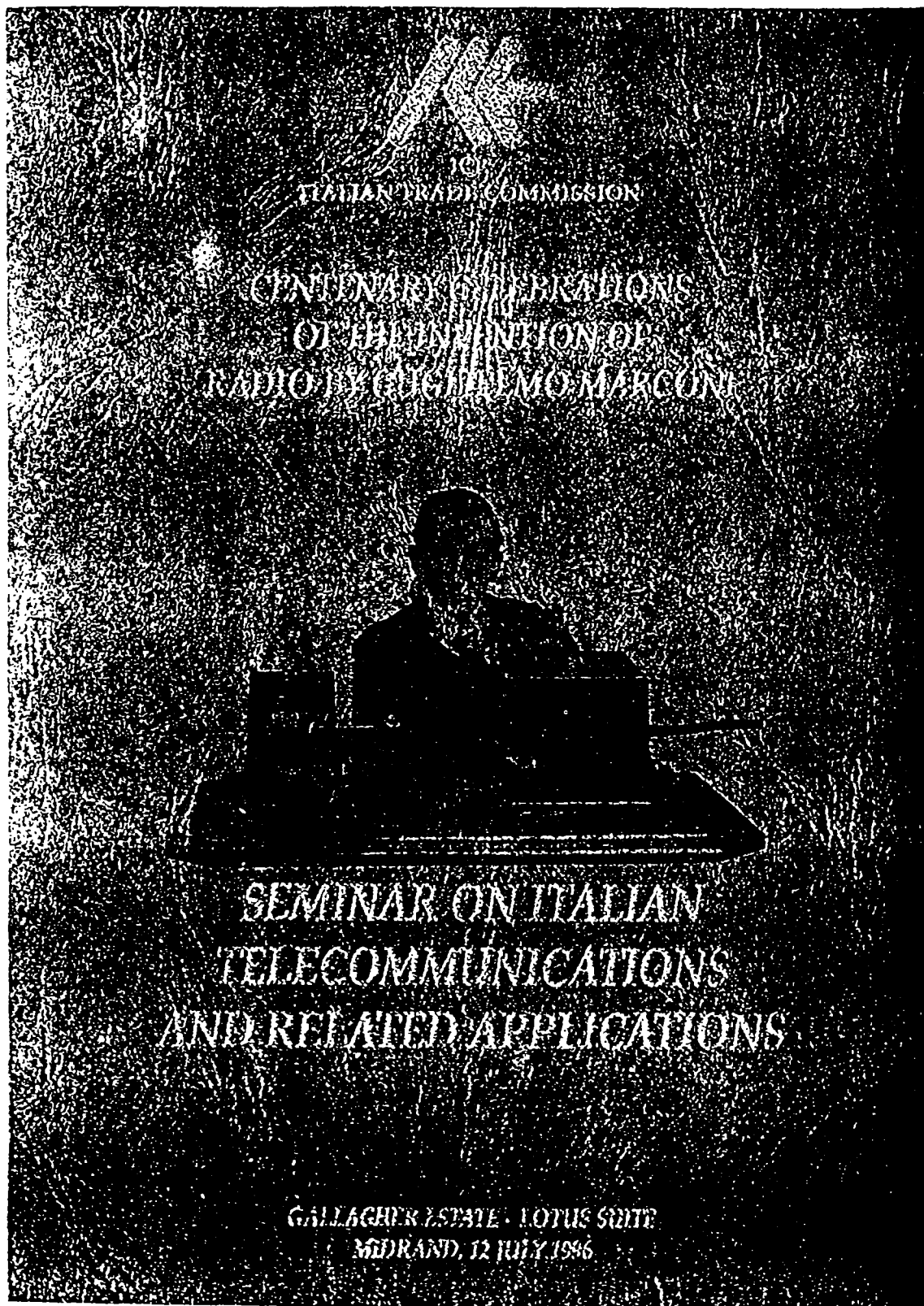
Celebrating the centenary of
the discovery of radio by
GUGLIELMO MARCONI

CATALOGUE OF ITALIAN EXHIBITORS

HALL NO. 2 STANDS D 27 - D 30

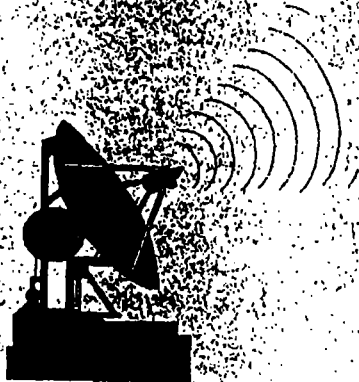


9-13 July 1996 at Gallagher Estate



The Italian Ministry of Foreign Trade and the Italian Trade Commission (I.C.E.) are promoting their first seminar on telecommunications in South Africa, in commemoration of the invention 100 years ago of radio by the Italian scientist Guglielmo Marconi.

The initiative, under the auspices of the Italian Embassy in South Africa, will consist of a presentation to the local entrepreneurs of the New South Africa of the successes achieved by Italian Companies in the field of research and technological application in the telecommunication sector and its related industries.



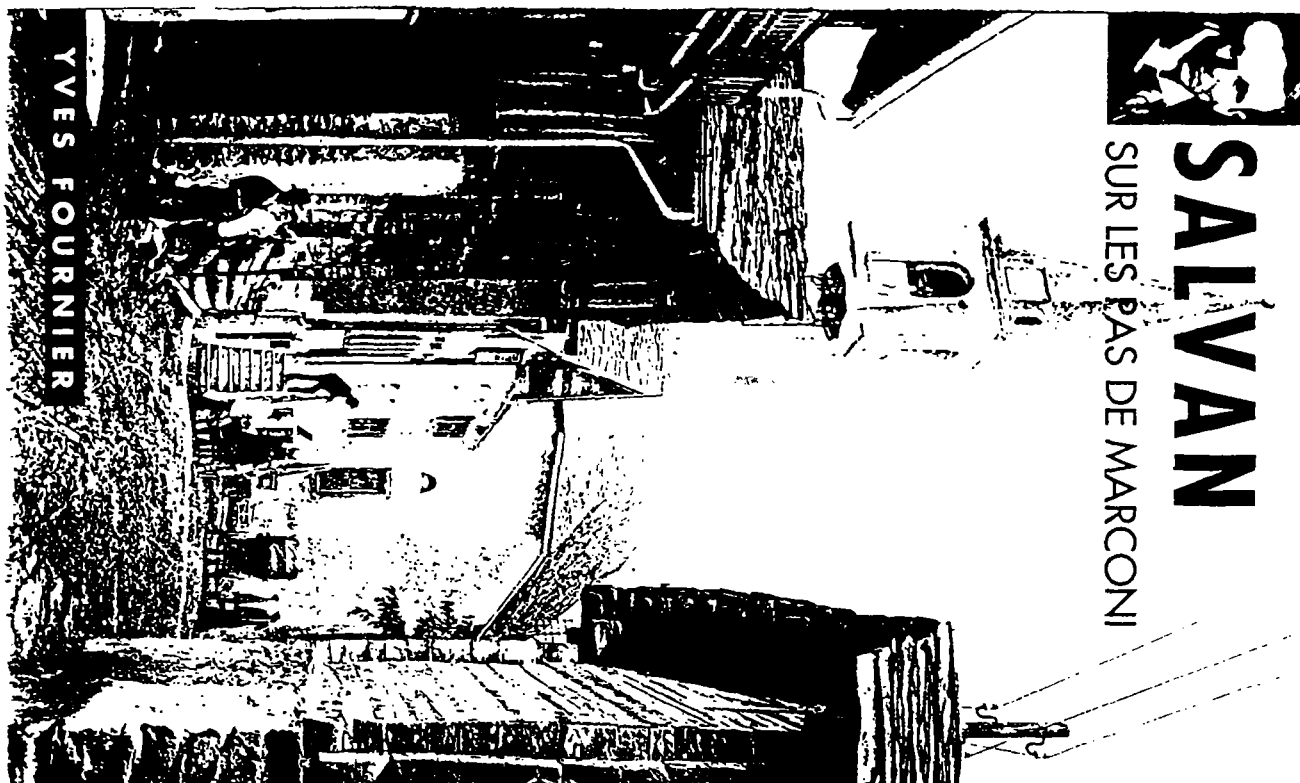
SEMINAR PROGRAMME

- | | |
|---------------|---|
| 08:15 - 08:45 | Registration. |
| 09:00 - 09:20 | Opening remarks by:
the Italian Embassy in South Africa
the Italian Trade Commission |
| 09:20 - 10:20 | Presentations by:
Prof. Gian Carlo Corazza - President of the Guglielmo Marconi Foundation:
"Marconi and the Invention of Wireless Communication"
Prof. Francesco Vatalaro - University of Tor Vergata:
"Secoms: A Multimedia Satellite System for Personal Mobility" |
| 10:20 - 10:40 | Coffee break |
| 10:40 - 12:30 | Prof. Dario Di Zenobio of the Ugo Bordoni Foundation:
"Wireless Multimedia Access"
Prof. Giampietro Ravagnan - Director of the Institute of Experimental Medicine of the National Council for Research - CNR:
"Activities of the Institute of Experimental Medicine"
Dr. Marco Pagani - (CNR):
"Medicine in Extreme and Normal Conditions"
Mr. André Wills - of BMI Technology:
"Telecommunications in South Africa and related opportunities" |
| 12:15 | Questions & Conclusions |
| 12:30 | Buffet Lunch |

ICET S.V.P.
CNR - V. Traversi
Tel. 06/850-8383
Fax 06/850-9040

Scheda Nr.	120
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Località	SVIZZERA - Salvan
Data	3 agosto 1996
In collaborazione con	Comune di Salvan Telecom PTT
Descrizione	Giornata commemorativa di Guglielmo Marconi. Mostra "Exposition Marconi".



EXPOSITION MARCONI

OUVERTE TOUS LES JOURS DE 10 H A 19 H JUSQU'AU 30 OCTOBRE 1996



Guglielmo Marconi
prix Nobel de physique en 1909

PLACE DE SALVAN - ENTREE LIBRE AVEC LE SOUTIEN DES TELECOM PTT

Maurice Gay-Balmaz n'avait qu'une dizaine d'années lorsque Marconi lui proposa de le seconder dans des expériences qu'il voulait tenter depuis la Pierre Bergère. Le jeune Salvanin allait ainsi, sans en avoir vraiment conscience, prendre part à l'une des plus grandes inventions de notre temps : la T.S.F. (télégraphie sans fil). Cette découverte a largement contribué à la naissance de la radio, de la télévision, du "Natel" et des communications par satellite.



Maurice Gay-Balmaz
assistant de Marconi en 1909

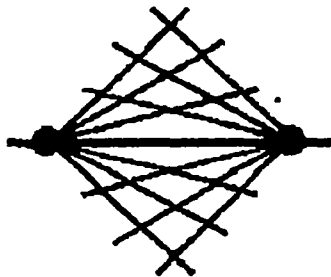
Scheda Nr.	121
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Località	CANADA - Toronto
Data	16 settembre 1996
In collaborazione con	ICE - Istituto nazionale per il Commercio Estero
Descrizione	- Mostra itinerante; - conferenza marconiana in occasione del seminario "From Marconi to McLuhan", organizzato dall'Ufficio ICE di Toronto.

150 Bloor St. W.
Suite 505
Toronto, Ontario
Canada M5S 2X9
Telephone (416) 968-1413
Telex 06-23641
Telefax (416) 968-2971



Italian Trade Commission



Italian Trade Commission

On the occasion of the celebrations for the 100th anniversary of the invention
of the radio by Guglielmo Marconi

The Italian Trade Commission
Cordially invites you to attend

"FROM MARCONI TO McLUHAN" seminar-press conference

SPEAKERS

Dr. Derrick de Kerckhove
Director, McLuhan program- University of Toronto
Prof. Gian Carlo Corazza
President, Fondazione Marconi - Bologna, Italy
Philip L. Fontaine
Director, Technological Division - The Municipality of Metropolitan Toronto
Fabrizio Notari
Telecom Media International
Welcoming remarks: Dr. Antonino Mafodda
Italian Trade Commissioner

Monday, September 16, 1996
10:30am - 12:00pm

Italian Trade Commission
150 Bloor Street West, Suite 505, Toronto

Scheda Nr.	122
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Località	FINLANDIA - Helsinki
Data	5 novembre 1996
In collaborazione con	ICE - Istituto nazionale per il Commercio Estero
Descrizione	Conferenza marconiana nel corso del Convegno sulla telemedicina organizzato dall'ICE nell'ambito del Progetto Marconi Meeting Point

Scheda Nr.	123
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Località	SVEZIA - Stoccolma
Data	7 novembre 1996
In collaborazione con	ICE - Istituto nazionale per il Commercio Estero Reale Accademia delle Scienze di Svezia
Descrizione	Seminario sulle Telecomunicazioni in Italia, svoltosi presso la Reale Accademia delle Scienze di Svezia. Il seminario si è svolto nell'ambito del Progetto Marconi Meeting Point dell'ICE.

Italienska Utrikeshandelsministeriet och Italienska Statens Utrikeshandelsbyrå (I.C.E), under beskydd av Italienska Ambassaden, arrangerar detta seminarium om telekommunikation i samband med hundraårsjubileet av den italienska vetenskapsmannen Guglielmo Marconis uppfinning av radion.



HUNDRAÅRSJUBILEUM
AV GUGLIELMO MARCONIS UPPFINNING
AV RADION



SEMINARIUM OM ITALIENSK
TELEKOMMUNIKATION
OCH TILLHÖRANDE VERKSAMHET

TORSDAGEN DEN 7 NOVEMBER 1996

KUNGL. VETENSKAPSAKADEMIEN – BEIJERSALEN
L. FRESCATIVÄGEN 4, STOCKHOLM

I.C.E.

Italienska Statens Utrikeshandelsbyrå

Sveavägen 28-30

111 34 Stockholm

Tel: 08-24 89 60

Fax: 08-411 49 47

E-mail: ice.stoccolma@wineasy.se

Italienska Ambassaden

Oakhill – Djurgården

115 21 Stockholm

Tel: 08-24 58 05

Fax: 08-660 05 05

SEMINARIEPROGRAM

Kl. 08.¹⁵ - 08.⁴⁵

Registrering

Kl. 09.⁰⁰ - 09.¹⁰

Öppningsanförande av:
Italiens Ambassadör i Sverige, Franco Ferretti

Kl. 09.¹⁰ - 11.¹⁵

TELEMEDICIN

Prof. L. Angelini - Università di Roma "La Sapienza" -
Policlinico Umberto I, Rom

"TELESURGERY: REALITY AND PERSPECTIVES"

Prof. S. Agnes - Università Cattolica del Sacro Cuore -
Policlinico A. Gemelli, Rom

"TELECOMMUNICATION PROBLEMS RELATED TO
ORGAN TRANSPLANTS"

Dr. R. Bergström - Innherred sykehus, Levanger, Norge
"TELEMEDICINE IN NORWAY - FROM 1986 TO 1996"

Kl. 11.¹⁵ - 11.³⁰

Kaffepaus

Kl. 11.³⁰ - 13.⁰⁰

TELEMEDICIN

Mr. A. Sköld - Chef för Telemedicinskt Utvecklingscentrum,
Huddinge Sjukhus, Stockholm

"THE ESTABLISHMENT OF THE TELEMEDICINE
DEVELOPMENT CENTRE IN STOCKHOLM"

Prof. G. Ravagnan - Direttore för Istituto di Medicina
Sperimentale del Consiglio Nazionale Ricerche, Rom
"TELEMEDICINE IN NORMAL AND EXTREME
CONDITIONS"

Dr. S. Pillon - Ospedale S. Camillo, Ansvarig för Progetto
Nazionale Ricerche in Antartide, Rom

"TELEMATICS AND TELEMEDICINE IN EXTREME
CONDITIONS: THE ANTARTIDE PROJECT"

Prof. A. Ardighi - Istituti Ortopedici Rizzoli, Bologna
"TELECONSULTING AND TELEMEDICINE
NETWORK IN A LARGE HOSPITAL"

Kl. 13.⁰⁰ - 14.⁰⁰

Lunch

Kl. 14.⁰⁰ - 15.⁰⁰

Ing. F. Bettini - VD för Parco Scientifico Biomedico
Internazionale San Raffaele, Milano
"SHARED: SATELLITE HEALTH ACCESS FOR REMOTE
ENVIRONMENT DEMONSTRATOR. SAN RAFFAELE
HOSPITAL (MILAN), ITALIAN FIELD HOSPITAL
(SARAJEVO), MILITARY POLICLINIC CELIO
(ROME). INNOVATIVE MODELS OF ACCESS TO
HEALTHCARE AND BIOMEDICAL SERVICES"

Kl. 15.⁰⁰ - 18.⁰⁰

RUNDABORDSSAMTAL PÅ TEMAT "DIGITAL
AUDIO BROADCASTING"

Prof. G.C. Corazza, Styrelseordförande i Marconi Foundation,
Bologna

S. Rundell - Project Manager Digital Developments - BBC

M. Pausch - Head of Digital Broadcasting Systems -

Bayerischer Rundfunk

Kjell Engström - Forskningsingenjör på Sveriges Radio AB

Ing. L. Rocchi - RAI Radiotelevisione Italiana

M. Åhlund - Project Manager for DAB - T-Net

Development Dept. Teracom Svensk Rundradio

*Vi tackar TELECOM ITALIA, CONSORZIO DI RICERCA IN
MEDICINA SPAZIALE TELEMEDICINA E BIOTECNOLOGIE
SPAZIALI - TELBIOS, EUROPEAN SPACE AGENCY och SWEDISH
SPACE CORPORATION för utrustning och internationell nätförbindelse.*

Scheda Nr.	124
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Località	U.S.A. - New York
Data	9 dicembre 1996
In collaborazione con	ICE - Istituto nazionale per il Commercio Estero Italian Academy for Advanced Studies in America
Descrizione	Seminario "The Heritage of Marconi's Invention & the Future of Telecommunication"



Italian Trade Commission, High Technology Center - New York

presents

"The Heritage of Marconi's Invention & the Future of Telecommunication"

The future of telecommunication, presented by international experts and industry representatives.

Casa Italiana,
Columbia University
1161 Amsterdam Avenue
New York, N.Y.



For Further information, contact
Italian Trade Commission, High Technology Center
Tel: 212.848.0330 - Fax: 212.758.1050 - e-mail: alex@italtrade.com

December 9, 1996

A seminar organized in collaboration with
The Italian Academy for Advanced Studies in America
& The School of Engineering and Applied Science of
Columbia University