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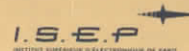
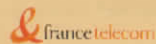
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### Objectives

The transmission of messages faster than a man could run or a horseback could ride was based for many centuries on drums, fiery beacons, smoke, etc. Greeks and Romans developed different "telegraph systems" to send military messages. The Chappe brothers in France did much in the late 18th century to develop the visual telegraph through a system of semaphore arms that could quickly be manipulated to form different shapes. During the 19th and 20th centuries, signal transmission and encoding followed major technological and sociological developments, to the point that today millions of users make contact through cellular telecommunications and the internet.

The IEEE 2008 HISTELCON Conference intends to build a comprehensive view of the history of electrical and information technologies, through professional papers, each of which investigates some formative development in the last centuries. The developments include the opening of a new area of application, the invention of a major technique or the gradual replacement of one dominant technique by another. An important feature of this conference is the participation of people with different backgrounds – engineers, historians, museum curators - that should make discussions particularly fruitful. Visits to Museums will also stimulate exchange of ideas.

### Themes

- Inventors & Inventions: Developments in Communications Technologies
- Encoding of messages
- Systems: communication in military and civil activities
- Innovating enterprises
- Communications as Museum items

Web-site: <http://www.isep.fr/histelcon>

# HISTELCON 2008

## History of Telecommunication Conference

11-12 September 2008

Cercle National des Armées  
8, place Saint - Augustin  
75008 Paris, France

Thursday 11 September 2008

**8h00: Registration & coffee**

**8h45: Opening session**

Jacob Baal Schem/Jean-Claude Boudenot; Jean-Gabriel Remy; Pierre Mounier Kuhn

**9h15: Introduction** : HISTELCON in the environment of the IEEE History Committee and its activities/ A Revolution in the Recording of the History of Technology: the IEEE Global History Network

*Richard Gowen*

**9h45: Invited talk** : Alec Reeves and PCM invention

*David Robertson*

**10h30: Coffee break**

**10h45: Session A : Inventors & Inventions : Developments in Communications Technologies**

**10h45:** In a parental position to our telegraph system, Charles Wheatstone

*Brian Bowers, Science Museum, London (UK)*

**11h05:** Baron Pavel Schilling

*V. & V. Shilov, Russian State Technological University, Moscow (Russian Federation)*

**11h25:** Salvá's electric telegraph based on Volta's battery

*A. Pérez-Yuste, Universidad Politécnica de Madrid (Spain)*

**11h45:** Marconi in Switzerland

*F. Gardiol, École Polytechnique Fédérale, Lausanne ; Y. Fournier, Historian, Marconi Foundation, Salvan (Switzerland)*

**12h05:** The True Inventor of Radio Communications

*Igor Kuzle, Hrvoje Pandzic, Darjan Bošnjak, Faculty of Electrical Engineering, Zagreb (Croatia)*

**12h25:** Tesla's Multi-frequency Wireless Radio Controlled Vessel

*A. Marincic, University of Belgrade (Serbia) ; D. Budimir, University of Westminster, London (UK)*

**12h45: Lunch**

**13h50: Welcome address, Alain Bravo**

**14h00: Session A (continued)**

**14h00:** Edouard Estaunié, Electrical Engineer, Novelist and Teacher, the man who coined the term Telecommunications

*Jean-Marie Dilhac, Université de Toulouse, LAAS-CNRS (France)*

**14h20:** "He was the father of us all." Ernie Guillemin and the teaching of modern network theory

*Chris Bissell, Open University (UK)*

**14h40:** Meissner's Generator of Electric Waves: On the History of an Artifact

*Oskar Blumtritt, Deutsches Museum, Munich (Germany)*

**15h00: Coffee break**

**15h20: Session B : Encoding of messages**

**15h20:** Vigenère through Shannon to Planck – a short history of crypto-systems

*P. C. J. Hill, Cranfield University, UK Defence Academy, Shrivenham (UK)*

**15h40:** Shannon's Information Theory "Rides-on" strong after more than half a century

*D. Yavuz, Senior Member of IEEE, NATO (Netherlands)*

**16h00:** Contributions of the IBM Laboratory in La Gaude, France to the History of Telecommunications

*E. Gorog, Paris (France)*

**16h20:** Walsh functions in secure coding, signal processing and cellular radio communication (1960- 1990)

*Franz Pichler, Johannes Kepler University, Linz (Austria)*

**16h40: Poster Session (Poster will be displayed during the two days, with a dedicated session on September 12<sup>th</sup> at 13h20)**

**P.1:** Amplifiers before Electronics – The 'Magnifiers'

*John Moyle, The Telegraph Museum, Porthcurno, Cornwall (UK)*

**P.2:** The new generation of mobile microwave link TM 308/313

*Jacques Bursztein, SEE, IEEE (France)*

**P.3:** A numerical model for submarine telegraph communication

*Donard de Cogan, School of Computing Sciences, UEA, Norwich (UK)*

**P.4:** Different poles of three decades development in microcontrollers' domain

*Zbynek Fedra & Tomas Fryza, Brno University of Technology (Czech Republic)*

**P.5:** Invention of Pupin's periodically distributed inductance coils to allow for long-distance telephone transmission

*J. B. Milovanović, Faculty of Electronic Engineering, Niš (Serbia), A. Marinčić & N. Dončov, SANU member, Faculty of Electrical Engineering, Beograd (Serbia)*

**P.6:** A photographic excursion through Sir J. C. Bose Institute Museum in Kolkata (India)

*B. & K. Mukherjee & S. Raha, Deutsches Elektronen-Synchrotron, Hamburg & Bose Institute, Kolkata (India)*

**P.7:** The first SAW based IFF system and its operation in Austrian aerospace defence

*F. Seifert, H. Stocker, O. Franz, University of Technology, Vienna (Austria)*

**P.8:** From Analog to Digital Television – the Common Way How to Digitize European Broadcasting

*Tomas Kratochvil, Brno University of Technology (Czech Republic)*

**17h00 : End of presentation**

**19h00 (sharp) : Gala dinner**

Friday 12 September 2008

**8h30: Registration & coffee**

**9h00: Session C : Systems : communication in military and civil activities**

**9h00:** From large technical systems to technological complexes

*Lars Thue, Norwegian School of Management, Oslo (Norway)*

**9h20:** Wired Radio Broadcasting Technology in Britain, 1924-1950

*Martin Bolton, ST Microelectronics, Bristol (UK)*

**9h40:** The predigital period (1937-1965) in Europe

*Louis-Joseph Libois, Georges Phélizon, Jean-Marie Colin (ARE), Philippe Dupuis (AHTI), Michel Joindot (France)*

**10h00:** Establishing Standards for Measuring the Performance of Radio

Receivers

*Frederik Nebeker, IEEE History Center, Rutgers University (USA)*

**10h20: Coffee break**

**10h40: Session C (continued)**

**10h40:** Improving the Noise Performance of Communication Systems, 1930s to early 1940s

*Mischa Schwartz, Columbia University, New York (USA)*

**11h00:** Brainwaves - History of Electroencephalography

*Hans Schmitt, History Committee of IEEE, Institut für HF-Technik, RWTH-Aachen (Germany)*

**11h20:** WW2 British Army Battlefield Communications Equipment

*Anthony C. Davies, Faculty of Computing, Information Systems and Mathematics, Kingston University (UK)*

**11h40:** The first computer communication network between East and West

*Frank Dittmann, Deutsches Museum, Munich (Germany)*

**12h00: Lunch**

**13h20: Poster Session**

**14h20: Session D: Innovating enterprises**

**14h20:** From Nipkow to Digital Convergence

*Luca Morassutto, Massimo Temporelli, Sandro Pinarello, Walter Barbirato, Fracarro Radioindustrie S.p.A. & National Museum of Science and Technology, Milano (Italy)*

**14h40:** Disseminating electronics: Bell Telephone Manufacturing Company and the spread of electronics research in Belgium

*Marie Gevers, Sandra Mols, Facultés Universitaires Notre-Dame de la Paix, Namur (Belgium)*

**15h00:** Evidence from the patent records on the development of cash dispensers and ATM technology

*Bernardo Batiz-Lazo & Robert Reid, University of Leicester (UK)*

**15h20: Coffee break**

**15h40: Session E: Communications as Museum items**

**15h40:** Contribution of the Russian scientist and physicist A.S. Popov to the development of wireless communication in the world

*L. I. Zolotinkina, Popov Memorial Museum Director, St Petersburg (Russia)*

**16h00:** The Birthplace of the First Wireless Communications between Japan and Europe

*E. Matsumoto, Society of Historical Metrology (Japan), K. Tanaka & S. Ishida, YOSAMI VLF Radio Station*

**16h20:** The SIRT Collection of telephone sets in the Pavia Museum of Electrical Technology *Antonio Savini et al., Museum of Electrical Technology, University of Pavia (Italy)*

**16h40:** Communications at the Musée des Arts et Métiers: "From transmission to information processing"

*Loïc Petitgirard, CNAM, Paris (France)*

**17h 00: End of presentation, departure for Branly's Museum**

**18h00: Branly's Museum and cocktail**