

France Telecom announces Turbo Codes Licensing Program (TCLP)

Paris, October 22, 2001 - France Telecom announced today the commencement of a new licensing program, TCLP, for Turbo Codes applications.

Developed by France Telecom R&D, France Telecom's research center, Turbo Codes are a form of FEC (Forward Error Correction) that operates near the Shannon-limit. They offer an exciting advance in communications that increase system capacity for a variety of broadband applications, such as satellite broadcasting, cable modem digital subscriber lines, direct broadcast TV (DBS), and wireless telephony.

France Telecom R&D, TDF (Telediffusion de France, a national broadcasting subsidiary of France Telecom) and Groupe des Ecoles des Telecommunications (GET) own a number of patents and patented applications related to Turbo Codes, these are being licensed on a non-discriminatory basis by France Telecom acting for itself and on behalf of TDF and GET.

France Telecom kicks-off its Turbo Code Licensing Program (TLCP) by designating two regional license agents who will manage the program in North America and Europe. The North American licensing agent is Spectra Licensing Group LLC. The European agent is TurboConcept SAS.

"For the first time France Telecom is initiating and coordinating a standard licensing program for a multi-applicative technology. This clear and evolutive program is created to respond to the needs of manufacturers. It will allow all the players involved in the use of Turbo Codes (circuit designers and manufacturers, integrators) to benefit from this technology under attractive and coherent tariffing conditions", stated Jean-Luc Chativat, Senior Account Manager at France Telecom R&D.

The Turbo Code Licensing Program will simplify access to Turbo Code Patent rights by establishing a single licensing scheme for virtually all applications. The regional licensing agents will support the licensing effort by providing sales support services and general information as well as directing licensee's to sources of technical support.

About France Telecom R & D

France Telecom R&D, the France Telecom Group's research and development center, drives innovation for all Group units in France and worldwide. The center anticipates technological revolutions and paradigm shifts in usage. The center focuses on innovation that provides customers with best-in-class communications solutions, paving the way for technologies that will become ubiquitous in the future. The performance of France Telecom R&D makes it Europe's leading telecom research and development center.

France Telecom is one of the world's leading telecommunications carriers, with over 86 million customers on the five continents (220 countries and territories) and consolidated operating revenues of 33.7 billion euros for 2000 (20.4 billion at June 30, 2001). Through its major international brands, including Orange, Wanadoo, Equant and GlobeCast, France Telecom provides businesses, consumers and other carriers with a complete portfolio of solutions that spans local, long-distance and international telephony, wireless, Internet, multimedia, data, broadcast and cable TV services.

France Telecom is the second-largest wireless operator and the number three Internet service provider in Europe, and a world leader in telecommunications solutions for multinational corporations. France Telecom (NYSE: FTE) is listed on the Paris and New York stock exchanges.

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About TDF (Telediffusion de France)

TDF (Telediffusion de France) is a national broadcasting subsidiary of the France Telecom Group. TDF builds and operates infrastructures for terrestrial TV and radio, wireless telephony and wireless multimedia.

TDF provides one-stop outsourcing solutions across the entire value chain for infrastructure management and service integration, spanning playout centers, teleports, distribution backbones, transmission sites, network operation and maintenance.

TDF provides radio and TV broadcasters and wireless operators- from telephony to cutting-edge multimedia- with solutions that unlock the potential of the digital revolution.

About Groupe des Ecoles des Telecommunications

Groupe des Ecoles des Telecommunications (GET) is a STIC Research and Training Public Establishment. GET regroups the ENST, the ENST Bretagne and the INT, as well as other schools created through partnerships. Research is at the heart of the school's activities belonging to the Group : the scientific community attests to quality work produced ; the schools take an active part in most of the major internal and international telecommunications project.

About Spectra Licensing

Spectra Licensing, headquartered in Rancho Bernardo, CA, specializes in the licensing of communications technology patents. Most recently spectra Licensing has become the exclusive North America representative for France Telecom of the TCLP, putting licensed Turbo Code solutions into the hands of communications product



developers and vendors. For more information on Spectra Licensing Group and the TCLP, visit their website at www.spectralicensing.com or contact their licensing agent :

Spectra Licensing Group
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About TurboConcept

TurboConcept, located near Brest, France, is an expert in turbo code technologies. Professors Berrou, Glavieux and Pyndiah, inventors of turbo codes, support the company. In addition to its IP Core designer activities, TurboConcept has recently become the exclusive commercial agent for the Turbo Code licensing Program in Europe. For more information on TurboConcept activities and the TCLP, visit their website at www.turboconcept.com or contact their licensing agent :

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