

## Electronics and Telecommunications Research Institute(ETRI)

Foundation	1976	Address	138 Gajengno, Yuseong-gu, Daejeon, KOREA		Telephone	+82-42-860-6114
Object & Character	ETRI is the largest government funded research institute in Korea, which strives to advance science by means of formulating innovative ideas; developing new techniques; and training professional individuals in the area of information telecommunications to ultimately enhance social and economical aspects of the modern society					
Main Funtion	<ul style="list-style-type: none"> <li>○ Creation, Development and Dissemination of knowledge and technology required for the development in the field of information, telecommunications, electronics, broadcasting and related convergence technology</li> <li>○ Information security and Standardisation of information, telecommunications, electronics, broadcasting and related convergence technology</li> <li>○ Training professionals in the field of science and technology</li> <li>○ Technical consulting and providing technical information for the industry in the field of Information, telecommunications, electronics, broadcasting and related convergence technology</li> <li>○ Cooperation with domestic and foreign institutions in the field of Information, telecommunications, electronics, broadcasting and related convergence technology</li> </ul>					
Research and Development Results	<ul style="list-style-type: none"> <li>○ <b>1986 TDX</b> : 1-telephone, 1-household ; Realization of nationwide telephone automation realized</li> <li>○ <b>1988 DRAM</b> : Dominated the world's semiconductor market by developing 4M, 16M, 64M, 256M</li> <li>○ <b>1996 CDMA</b> : CDMA system successfully commercialized for the first time in the world, Salient contribution to the domestic industry and economy</li> <li>○ <b>2004 WiBro, terrestrial DMB</b> : Super-speed portable internet developed for the first time in the world, Terrestrial DMB developed for the first time in the world, WiBro and terrestrial DMB acquiring international standard</li> <li>○ <b>2007 NoLA</b> : 3.6Gbps, 4th-generation radio transmission system developed for the first time in the world</li> <li>○ <b>2008 Contents Island</b> : Developed a digital vending machine for the first time in the world thus enabling fast and convenient contents downloading at anytime, anywhere</li> </ul>					
Organization /Personnel <small>(the end of 9/'10)</small>	Organization		Personnel			
	5 Research Laboratory, 3 Reserch Division, 3 Administrative Divsion	Total	Doctoral Degree	Master's Degree	Bachelor's Degree etc.	
		1,736	750	939	47	
Representative Research Areas	<p><b>IT Convergence Technology Research Laboratory</b></p> <p>Under the motto of 'HUMAN IT-Mega Convergence Creator', the IT Convergence Technology Research Laboratory aims to develop IT convergence solutions for the creation of new business, to establish top level industries, and for the advancement of SoC. In order to achieve its goal, the laboratory is developing various technologies such as environmentally friendly low power computing technology, u-health/lifecare technology for health and wellbeing, automobile/ship building technology where sensors converge with telecommunication, intelligent mail distribution technology, the RFID and ubiquitous network technology that are the core technologies of the u-City of the future, and human friendly robot and intelligent robotic space technologies.</p>					

Representative Research Areas	<p><b>Software Research Laboratory</b></p> <p>At the Software Research Laboratory, we are conducting research on the SW technologies required for a knowledge-based society and to boost national competitiveness. Specifically, we are developing embedded SW technologies for strengthening industrial competitiveness through a convergence with traditional industries, speech/language information technologies for a user-friendly IT environment, low-cost cloud computing infra technologies for large-scale global internet services, creative computing technologies that can be used anytime, anywhere, and knowledge-based information security and safety technologies for a safe IT environment.</p>
	<p><b>Convergence Components &amp; Materials Research Laboratory</b></p> <p>Under the motto of “IT Convergence Components R&amp;DB Global Leader in the Realization of a U-Society”, the Convergence Components &amp; Materials Research Laboratory is initiating the development of new technologies in the convergence components and materials that are the core of the IT industry. The laboratory is developing key, high value-added convergence components with linked systems and services through convergence system component technology that realizes convergence and integrated broadcasting systems, next generation semiconductor technology that will outperform current semiconductor memory, and green conversion components technology that will advance low carbon and green growth. It also focuses on creative and adventurous research projects that will be the foundation for overcoming the limitations of current technologies and for the IT of the future.</p>
	<p><b>Broadcasting &amp; Telecommunications Convergence Research Laboratory</b></p> <p>The Broadcasting &amp; Telecommunications Convergence Research Laboratory has been actively developing, under the vision of leading the New Technology of Broadcasting &amp; Telecommunications Convergence for a Greater Korea, key technologies in the areas of broadcasting, IPTV, radio, and satellite, for realizing a future knowledge-based society enabled by naturally integrating broadcasting and telecommunications services into life. With next generation broadcasting-telecommunications convergence, realistic media and radio-satellite defined as three major areas, we put our efforts into realizing four services (Cognitive WPAN, Stereoscopic 3DTV, Advanced T-DMB and Wired-wireless-convergent mobile IPTV) and into developing five future source technologies (Gbps satellite broad band transmission, mm-wave/T-Hz radio resource and RF energy transfer, Digital Holography, Glasses-free super-multiview 3D broadcasting and Personalized u-IPTV) to contribute greatly to enhancing the convenience and safety of people as well as boosting national industry and economy.</p>
	<p><b>Internet Research Laboratory</b></p> <p>Through the realization of a ‘mobile life’, the Internet Research Laboratory enhances quality of life while aiming to improve upon convenience by providing communication services that are capable of high speed wired/wireless communication anytime, anywhere. In order to realize a knowledge-based future society that expands through IT convergence, the laboratory conducts research into mobile communications technology, optical fiber internet infrastructure technology, and service platform technology, along with the technology for future networking.</p> <p>Representative fields of research relate to the source technology of each area, such as 4th generation mobile communications technology, high speed short range wireless communications technology, internet-based convergence network technology, packet-optic convergence technology, convergence service platform technology, strategic station broadcasting communication, etc., and their commercialization for green growth.</p>

Representative Research Areas	<p><b>Contents Research Division T</b></p> <p>The Contents Research Division develops video content and convergence related technologies targeted at improving people-centered digital life. In pursuing this goal, the Contents Research Division has focused aggressively on research and development in the following technologies: computer graphics, high-quality video and gaming content production, virtual reality technology, copyright protection, distribution and management technologies, and u-learning technology. Above all, our emphasis on core technology and content creation for new markets has led to innovations in 3D stereoscopic video, interactive content for learning systems, and continuous research. The Contents Research Division strives to actively contribute to the growth of the content production industry by developing cutting edge tools and technologies for the global media marketplace.</p>
	<p><b>Creative &amp; Challenging Research Division</b></p> <p>The mission of the Creative &amp; Challenging Research Division(CCRD) is to develop a medium and long term research strategy for future technologies, to conduct pilot research projects, and to coordinate research projects in the IT convergence, SW contents, convergence components and materials, broadcasting &amp; telecommunications convergence and Internet areas.</p> <p>Guided by its vision of “Creating New Concepts”, the CCRD strives to conduct world class research in fundamental research areas, to identify large global brand technology fusion projects, and to conduct open R&amp;D through the joint international cooperation between academia and industry to establish ETRI as one of the world’s leading IT laboratories. The CCRD is also initiating a new research group, called the creative research team, to establish new conceptual ideas and to secure world class technologies.</p>
	<p><b>Technology Strategy Research Division</b></p> <p>The Technology Strategy Research Division enables ETRI to pursue the technology development that is needed by society through research in the direction of IT and IT convergence technology development, the economic feasibility of technological development, and the development of industrial ecosystems. Furthermore it aims to determine the direction the nation’s IT strategy must take.</p> <p>To this end it has established 5 main strategic directions; to create new knowledge about the economic/policy/market of the IT convergence industry, to provide high quality information through the utilization of various methodologies, to develop new business ideas and planning, to design a new ecosystem between developers (technology development) - private companies (commercialization) - customers (end-user), and to determine the direction of new technological developments through discovering future market needs. Thus the division supports the nation’s planning for IT.</p>
	<p><b>Technology Commercialization Division</b></p> <p>The role of the Technology Commercialization Division is to ensure that ETRI’s innovative technologies, the core of its growth momentum, are being implemented appropriately in society. To do this, we formulate strategies, execute marketing activities and enhance the value of technologies through intellectual property management. We also serve to strengthen SME(Small &amp; Medium Enterprise) competitiveness by providing various supporting projects and services. Moreover, we focus on R&amp;D with the regional strategic industries and the commercialization of advanced technologies.</p>