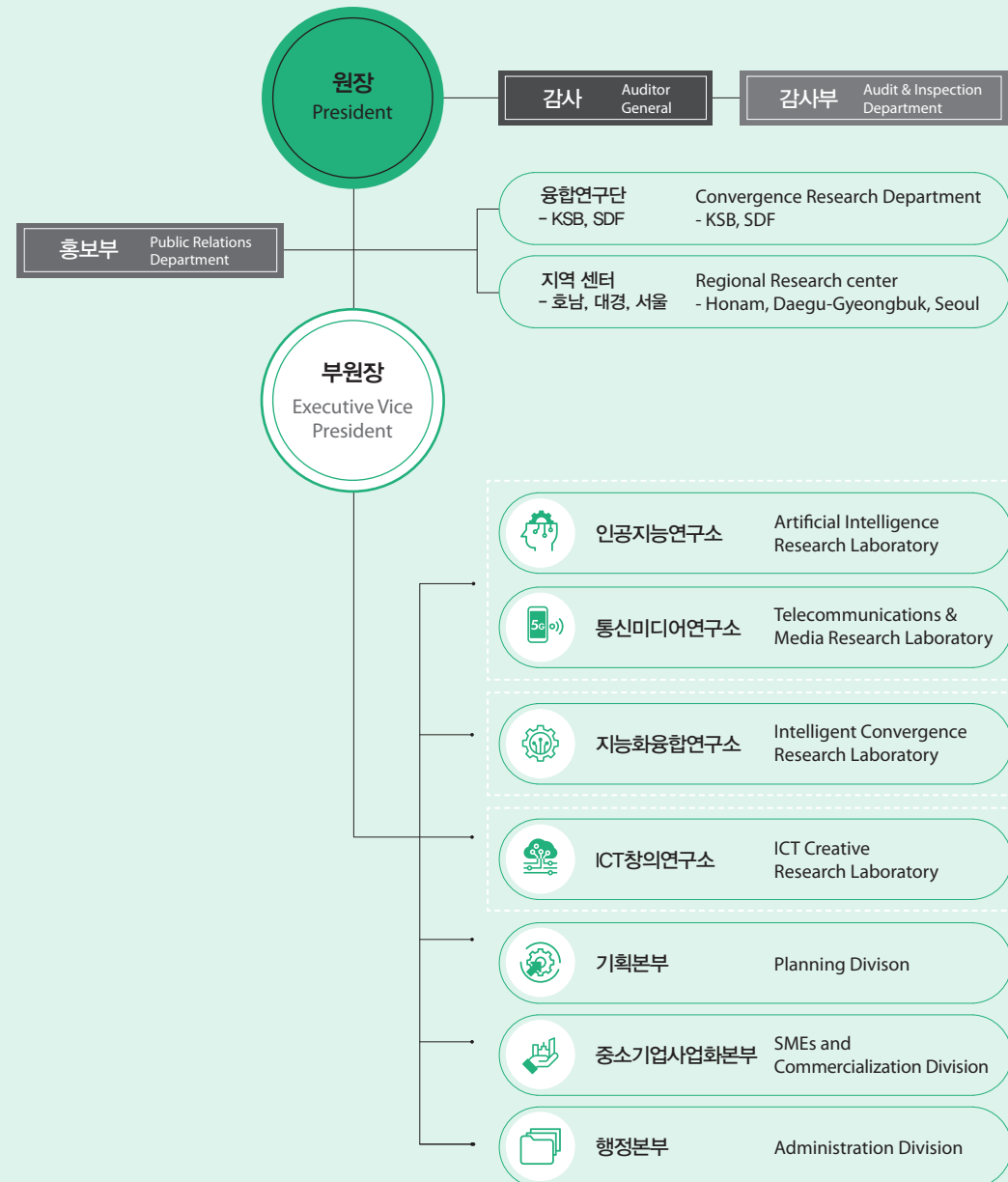


## ORGANIZATION

조직도

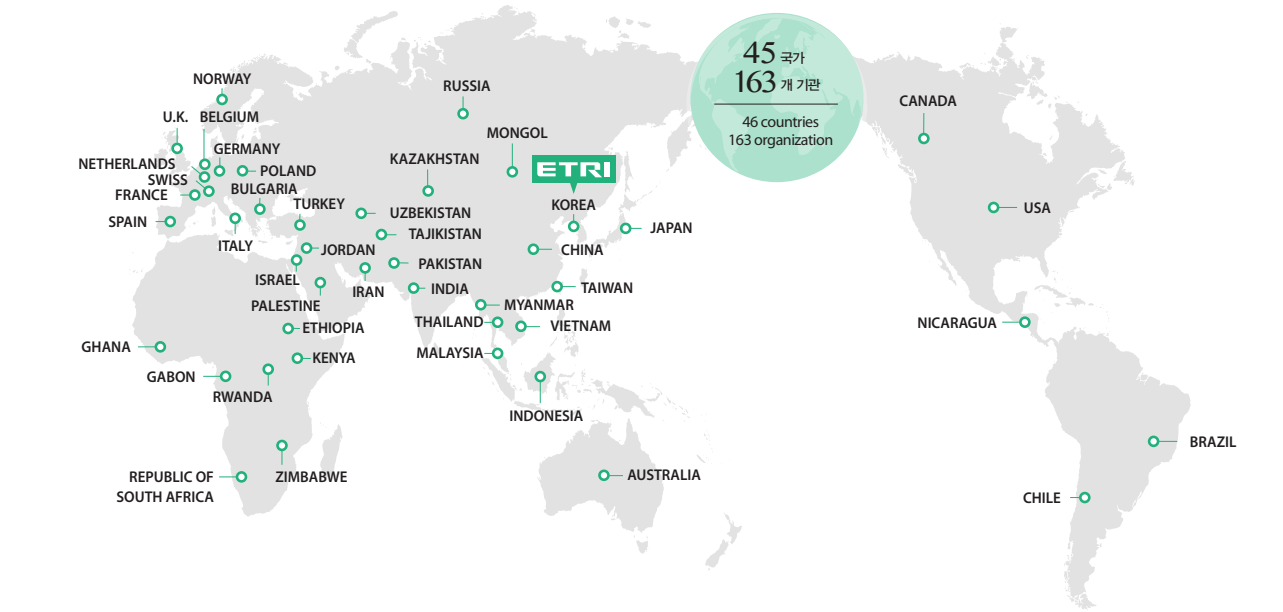


1부원장 4연구소 3본부 2단 3센터 1부

1 Executive Vice President, 4 Research Laboratory, 3 Division, 2 Research Department, 3 Research Center, 1 Department

## GLOBAL R&D COOPERATION NETWORK

글로벌 R&D 협력 네트워크



**ETHIOPIA**  
Adama Science & Technology University  
**SWISS**  
ETH Juelich / AOneSat  
**FRANCE**  
Ewind / ETSI / Eglide / Secure-IC / CNRS / Eutelsat S, A / CNRS / Rhodia / Sigfox  
**GERMANY**  
Fraunhofer HHI / Fraunhofer IAF / Fraunhofer-Heinrich Hertz / Institute / UNIVERSITÄT ZU LÜBBECK / Robert Bosch / X-FAB  
**MERCK** / BOSCH / Fraunhofer Institute for Telecommunications / BMW / Julich / ECRYPT  
**BELGIUM**  
EpiGaN nv  
**ISRAEL**  
ARO Volcani Center / Design Art Networks / FINLAND  
**KAZAKHSTAN**  
Transtelecom / IGITIC(International Green Technologies & Investments Center)  
**ITALY**  
SIM2 BV  
**PALESTINE**  
An-Najar / National / University  
**KENYA**  
Postal Corporate of Kenya / Baringo / Country Government  
**INDIA**  
CDAC / Sagacious Research Pvt Ltd / Saankhya Labs Private Limited  
**VIETNAM**  
Viettel / UET-VNU / Ton Duc Thang University  
**MALAYSIA**  
**MYANMAR**  
Mytel / UCSU(University of Computer Studies, Yangon) / West Yangon Technological University / Ministry of Education  
**TAIWAN**  
**INDONESIA**  
Researchwire Knowledge / Solution Pvt. Ltd. / Ministry of Communication and Information Technology / NCCA(National Cyber & Crypto Agency of Indonesia)  
**RUSSIA**  
JSC Radiophysika / JSC Apex / ITAE RAS / Russian Academy of Science

**SPAIN**  
UPV Universitat Politècnica de València / EHU University Basque Country  
**MONGOL**  
Country  
**FRANCE**  
Ewind / ETSI / Eglide / Secure-IC / CNRS / Eutelsat S, A / CNRS / Rhodia / Sigfox  
**GERMANY**  
Fraunhofer HHI / Fraunhofer IAF / Fraunhofer-Heinrich Hertz / Institute / UNIVERSITÄT ZU LÜBBECK / Robert Bosch / X-FAB  
**MERCK** / BOSCH / Fraunhofer Institute for Telecommunications / BMW / Julich / ECRYPT  
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**RUSSIA**  
JSC Radiophysika / JSC Apex / ITAE RAS / Russian Academy of Science

Institute of Technology(MIT) / University of California Los Angeles (UCLA) / Qualcomm / University of North Carolina at Charlotte / Houlihan Lokey /  
**AVANCE**, LLC / IBM corp. / Farjami & Farjami LLP / AIM IP / SIGMA DESIGNS / Sinclair Broadcast Group Inc. / PANASCORP / NVIDIA / Dolby Laboratories, Inc. / Via Licensing Corporation / University of Connecticut / IEEE / Rutgers University / KBRI / Purdue University / San Jose State University / Space Systems/Loral INC. / South Dakota State Univ. / Google / BOEHRINGER INGELHEIM / Space Systems/Loral / Nihau Security Corp. / Apple / IPVA LUE Management Int / APX / PMC-sierra / Cryptography Research Institute / Vanguard Video / AMD / Sedici Innovations Ltd / Intel / Open Networking Foundation(ONF) / Via Licensing / ICAP / Argonne National Laboratory / Endolynx Inc. / Netlist Inc. / SEMTECH / University of Oklahoma / Arizona State University  
**UZBEKISTAN**  
Tashkent University of Information Technologies / JSC Uzbek-telecom  
**RUSSIA**  
Rwanda Information Society Authority / Ministry of Infrastructure  
**TURKEY**  
PTT  
**NICARAGUA**  
ENATREL  
**TAJIKISTAN**  
Technical University of Tajikistan  
**JORDAN**  
Ministry of Information & communication Technology  
**NETHERLANDS**  
Royal Thai Air Force / Guru Square Co., Ltd.  
**PAKISTAN**  
Pakistan Post / ITU  
**REPUBLIC OF SOUTH AFRICA**  
SENTECH SOC LTD / AFRIKO HOLDINGS PTY LTD  
**GABON**  
National Agency of Digital Infrastructures and Frequencies

· ETRI BEIJING R&D CENTER : Room 2011, Air China Plaza, 36 Xiaoyunlu, Chaoyang District, Beijing 100027, CHINA Tel : +86-10-8447-5215  
· ETRI US R&D CENTER : 3003 North 1st Street, Suite 338, San Jose, CA 95134, USA Tel : +1-408-519-5793

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218 Gajeong-ro, Yuseong-gu, Daejeon, 34129, KOREA

**ETRI** 한국전자통신연구원  
Electronics and Telecommunications  
Research Institute

## NATIONAL AI RESEARCH INSTITUTE MAKING A BETTER TOMORROW

## VISION

비전

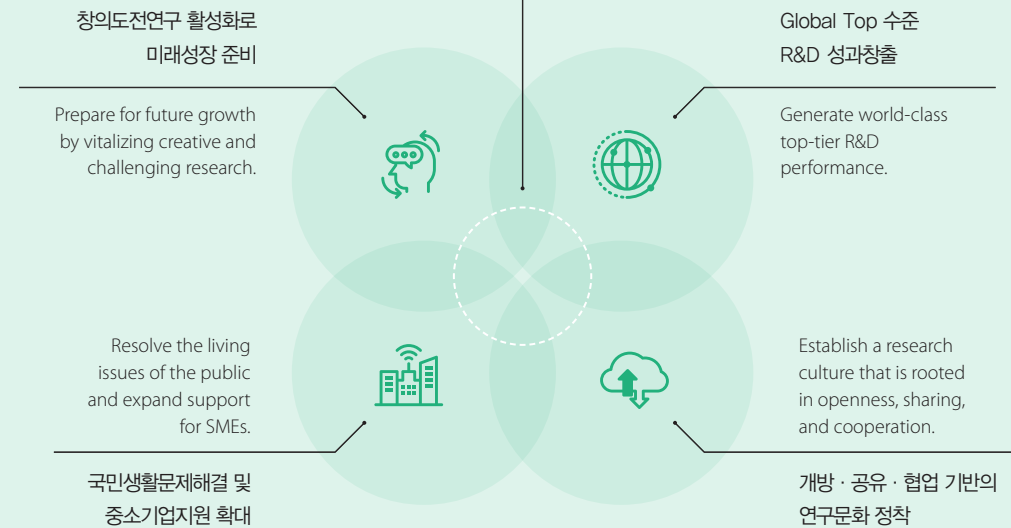
미래사회를 만들어가는  
국가 지능화 종합 연구기관

NATIONAL AI RESEARCH INSTITUTE  
MAKING A BETTER TOMORROW

앞서가는 ICT, 보다 나은 세상, 함께 하는 ETRI  
Your Trusted Partner, Leading ICT,  
Creating a Better Future

## MANAGEMENT PRINCIPLE

경영목표

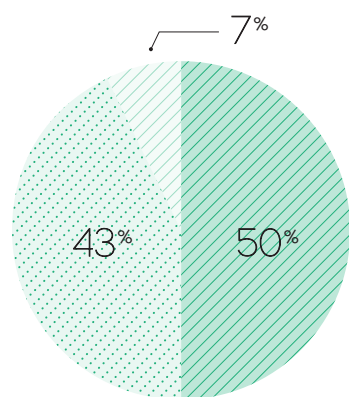
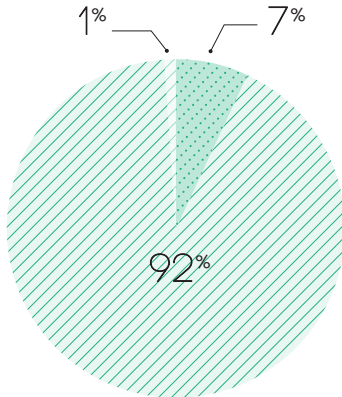


ETRI

## PERSONNEL

인원현황

2019.08.30. 현재기준  
As of end of Aug. 2019



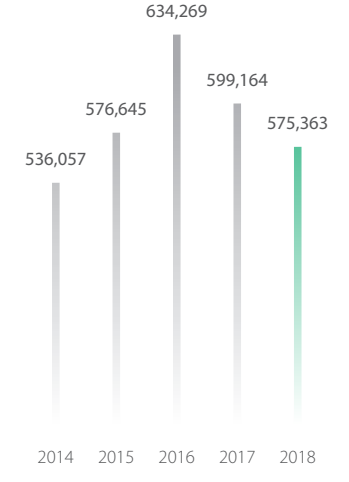
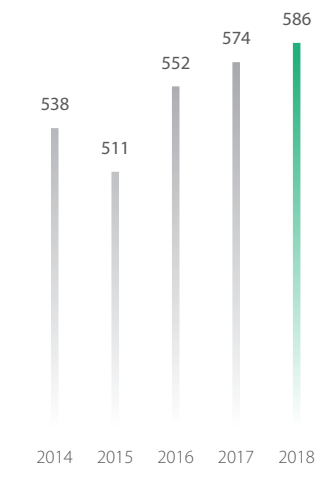
총 인원  
Total

2,262 명  
person

## PROJECT STATUS

과제 수행실적

5년간 누적  
2018년 말 기준  
Total of past 5 years  
As of end of 2018



과제 수  
No. of Project

2,761 개  
cases

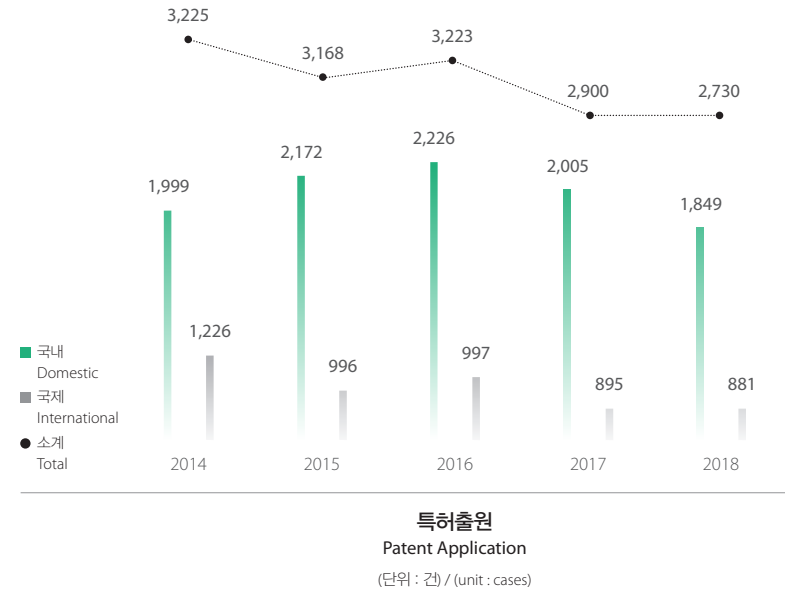
연구비(평균)  
Budget(average)

584,299 백만 원  
million won

## PATENT APPLICATION

특허출원

5년간 누적  
2018년 말 기준  
Total of past 5 years  
As of end of 2018



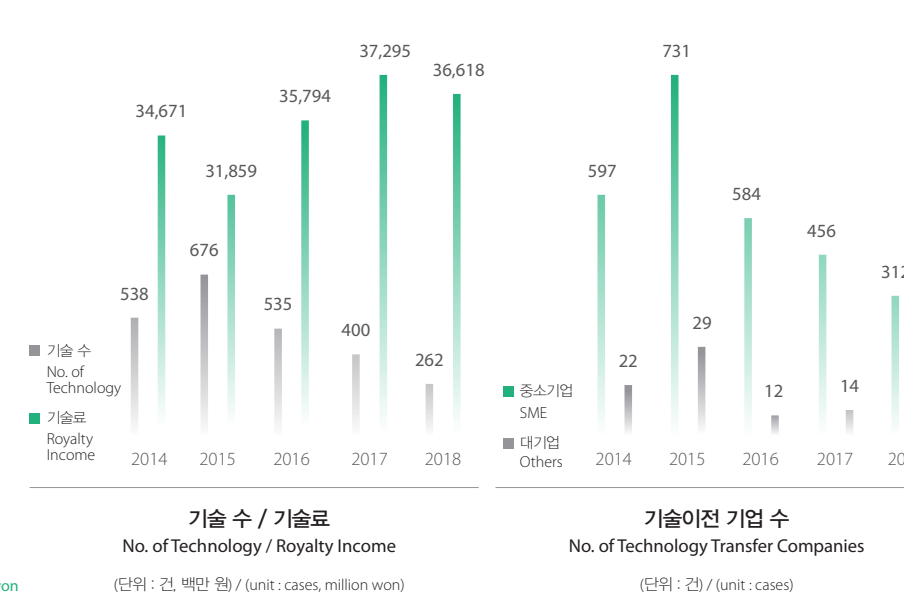
특허출원 건수  
No. of Patent Application

15,246 건  
cases

## TECHNOLOGY TRANSFER

기술이전

5년간 누적  
2018년 말 기준  
Total of past 5 years  
As of end of 2018



기술 수  
No. of Technology

2,411 건  
cases

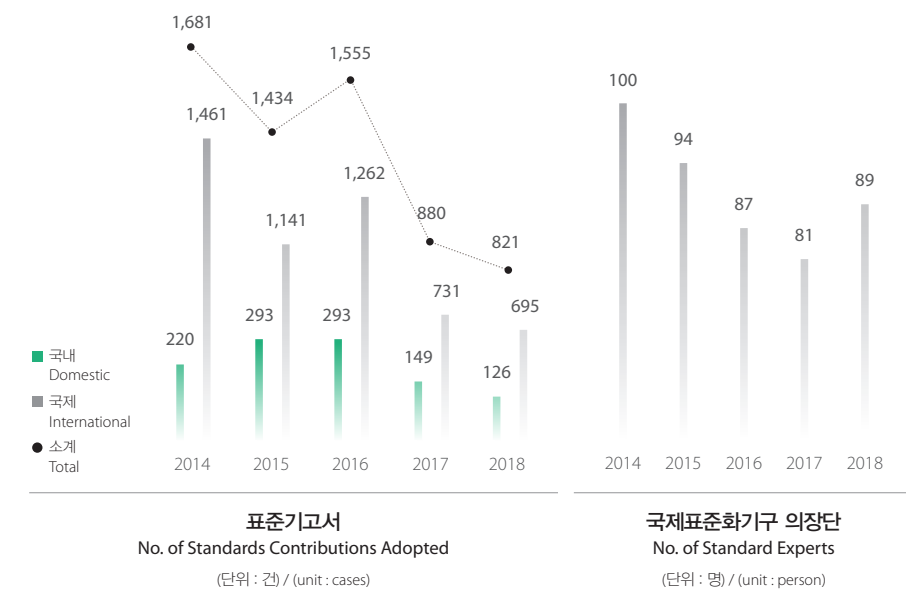
기술료  
Royalty Income

176,237 백만 원  
million won

## STANDARDIZATION

표준화

5년간 누적  
2018년 말 기준  
Total of past 5 years  
As of end of 2018



표준기초서  
No. of Standards Contributions Adopted

6,371 건  
cases

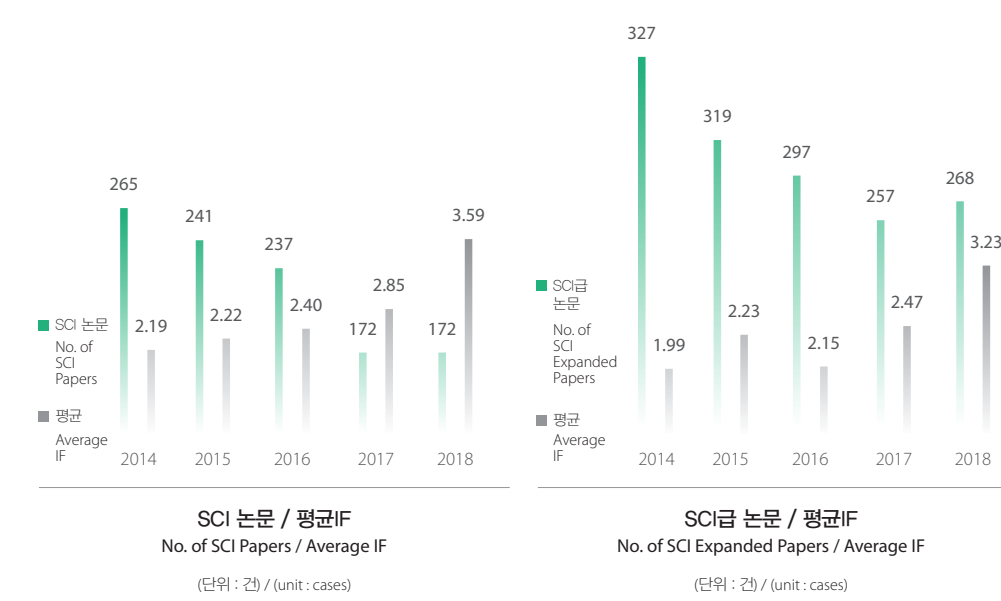
국제표준화기구  
No. of Standard Experts

451 명  
person

## SCI PAPERS & SCI EXPANDED PAPERS

SCI 논문 & SCI급 논문

5년간 누적  
2018년 말 기준  
Total of past 5 years  
As of end of 2018



SCI 논문  
No. of SCI Papers

1,087 건  
cases

평균 IF  
Average IF

2.65 평균  
average

SCI급 논문  
No. of SCI Expanded Papers

1,468 건  
cases

평균 IF  
Average IF

2.41 평균  
average

## R&D MAJOR ACHIEVEMENT

R&D 주요성과

### 2010s

- 2018** · 촉각인터넷기술(틱톡, TIC-TOC) Tactile Internet Technology(TIC-TOC)
- 2017** · UHD 모바일방송 기술개발  
Developed UHD mobile broadcasting technology
- 가가급 데이터 전송이 가능한 이동 핫스팟 네트워크(MHN) 기술개발  
Developed mobile hotspot network(MHN) technology capable of GIGA-level data transmissions
- 2016** · 언어지능 SW, 엑스브레인 기술 개발 Developed language intelligence SW EXOBRAIN
- 2015** · 광기반 대용량 이동통신기 지국 구축기술 개발  
Developed technology for constructing optical large-capacity mobile communication base stations
- 2014** · 오케스트라 광인터넷 기술 OCESTRA, optical Internet technology
- 2013** · 스마트폰을 이용한 무인 발렛주차 기술개발 Automated valet parking technology using a smart phone
- 2012** · 100배 빠른 광 인터넷 기술개발 Developed optical Internet technology that's 100 times faster
- 휴대형 한 · 영 자동통역 지니톡(Genie Talk) 기술 개발  
Developed a mobile Korean-English translating technology called Genie Talk
- 2011** · 투명도 조절 AMOLED 디스플레이 패널 개발 Transparency adjustable AMOLED display
- 패킷-광 통합 전달망 기술개발  
Packet-optical integrated transport network technology
- 2010** · 4세대 이동통신 LTE-Advanced 세계 최초 개발 4G LTE-Advanced Technology
- 스마트 선박 기술개발 Smart ship technology(SAN)

### 2000s

- 2009** · 세상을 밝히주는 친환경 OLED 조명기술 개발  
Developed eco-friendly OLED lighting technology for illuminating the world
- 2008** · SMMD 기반 실감체험 4D 시스템기술 개발  
Developed an SMMD-based live experience 4D system technology
- 2007** · 3.6Gbps 4세대 무선전송시스템 세계 최초 개발  
The world's first 3.6Gbps 4th generation mobile communication technology(NoLA)
- 2006** · 무선 홈 네트워크(UWB)개발 Developed a wireless home network(UWB)
- 투명 AMOLED 세계 최초 개발 Developed the world's first transparent AMOLED
- 2005** · 국산 임베디드SW 개발 솔루션 첫 수출 ETRI succeeded in exported embedded SW solution
- 지상파 DMB 서비스 개시 Terrestrial DMB service launched
- 2004** · 세계최초 이동무선 광대역 인터넷 와이브로(WiBro) 시제품 개발  
Developed the world's first prototype system of wireless broadband Internet called WiBro

### 1990s

- 1999** · 동기식 IMT 2000(CDMA2000) STP 시스템 개발 Synchronized IMT 2000(CDMA2000) STP system
- 1996** · CDMA ATM교환기 개발 CDMA ATM exchanging machine
- 1995** · CDMA 세계 최초 상용화 성공 Commercialize CDMA for the first time in the world
- 1991** · TD-X-10 개통 Launched TD-X-10
- 주전산기II (TICOM) 개발 TICOM II
- 1990** · 32비트 마이크로프로세서 개발 32-bit microprocessor

### 1980s

- 1989** · 4M DRAM 개발을 시작으로 16M, 64M, 256M DRAM 개발 4M, 16M, 64M and 256M DRAM
- 1988** · 565Mbps 광통신 시스템 565Mbps optical communications system
- 1986** · 1가구 1전화시대를 연 전자교환기(TDX)개발  
Developed the telephone exchange system(TDX) that opened the era of 1 telephone per household in South Korea
- 1984** · 16비트 UNIX 개발 컴퓨터 국산화 성공 16-bit UNIX domestic computer
- 1983** · 8bit 교육용 컴퓨터 개발 8-bit educational computer
- 1982** · 우리나라 최초의 메모리 반도체 32K ROM 개발  
The nation's first semiconductor product '32K ROM chip'