

IEEE Enables Innovation in South Korea

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International Area Manager
May 2012**

About the IEEE

- World's largest technical membership association with more than 415,000 members (107,812 students) in over 160 countries
- Not for profit society
- Core areas of activity
 - Membership
 - Conferences
 - Standards
 - Education
 - Publishing



Jonathan Chew, former UCLA student branch chair (left) and William Lu, UCLA project manager, in NJ to attend the IEEE UPP Leadership Summit



IEEE is the world's largest professional association dedicated to advancing technological innovation and excellence for the **benefit of humanity**.

Mission statement

IEEE's core purpose is to foster technological innovation and excellence for the benefit of **humanity**.

Vision statement

IEEE will be essential to the global technical community and to technical professionals everywhere, and be universally recognized for the contributions of technology and of technical professionals in **improving global conditions**.



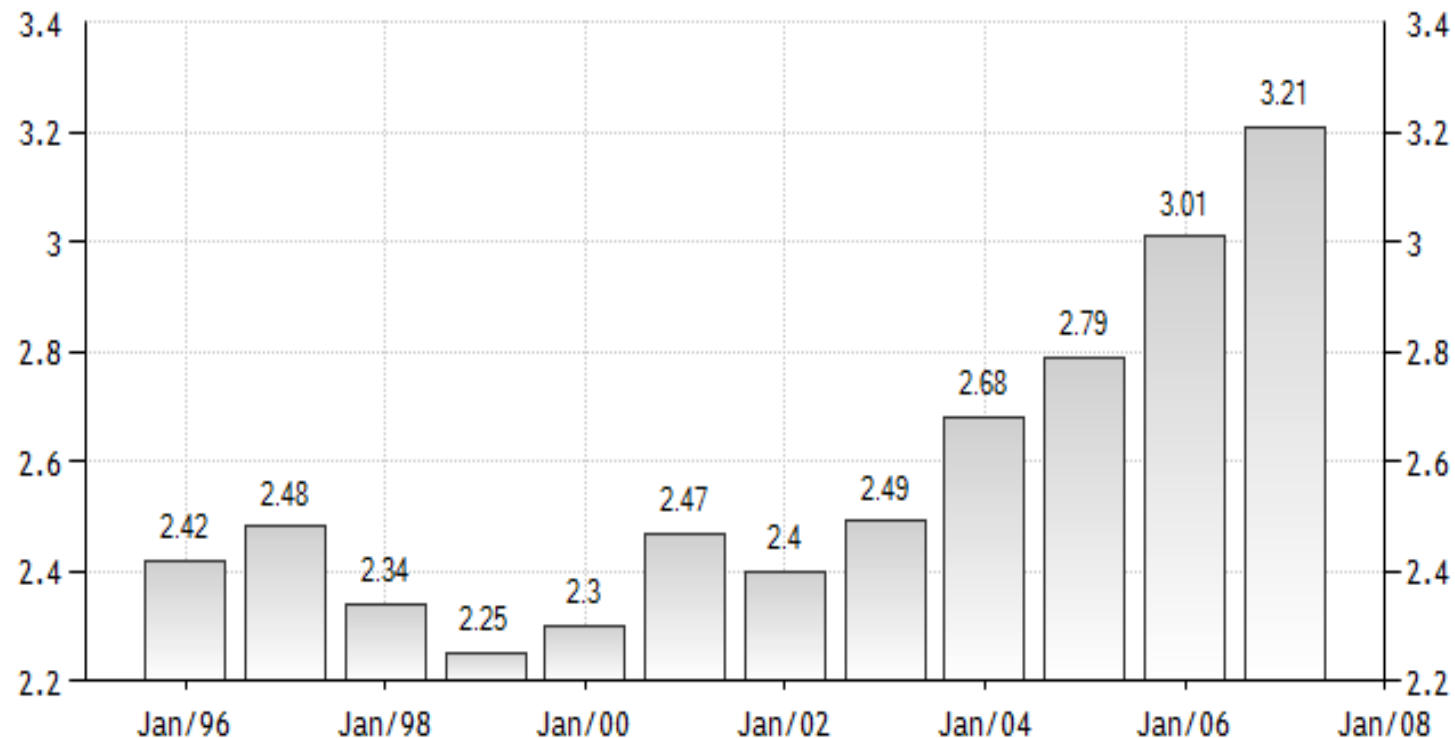
South Korea Investment in R&D

- Since the 1960s, South Korea has achieved an incredible record of growth and integration into the high-tech modern world economy.
- An extremely competitive education system and a highly skilled and motivated workforce are two key factors driving this knowledge economy.
- South Korea's economy moved away from the centrally planned, government-directed investment model toward a more market-oriented one.

Source: World Bank Indicators, <http://www.tradingeconomics.com/south-korea/patent-applications-residents-wb-data.html>

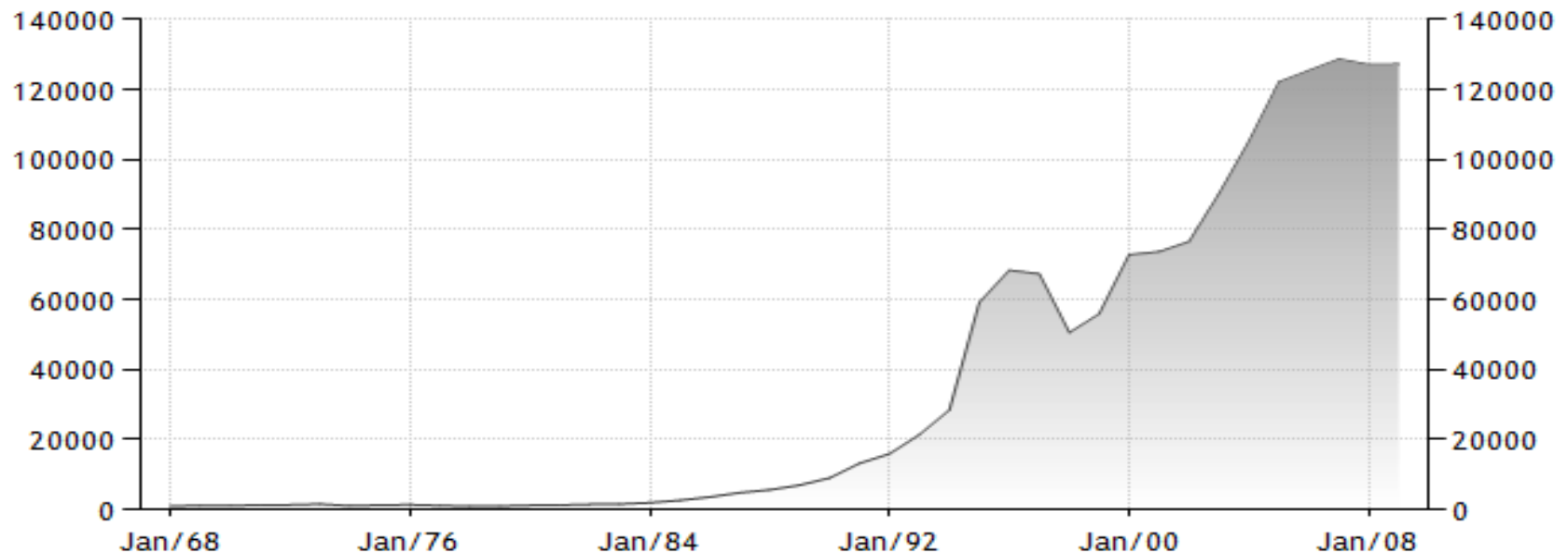
South Korea Investment in R&D

(R&D as % of GDP)



Source: World Bank Indicators, <http://www.tradingeconomics.com/south-korea/patent-applications-residents-wb-data.html>

Patent Applications: South Korea

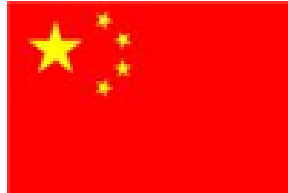


- The Patent applications from residents in South Korea was 127,316 in 2009

Source: World Bank Indicators, <http://www.tradingeconomics.com/south-korea/patent-applications-residents-wb-data.html>

Where is IEEE Xplore Usage Coming From?

Top 5
countries
based on
downloads
in 2011



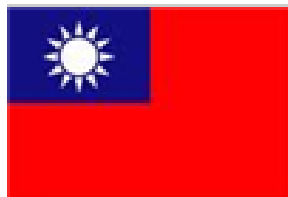
China



India



USA



Taiwan

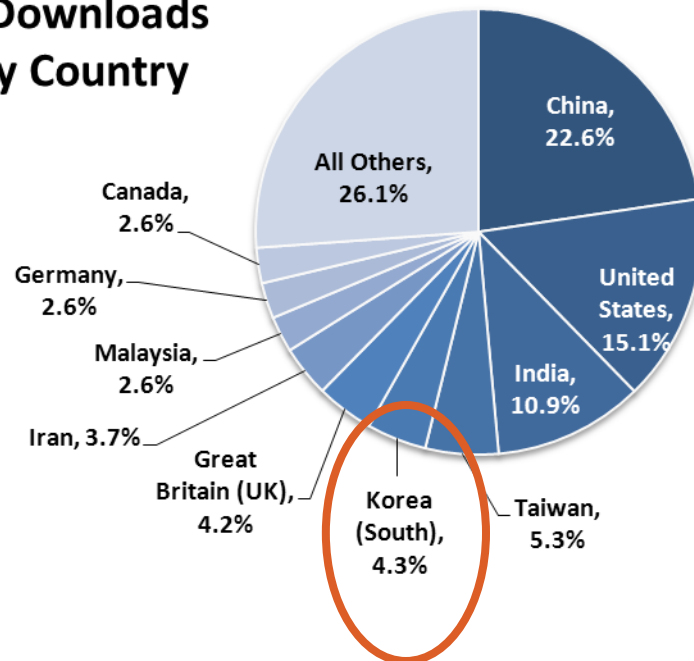


South
Korea

PDF downloads by Country

- The top 10 countries accounted for 74.4% of all downloads in March

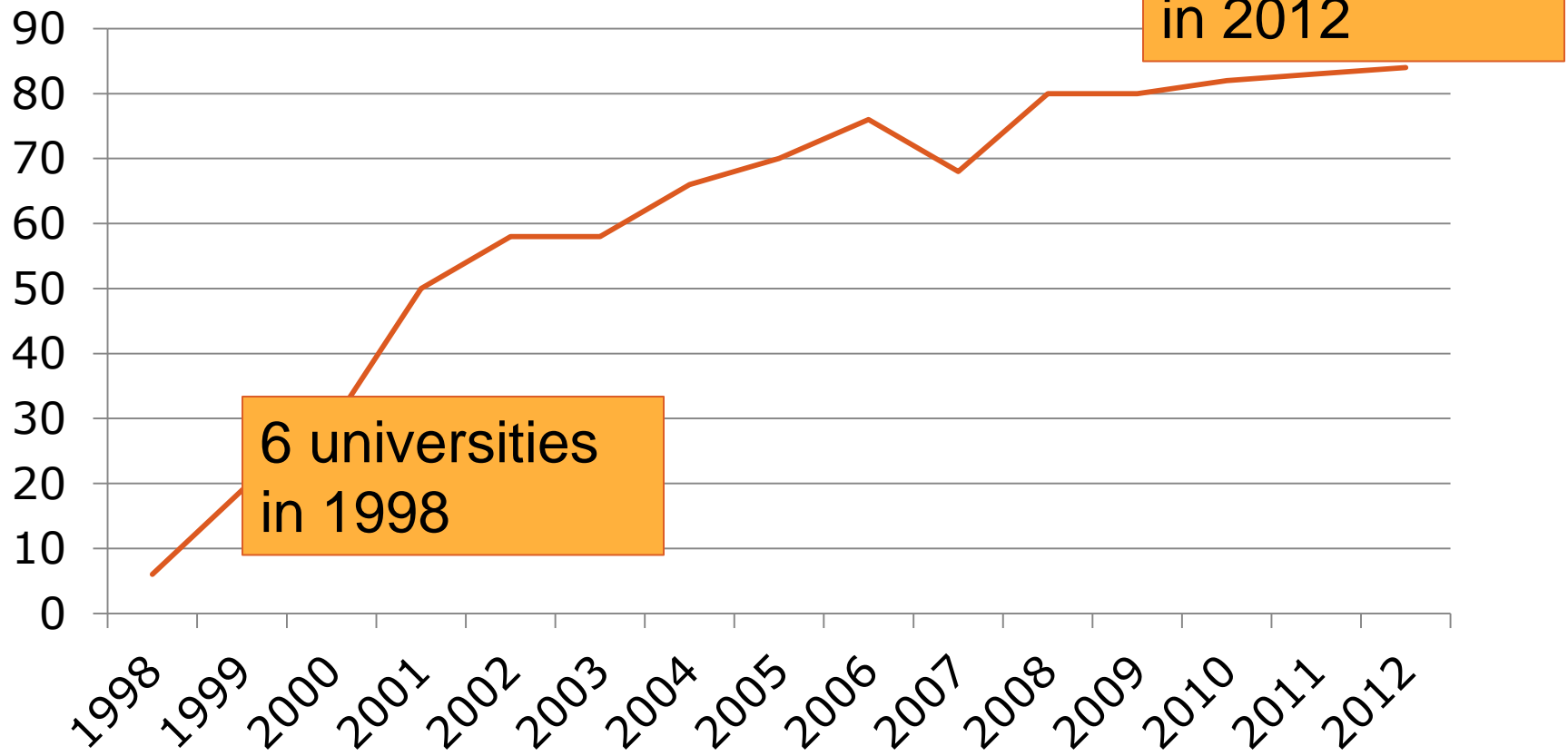
% Downloads
by Country



Country	Feb-12	Mar-12	Prev. Mo.	Prev. Yr.	2012 YTD
China	1,751,020	2,228,280	27%	19%	5,159,730
United States	1,493,886	1,482,201	-1%	8%	4,268,888
India	1,267,178	1,070,956	-15%	2%	3,492,431
Taiwan	436,552	520,479	19%	-13%	1,294,634
Korea (South)	397,375	427,732	8%	5%	1,229,177
Great Britain (UK)	400,481	410,651	3%	16%	1,130,011
Iran	418,740	366,242	-13%	183%	1,114,293
Malaysia	185,802	256,468	38%	13%	627,672
Germany	236,192	255,792	8%	16%	759,038
Canada	232,130	253,102	9%	4%	697,311
All Others	2,419,662	2,572,833	6%	16%	7,219,987

Source: NetInsight

South Korea Established One of the First IEEE Consortia



Access to IEEE content helps increase authorship

- In 2000 South Korea published 8,594 articles in IEEE *Xplore*
- In 2011 South Korea published 38,630 articles in IEEE *Xplore*
- **South Korea total number of articles = a 354% increase in number of articles since 2000**

Major Cities*	Number of Articles in 2000**	Number of Articles in 2011**	Variance	% increase
Seoul	6,779	19,959	13,180	194%
Daejeon	352	11,031	10,679	3034%
Suwon	536	3,663	3,127	583%
Yongin	125	1,743	1,618	1294%
Pohang	710	2,234	1,524	215%
Total	8,502	38,630	30,128	354%

*Top cities selected according to the number of IEEE members

**Number of articles derived from searching IEEE Xplore in May 2012 in cities with highest IEEE membership

Results based on data from May 2012



IEEE English for Engineering

A new IEEE eLearning resource that improves communication skills for engineers and other technical professionals

Coming Soon from IEEE!



IEEE English for Engineering

- IEEE has partnered with Cambridge University Press to develop a program of online English instruction for engineers and other technical professionals.
- IEEE English for Engineering online training develops communication skills and specialized English language knowledge engineering professionals need.
- This new IEEE program is delivered in an engaging series of highly interactive online courses.

The Importance of Getting Published

- "The cardinal rule is, a scientific experiment is not complete until the results have been published."
 - Bob Day, professor emeritus, department of English, Univ. of Delaware, author of a book on scientific paper publishing
- "Scientific knowledge is a communal resource that only exists because it's available for others to judge and affirm as important."
 - Bruce Lewenstein, associate professor of communication and science and technology studies, Cornell University
- "Researchers publish for economic self-interest, ... it provides visibility and is evidence of productivity."
 - Ed Huth, editor emeritus of the Annals of Internal Medicine and author of a book on publishing in medicine

Source: The Scientist - The News Journal of the Life Scientist

<http://www.the-scientist.com/homepage.htm>], April 2, 2001 © Copyright 2001,

Develop all of the following key skills:

- Speaking in technical English
- Listening and comprehension
- Technical writing
- Reading and understanding technical publications

All available in

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Advanced course levels

IEEE English for Engineering

Develop the communications skills and knowledge engineers need to succeed:

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- Relevant to all engineers – including electrical, civil and mechanical - and other technical professionals
- A dynamic and interactive online learning experience
- Printable individual certificates
- Pretest placement exam
- Discoverable in IEEE *Xplore*

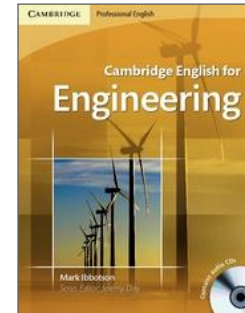
Who is IEEE English for Engineering intended for?

- Users who have an Engineering background and basic knowledge of the English language
- Users working in technical areas are or will be in the future
- Users would like to improve their technical communication and English grammar skills

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Leader in EE



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A Dynamic and Engaging Experience

Reading Technical Materials

Reading Technical Materials

Match the GPS applications on the left to the descriptions on the right.

R

Read

topographical surveying

maritime applications

civil engineering

GPS in cars and trucks

geological exploration

mapping surface features

applications in mining and the

setting out positions and level

avionics equipment
air traffic control, navigation a

navigation and safety at sea

highway navigation and vehicl

0:09/0:09

Describing Types of Technical Problems

Describing Types of Technical Problems

Listen to Sabino talking about some technical problems the team had at the test session and select whether the following statements are True or False.

	True	False
Some liquid was lost from a pipe.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A car lost all its coolant with the engine still running.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
A car's engine stopped on the circuit.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Some tires were damaged.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
A wheel nut fell off a car on the circuit.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A car's suspension was broken.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sorry, that is incorrect.

Press the

▶▶

 button below to proceed.

0:21/2:49

9 of 20

A Dynamic and Engaging Experience

Choosing the Correct Word

Choosing the Correct Word

Complete the following extracts from the discussion with words that come drop-down on each blank and then selecting the correct word.

Sentence Extracts

1. Then you've got associated applications, that are
2. ...tracking systems you can g deliver
3. ...from the end- point of view, accuracy is no longer

Most devices are accurate enough. The key is to make them more


use
uses
using

0:11/0:16 6 of 20

Explaining and Assessing Manufacturing Techniques

Explaining and Assessing Manufacturing Techniques

Again referring to the promotional literature, explain the phrases in bold.



What makes waterjets such a popular cutting option? Water jets require few **secondary operations**, produce **net-shaped parts** with no **heat-affected zone**, heat distortion, or **mechanical stresses** caused by other cutting methods, can cut with a **narrow kerf**, and can provide better usage of raw material since parts can be **tightly nested**. As a result of the FlowMaster™ PC control system and intuitive operation, waterjets are extremely easy to use. Typically, operators can be trained in hours and are producing high-quality parts in hours. Additionally, waterjets can cut virtually any material, leaving a satin smooth edge.

Secondary Operations refer to: additional manufacturing such as polishing

Net-shaped parts are: parts with accurately cut edges..

Heat-affected zone is: Type your responses here.

Mechanical stresses refer to: Type your responses here.

A Narrow kerf is: Type your responses here.

Tightly nested means: Type your responses here.

0:09/0:09 19 of 20

Promote Your Achievement

- Printable individual certificates upon the successful completion of each module.
- Users can receive a certificate after each section for a maximum of 12 certificates



IEEE English for Engineers

Per institution Pricing (\$USD)

- Pricing:
 - 75 - 100 user seats \$10,995
 - 50 to 74 user seats \$8,250
 - Up to 49 user seats \$4,695
 - Year 2 renewal quote based on usage
- Consortia pricing available
- Custom quotes available for larger needs

Approximate Plan for Release

- Beta test
 - KITIS staff among test group
 - Final review and integration into IEEE Xplore
 - Available for purchase
 - Release in IEEE Xplore
- May/June
 - July/Aug
 - Quarter 3
 - Quarter 4