

# SMART5

SMART PATENT MANAGEMENT  
WITH SMART5

35%



IP5 PATENT EVALUATION  
IN JUST ONE MINUTE



PATENT MANAGEMENT HOLDS  
GREATER SIGNIFICANCE THAN REGISTRATION.

# Korea Invention Promotion Association (KIPA)

is the first leading public institution under Korean Intellectual Property Office (KIPO) and has been elevating the value of Korea's intellectual properties as a specialized IP institution since establishment in 1973.

[www.kipa.org](http://www.kipa.org)



## HISTORY



1973

Founded as the Korea Patent Association



1995

Launched the Center for Patent Technology Information (Later became the Korea Institute of Patent Information in 2001)



2001

Designated as a technology evaluation agency (Ministry of Trade, Industry and Energy)



2002

Designated as a technology transaction agency (Ministry of Trade, Industry and Energy)



2003

Opened the twenty-eight-floor Korea Intellectual Property Service Center (KIPS)



2007

Designated as a public institution (Ministry of Strategy and Finance)

## CORE DUTY

### IP BUSINESS

#### IP finance

From supporting patent valuation to purchasing poor collateral IP through a recall support organization. Total management of all steps of IP finance

#### IP transaction

Distribution of IP where it is needed by creating connections between suppliers and consumers through an IP transaction platform ([www.ipmarket.or.kr](http://www.ipmarket.or.kr)) and patent brokers.

#### IP creation

Operation of 'IP Narae', 'IP Didimdol', 'Global IP Star Enterprise development' and many other support projects based on 25 regional IP centers around throughout Korea.

### IP TALENT CULTIVATION

#### Invention education for elementary to high schools

Operation of approximately 200 invention education centers based in elementary to high schools throughout Korea to provide invention education.

#### Youth invention contest

Organize and oversee invention contests such as 'Korea Student Invention Exhibition' and 'Korean Student Creativity Championship' to foster invention capabilities of youths.

#### Training IP practitioners

Train IP practitioners through IPAT and provide general IP education to the public through 'IP Campus'.

#### Online IP education

Provide free IP education to the public via 'IP academy ([www.ipacademy.net](http://www.ipacademy.net))'

### CULTIVATION OF IP CULTURE

#### Create invention culture at home and abroad

Promote outstanding inventions and spread invention culture through 'Invention Day Ceremony' and 'Korea IP Exhibition'.

#### Spread Korean IP wave globally

Spread Korean IP Wave through 'IP Panorama' and 'Pororo, the inventor king (animation)'; and take the role of the leading IP organization by providing required technologies to developing countries.



2010

Launched "System to measure, analyze and rate patent technology" (SMART) and the Center for Next-Generation Entrepreneurial Talents



2014

Launched the Korea Intellectual Property Evaluation Center



2015

Designated as a general education training institute (Ministry of Education)



2017

Established IP E-Learning Platform (IP-ACADEMY)



2018

Acquired the nation's first IP certification program, the Intellectual Property Ability Test (IPAT)



2020

Launched the IP Recovery Service Agency (dedicated agency)

# SMART5

(System to Measure, Analyze and Rate patent Technology)

Easy, fast, and convenient online ([smart.kipa.org](http://smart.kipa.org)) evaluation system for IP5 patents

## HOW TO?

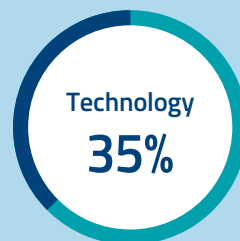
Evaluation of objective data derived from quantified information on patent applications and administrative status

## CONSTRUCTION OF EVALUATION MODEL

Confirmed Evaluation Criteria



Degree of maintaining the exclusive monopoly in a patent dispute with a third party



Degree of aligning with and leading technological trends



Relevance in business and potential utilization

Evaluation Factors



Information configured to be quantified and measured



Information universally recognized as factual



Information included in every patent under evaluation

Confirmed Evaluation Factors

Confirmed evaluation factors considering the patent laws of each country



US  
29



Korea  
32



EU  
25



China  
27



Japan  
36

# PATENT EVALUATION MODEL

## Evaluation model for US, EU and Japan: Multiple Regression Analysis

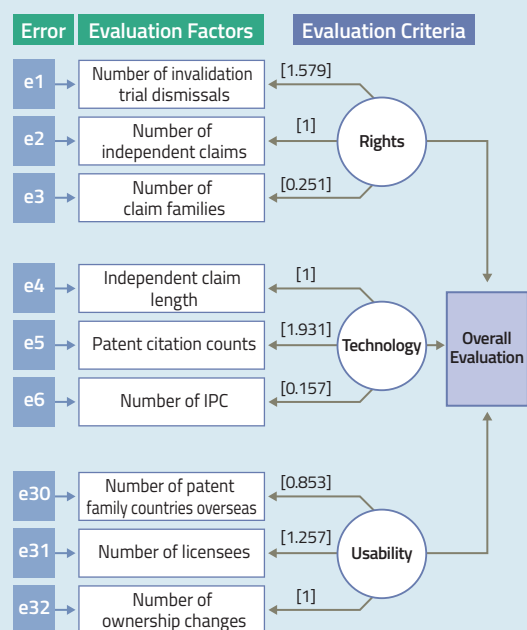
- When analyzing the relationship between independent variables by dedicating the 3 evaluation criteria as dependent variables
  - Multiple regression analysis is capable of verifying the significance of the following evaluation model when there are K independent variables
- $$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_K X_K + \epsilon$$
- Multiple regression analysis model generates the optimal independent variable coefficient set  $\beta$  and error  $\epsilon$  by using the X, Y sets provided in the training set.
  - With this result, the result Y (evaluation result) corresponding to independent variable X (set of evaluation factors) provided in the actual evaluation is generated

### Example of an evaluation model (Evaluation of power of rights)

Power of rights (Y) =  
 $0.251 + 0.3548 \times (\text{number of independent claims}) + 0.7958 \times (\text{number of claim families}) + \dots + 0.8579 \times (\text{number of patent family countries overseas}) + \epsilon$

\*The above model is an arbitrarily generated virtual model.

## Evaluation model for Korea and China: Structural Equation Modeling

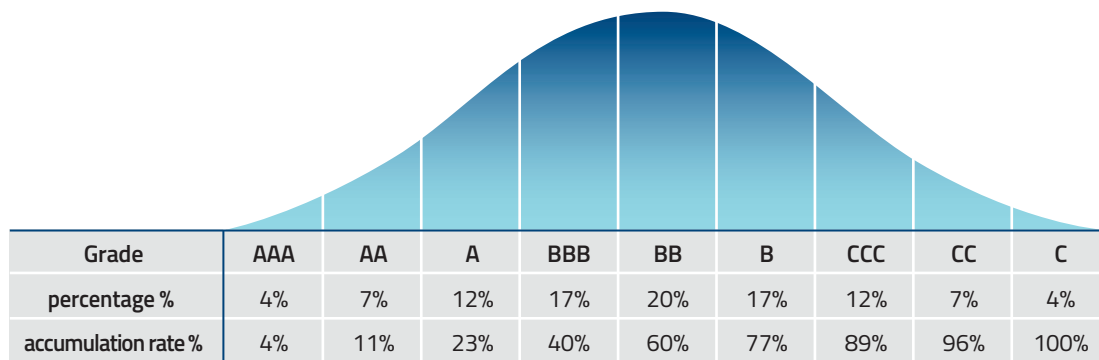


\*The above model is an arbitrarily generated virtual model.

**SMARTS** certified by Statistical Research Institute of Seoul National University with over 80% reliability!

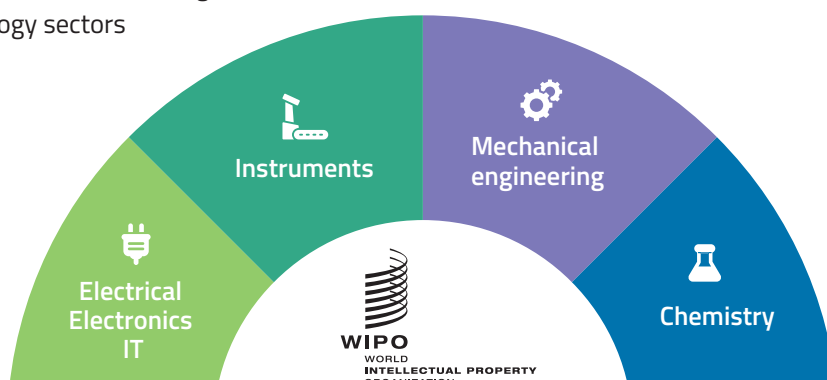
# EVALUATION GRADES

With relative evaluation using the 9 grades of the stanine score, intuitive understanding of where my patent stands is possible!



# TECHNOLOGY SECTOR

Evaluation sectors classified according to the 4 WIPO technology sectors



# EXAMPLE OF A SMART5 EVALUATION REPORT

## General Review & Grade

## Patent Valuation Report

### [ General Review ]

Patent No. 10-1118057, "Patent Rating System and Rating Factor Information Processing Metho..." evaluated as A grade(upper 22.2% level) by the comprehensive valuation in the "electric/electronic/IT" technology patent .IP Right index might be on the average level to maintain the exclusive position at patent dispute with the 3rd party in the relevant technical field. The technology Value index might be on a the highest level to lead or accord with the tendency to technology in the relevant technical field. Usability index might be in a a little low level of business use degree and possibility.

A

Grade

### [ Grade Distribution ]

Indicate the location of my patent within the technical field

Comprehensive valuation grade	AAA	AA	A	BBB	BB	B	CCC	CC	C
Percentage Interval (%)	4	7	12	17	20	17	12	7	4
Accumulated Percentage (%)	4	11	23	40	60	77	89	96	100

※ For the whole patent in the technology field registered currently, valuation grade grants by the above percentage.

### Patent Outline

Patent   Application No.	10-1118057   10-2009-0125151
Technology Field	electric/electronic/IT
Title of Invention	Patent Rating System and Rating Factor Information Processing Metho...
Assignee   Applicant	한국발명진흥회   한국발명진흥회
Application   Registration   Termination	2009-12-15   2012-02-13   2029-12-15

### [ Abstract ]

본 발명은 특허 자동 평가 시스템 및 상기 시스템에서의 평가 요소 정보 처리 방법에 관한 것으로, 명세서 분석 결과로 생성되는 정보, 경과 정보, 서지 사항, 유사 특허군 정보, 기업 재무 정보 등의 시장 정보 및 국내외의 특허 정보 등 다양한 특허 정보 데이터 소스에 기반한 평가 요소를 사용하는 평가 대상 특허의 평가 점수와 평가 등급을 생성해 주는 특허 자동 평가 시스템 및 상기 시스템에서의 평가 요소 정보 처리 방법에 관한 것이다. 본 발명을 활용하면, 대량의 특허를 객관적인 평가 기준 하에서, 저렴하게 신속하게 평가할 수 있어, 양질의 특허를 선별할 수 있고, 특허권의 연차 등록 유지 여부에 관한 의사 결정에 기여할 수 있다. 유사 특허군을 기반으로 하는 평가 요소를 도입하는 경우 평가 대상 특허와 기술적으로 유사한 유사 특허군 구성 특허들의 집단적 속성을 살펴 볼으로써, 상기 평가 대상 특허 자체에서는 추정하기 힘든 속성을 추정할 수 있다. 나아가 본 발명을 활용하면, 평가 대상 특허와 기술적으로 유사한 유사 특허군이 제공되므로, 평가 대상 특허와 기술적으로 유사한 다량의 특허를 효과적으로 검토해 볼 수 있으며, 유사 특허군을 분석함으로써, 경쟁사, 신규 진입자들의 특허 동향까지 아울러 알 수 있게 된다.

### Valuation Grades Verification Method per Valuation Index

#### [ Testing Hypothesis about the mean comparison of valuation factors ]

- \* SMART5 grade evaluates based on valuation factors extracted from various patent data then suggests the testing hypothesis result about the mean comparison of valuation factors as the grounds of the evaluated grade.
- \* The testing hypothesis by the mean comparison is an objective method to confirm the significant difference of valuation factor values between valuation subject patent and upper (if in A grade range, lower) patent
- \* The value of the different degrees is called t-statistic; p.value is the statistical indication. As the t-statistic is greater, the difference is higher; if the p.value is lower than 0.05, there is a significant difference in valuation factors.

※ The comprehensive valuation grade does not mean the total value of each detailed valuation index grade; it has the difference of the absolute value of each detailed index.

#### [ Mean comparison subject in valuation factors ]

Valuation Subject Patent grade	Mean comparison range
A grade range (AAA~A)	B grade range (BBB~B)
B grade range (BBB~B)	A grade range (AAA~A)
C grade range (CCC~C)	B grade range (BBB~B)

#### [ Hypothesis Setting ]

- \* null hypothesis (H0) and alternative hypothesis (H1) concerning the mean comparison are as follows;
- H0: In valuation factors, the mean of the upper/lower patent group is the same as the mean of the valuation patent subject.
- H1: In valuation factors, the mean of the upper/lower patent group is greater/less than the mean of the valuation patent subject.
- \* If p.value < 0.05, In valuation factors, the median of upper/lower patent group is significantly greater/less than the mean of valuation patent subject.

Evaluation sectors classified according to the 4 WIPO technology sectors

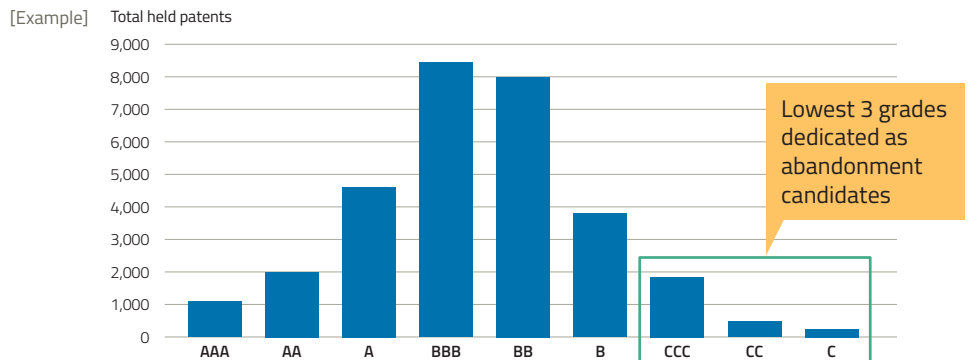
- Electrical Electronics IT
- Instruments
- Mechanical engineering
- Chemistry

Get your evaluation report in just ONE minute with easy and quick evaluation based on twelve million registered patents of IP5!

# SMART5 IN PRACTICE

## 1 Management of held patents

- Reference data for considering patent abandonment to reduce annual fees
- When holding over hundreds of patents, SMART5 reduces time and expenses by evaluating up to 500 patents at once.



## 2 IP finance

### IP GUARANTEE SCHEME

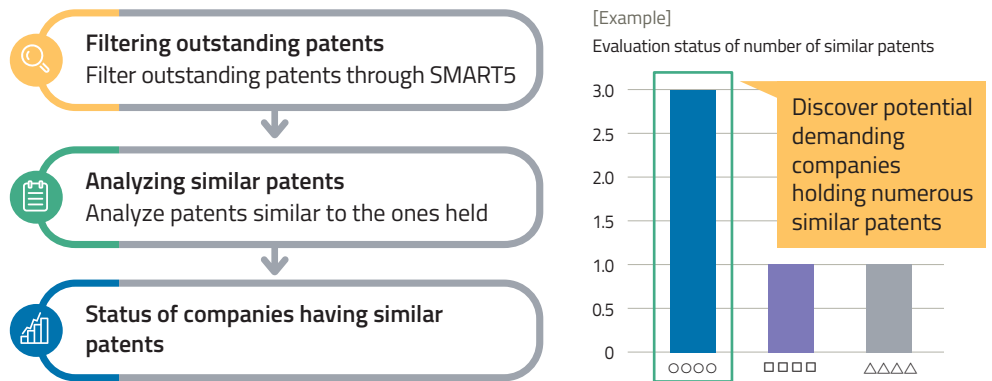
Guarantee scheme of guarantee institutions linked with SMART5



SMART5 grade B or higher / Guarantees maximum of two hundred million won per patent / Guarantees maximum of one billion won per company

## 3 Technology transfer

Discover potential demanding companies with the similar patent search function of SMART5



# SMART5 HISTORY

- 2022** 'Evaluation service for Japanese patents' and 'SMART5' are launched
- 2021** 'Evaluation service for Chinese patents' is launched
- 2018** New evaluation model for Korean, US, European patents is introduced
- 2016** 'Evaluation service for European patents' is launched
- 2014** 'API using patent evaluation data for financial purposes' is developed
- 2013** 'Evaluation service for US patents' and 'SMART3' are launched  
'IP guarantee scheme' of Credit guarantee fund associated with SMART5 is released
- 2011** 'Analysis system' is released
- 2010** 'SMART' is released



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where management matters more than  
registration!



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online anytime, anywhere.



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