

# TRIZ Activities in Korea & Its Success Factors until 2009

( 韓國 TRIZ 活動 & 成功 要因 )



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李敬元 教授 )

# Professor Kyeongwon, Lee



- **TRIZ Experience**

- learned “Classical TRIZ” at LG Electronics in 1997 first
- taught “TRIZ” in class of “Creative Mechanical Design” at Univ. for 10 yrs.
- CEO & Chief Consultant at TRIZ Eng. & consulting company, “KID“
- Visiting scholar at Wayne State University for TRIZ research in 2004
- TRIZ related papers : 7 English (Mosquito trap, Toilet), 100 Korean papers

- **Interests** : (Mechanical) Conceptual Product Design, Kinematics and TRIZ

- **Academic Background**

- Mechanical Engineering at Seoul National Univ. (B.S)
- KAIST (Korea Advanced Institute of Science and Tech.) (Master, Ph.D.)
- Stanford University ( Post Doctorial Visiting Scholar)

# **Contents**

**I. Overview of TRIZ in Korea**

**II. Online TRIZ Education Program**

**III. Success Factor of active TRIZ application**

**IV. Conclusion**

# **I. Overview of TRIZ in Korea**

**In 1996, 1997, Introduction to LG, Samsung first**

**Meantime, not active and drop of TRIZ team at LG and slow**

**In 2004, Cases study at Samsung Electronics at TRIZCON2004,  
Korea TRIZ Study Gr. , KTA & STA (Samsung TRIZ Asso. )**

**In 2006, Online Samsung TRIZ course (20,000 person completion)**

**In 2007, TRIZ intro. edu. for all Directors at R & D of Samsung  
; basis for bigger result and TRIZ education for all engineers**

**In 2008, Interests in Business TRIZ, Online Non-Technical course,  
Good results at LG, LS Cable, Hyundai Auto. & medium size**

**In 2009, more TRIZ results & TRIZ expert in international TRIZ  
conferences as TRIZFest, ETRIA & Japan TRIZ Symposium**

## II. Online TRIZ Education Program

- Korea is strong country on IT fields in the world.
- Most Koreans have enjoyed the online education including TRIZ.  
Specially, TRIZ (16 hours) with dynamic multimedia animation, are easy to understand, funny and useful for TRIZ beginners.
- Those are opened to public domain with cheap tuition (about 100 Japanese currency, yen for 16 hours) serviced by “Samsung SDS” ( [www.muticampus.co.kr](http://www.muticampus.co.kr) 中 )  
“CREDU” company ( [www.credu.com](http://www.credu.com) 中 )  
and “Korea Polytechnic Univ.” ( [www.ikpu.ac.kr](http://www.ikpu.ac.kr) 中 )

### **III. Success Factor of active TRIZ application - 1**

- 1) Compensating defects in Idea generation in “Improve” stage of 6 Sigma process that is most popular during past 15 yrs**
- 2) TRIZ champion, CEO Shon Wook’s strong support during 5 yrs in initial stage at Samsung Advanced Institute of Technology**
- 3) Direct introduction from Russia ( 10 Russian TRIZ specialists not through U.S.A, Europe and Japan) to biggest companies**
- 4) Strategic Approach of TRIZ team at Samsung Companies sharing big results at company-inside annual event with top executive managers & many Engineers**

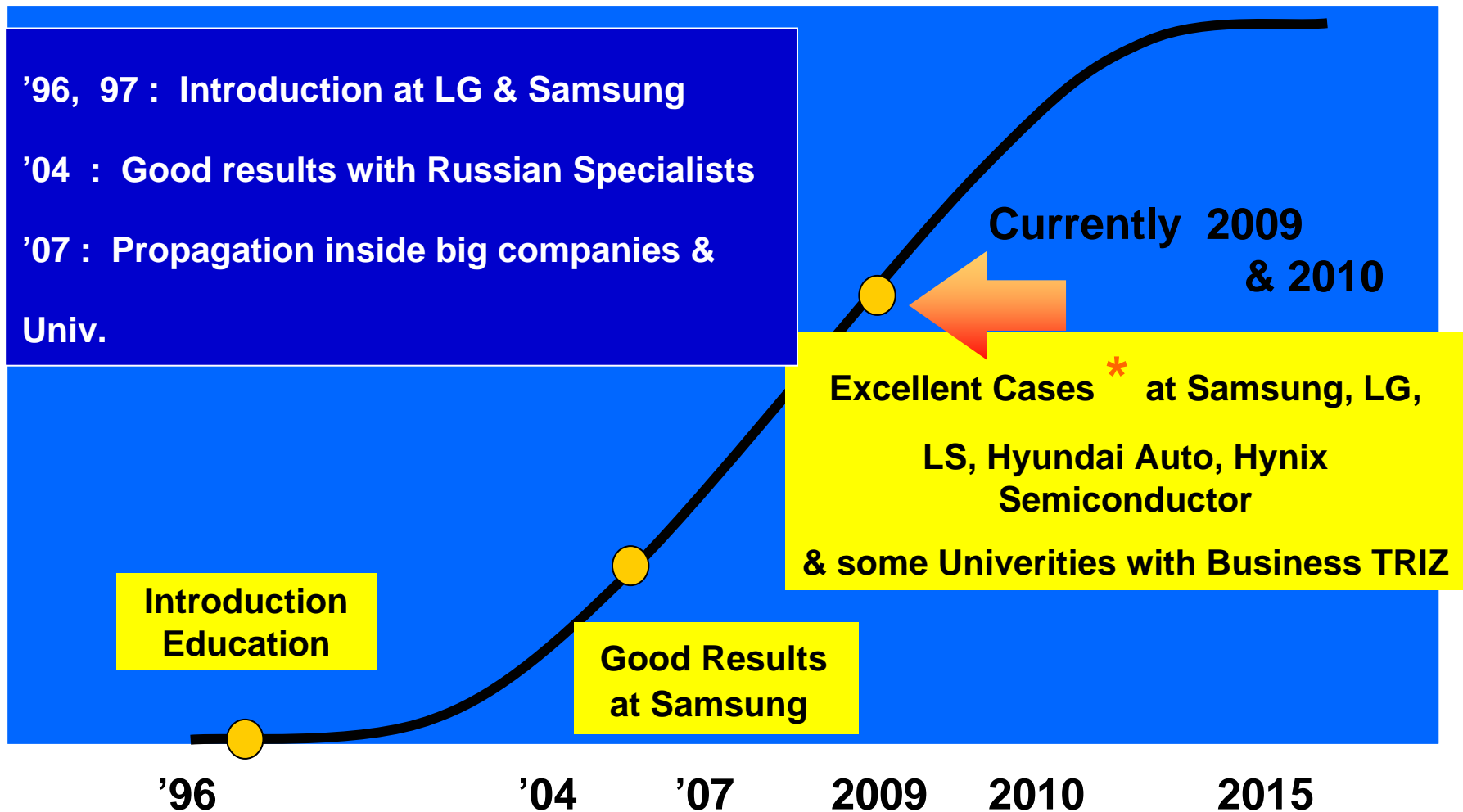
### **III. Success Factor of active TRIZ application - 2**

- 5) 70 TRIZ Korean translations and books  
& Online TRIZ Education Courses to public domain**
- 6) Currently, effective tool for “Creative management” at Samsung  
& “Creative Environment” by Government administrations**
- 7) Almost Engineering Schools at many Universities have opened  
“Creative Engineering Design” official and mandatory subject  
for ABET (America Board for Eng. Edu.) certificates these days**
- 8) TRIZ application education programs with seminar & consulting**
- 9) Korean nationality to like new issues is more active and faster  
than other countries compensating defects in “Idea generation”**

# **IV. Conclusion**

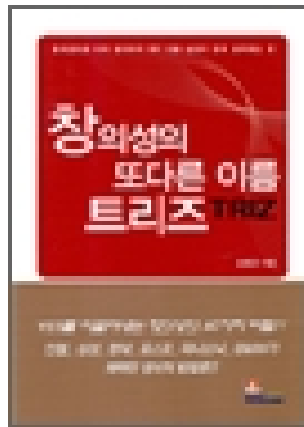
- **TRIZ activities in Korea are on rapid progressive stage of the S-curve of TRIZ and may be much accelerated in 2009 and near future in viewpoint of author based on the TRIZ activities**
- **From 2010, there will be more domestic & international “2<sup>nd</sup> ASIA TRIZ conference” at Jeju Island, on Feb. 2010**  
( TRIZCON on April, TRIZFest on July, Japan Workshop on Sept., ETRIA on Nov.)
- **Translation of other language for Korean TRIZ education materials including books, some practical case studies and TRIZ software hopefully in English and Japanese Editions**

# Korea TRIZ on rapid progressive curve

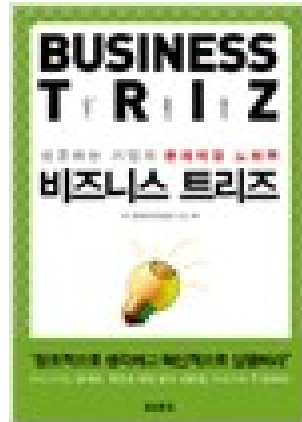


\* The Cases are not opened by secret policy at companies in Korea

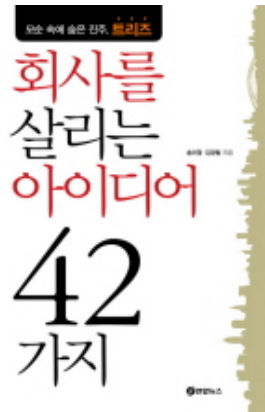
# Appendix - Recent Korean TRIZ books (not translation edition)



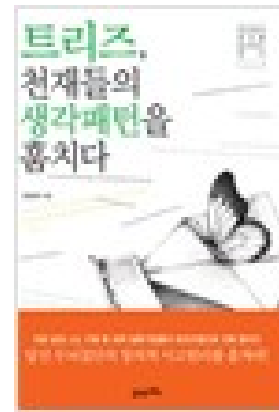
HyoJun, Kim  
(2009)  
On Creativity



Korea TRIZ Asso.  
(2009)  
On Business TRIZ



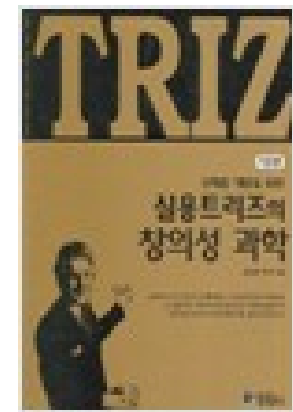
Mi Jung, Song  
(2009)  
on 40 Principles



HoTaek, Han  
(2007)  
Novel with TRIZ



Changil, Choi  
(2007)  
On Marketing with TRIZ



Hojong, Kim  
(2007)  
Simplified TRIZ book

- New Easy & Cartoon-based TRIZ books will be published before 2010;

- 1) Cartoon-based TRIZ Story book 1 (Series books by Ikchul Kim, Kyeongwon Lee, Jaewhan Lee et. al.)
- 2) TRIZ 100 배 活用 (October, by ChanKeun Jung, Da Hye Jung and Kyeongwon Lee)



One illustration for book cover of Cartoon TRIZ Story book

## **Appendix - Korean TRIZ Experts (based on Author's viewpoint)**

### **1) Active Korean TRIZ Experts in Korea,**

- **SeungHyun, Yoo (Ajou U.), Kyeongwon, Lee (Korea Poly. U.), Wonsik Kim (Doowon U.)  
JaeHwan Lee (Dongkook U.), Yongjung Huh (Korea Technical Education U.) etc.**
  
- **At Samsung TRIZ Association, Jun-Young Lee (Manager), Mijung Song (Dr.),  
Jung-Hyeon Kim, Sung-Wook Kang, SeungHyeon Han etc.**
  
- **At TRIZ Consulting Company, Kyeognwon Lee (Korea Item Development), Hyojoon Kim  
(Korea TRIZ Consult), Dr. Hojong Kim (Kim's TRIZ), HongYul Yoon (TRIZ Center),  
Yongil Kim (TRIZ Korea) and some other TRIZ consultants**
  
- **At Korea TRIZ Association, Ik Chul, Kim (Chairman), Dr. SungKyun Park (Vice chair)**
  
- **At LG Electronics, Dr. Jungho, Shin, at Hynix Semiconductor, Dr. Jungsun Kim and  
at Hyundai Automobile, YoungJoo Kang and No correct Information at Pohang Steel**

### **2) Russian TRIZ Experts ;**

**Dr. Kynin (TRIZ Master at Samsung SDI) and over 10 Russians for Samsung Electronics,  
Samsung SDI, Electro-Mechanics, Corning Precision Glass and Korea Poly. Univ. (2)**

# Appendix - Flow Chart for TRIZ in Samsung TRIZ Association

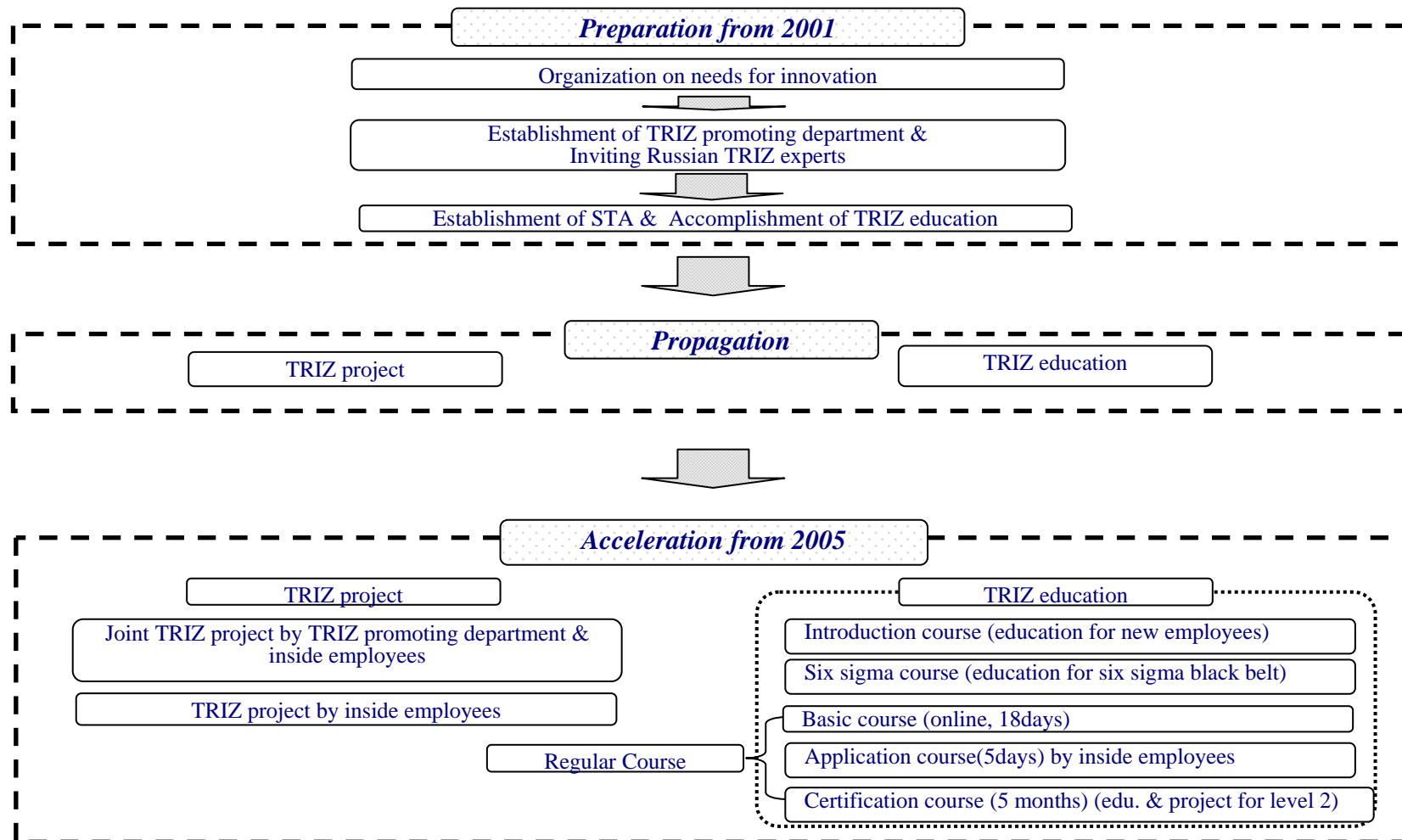


Figure 1. Flow Chart for TRIZ implementation in Samsung TRIZ Association (by Jung-Hyeon, Kim , ETRIA 2005)

# Appendix - Online TRIZ Technical course at Samsung SDS

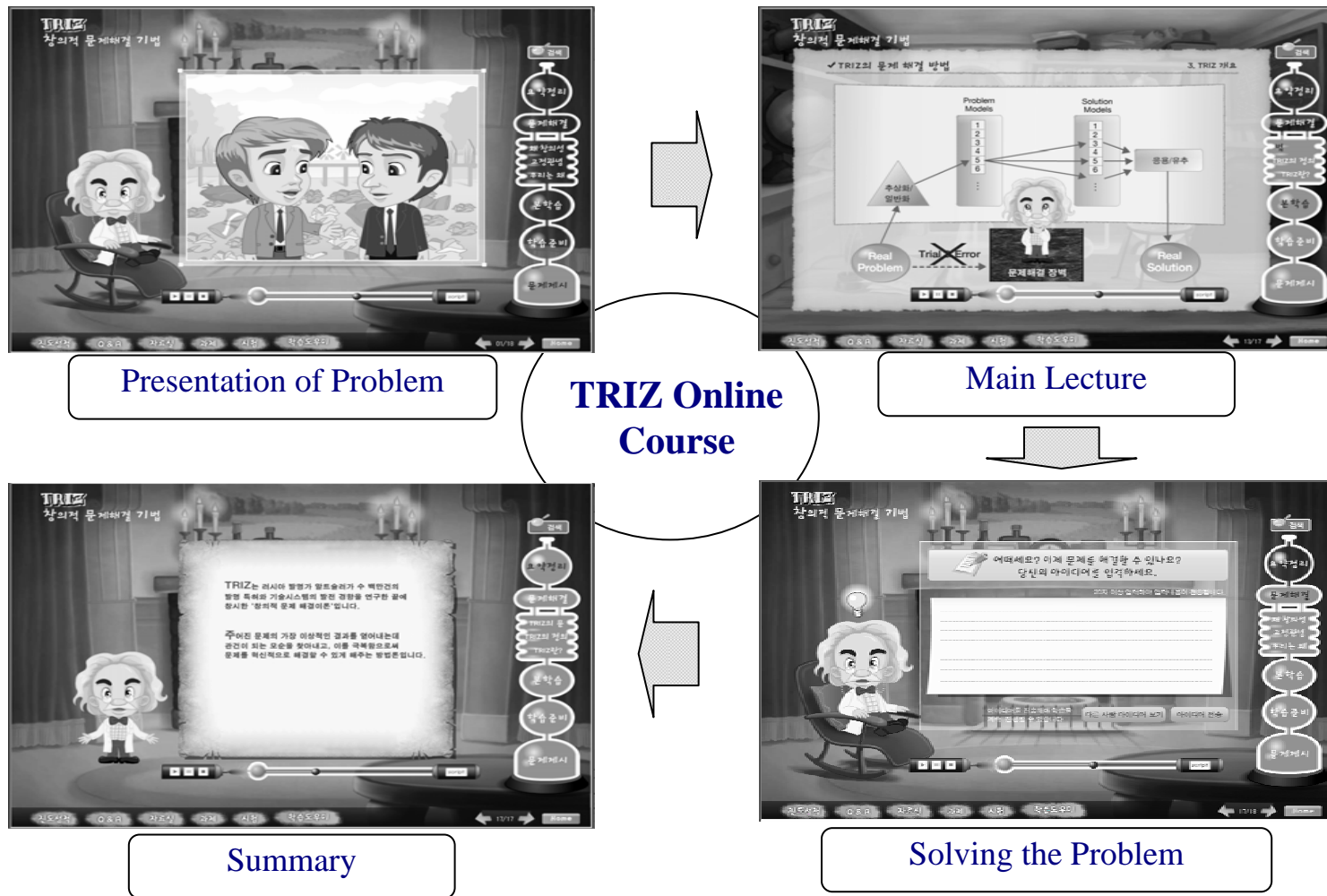


Figure 2. Samsung Online Education Process (by Jung-Hyeon, Kim , ETRIA 2005)

# Appendix - Online TRIZ Non-Technical course at CREDU



Figure 3. Online Non-Technical TRIZ Edu. Course, "創造經營 & TRIZ" by Ikchul, Kim & Kyeongwon, Lee)

# Appendix - Some News in Newspapers in Korea

## 三星電子 'TRIZ' 熱風

JiEun Im, MTN 記者 | 2009/06/05 15:01 | 調回 4918

三星電子 (764,000원 3,000 -0.4%) 事業場에 '트리즈(TRIZ)' 熱風이 불고 있습니다. 創造 經營이 強調되고 트리즈(TRIZ)를 適用한 成功 事例들이 속속 알려지면서 이를 배우려는 任職員들이 爆發적으로 늘고 있습니다.

< Reporter > 企業經營 革新道具 '6 Sigma'에 밀려 注目받지 못했던 트리즈(TRIZ)가 '創造經營'과 함께 다시금 注目받고 있습니다. TRIZ는 舊 蘇聯에서 200 萬件이 넘는 特許를 分析해 創造的 問題解決에 使用되는 共通原理를 問題解決의 原理로써 定理해 놓은 것입니다.

6 Sigma가 統計的인 方法으로 일하는 方式을 改善하는 革新 Tool이라면, TRIZ는 既存 構造와 方法에서 벗어나 New 構造와 Idea로 問題解決을 도와주는 '創意的 問題解決 技法'입니다. 三星電子 Drum洗濯機開發 Team은 TRIZ 理論을 活用해 골칫거리였던 騒音問題를 解決했습니다.

Drum 洗濯機 內部에는 脫水 時 Drum을 받쳐주는 Tub라는 Plastic 部品이 있는데 脫水 強度를 높이기 위해서는 이를 凹凸 形狀으로 만들어야 합니다.

But 이로 인한 騒音發生이 深刻해 이를 없애기 위해 Tub를 凹凸 없이 미끈하게 만들었더니 強度가 떨어지는 全形的 矛盾 狀況에 빠졌습니다.

TRIZ가 提示하는 解決策 中, '分割'을 採擇해 Drum 洗濯機 後面의 屈曲面을 部分的으로 없앴으로써 遠心力에서 發生되는 騒音を 改善했습니다.

[Interview] Youngchul, Choi, 三星電子 DigitalMedia 部門 首席 "既存 洗濯機 對比 3, 4dB 程度가 改善됐습니다. 洗濯機 2 臺에서 發生하는 騒音が

1 臺에서 發生되는 騒音으로 줄어든 效果와 같다고 할 수 있습니다." 至今까지 三星電子 內 TRIZ 教育 受講者는 1萬6千餘名. 그 中 國際 公認

TRIZ 專門家도 250 餘名이나 排出되었습니다. 여기에다 TRIZ를 活用了한 特許出願은 300 餘件이 훌쩍 넘었습니다.

[Calling Interview] Ik Chul Kim, 韓國TRIZ協會 會長 "企業이 先進國을 模倣하는 戰略을 維持해왔는데 이젠 그 戰略만으로 充分하지 않게 됨.

價値를 높이기 위해 TRIZ를 많이 利用하고 있다고 生角합니다." 三星電子 內 TRIZ 擴散 震源地는 VIP (Value Innovation Production) Center로

이곳에는 現在 40名이 勤務하고 있습니다. 各 府署는 難關에 부딪친 問題에 TRIZ를 適用하기 위해 該當人力을 VIP Center에 派遣해 集中的으로

革新 研究를 하도록 합니다. 革新과 創造만이 살아남는 時代에 三星電子는 트리즈 (TRIZ) 技法을 통해 企業價値 Up 主力.

## **Appendix - Call for Paper for “2nd ASIA TRIZCON” in Korea on Feb. 2010**

- Title : “2nd ASIA TRIZCON 2010” ( first on Feb. 2009 )**
- Venue : International Conference Hall, Jeju National Univ.  
(Beautiful & Visa free) Jeju Island, (South) Korea**
- Organizing institutes, Associations and Universities  
(Almost are not fixed, but temporary & under discussion yet)  
; Academy) Jeju, KPU, Yonsei, Korea, Ajou, Dongkuk, SNU  
Association) Korea TRIZ Association, Korea CAD/CAM, STA  
Companies) Invited Companies (Samsung, LG, Hyundai etc.)**
- Dates : 3 days (not fixed , 25 (Thur.)-27 (Sat.), Feb. 2009)**
- Nations : Korea, Russia, Japan, China and other Asian Nations**