

# **Challenges and Opportunities in Developing Information System based on Digitization of Business Processes**

**December 7, 2010**

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Senior Deputy Director  
Technical Cooperation Division**



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**Lessons to be shared**

*To be an IP Powerhouse through Innovative IP Administration*



### MISSION

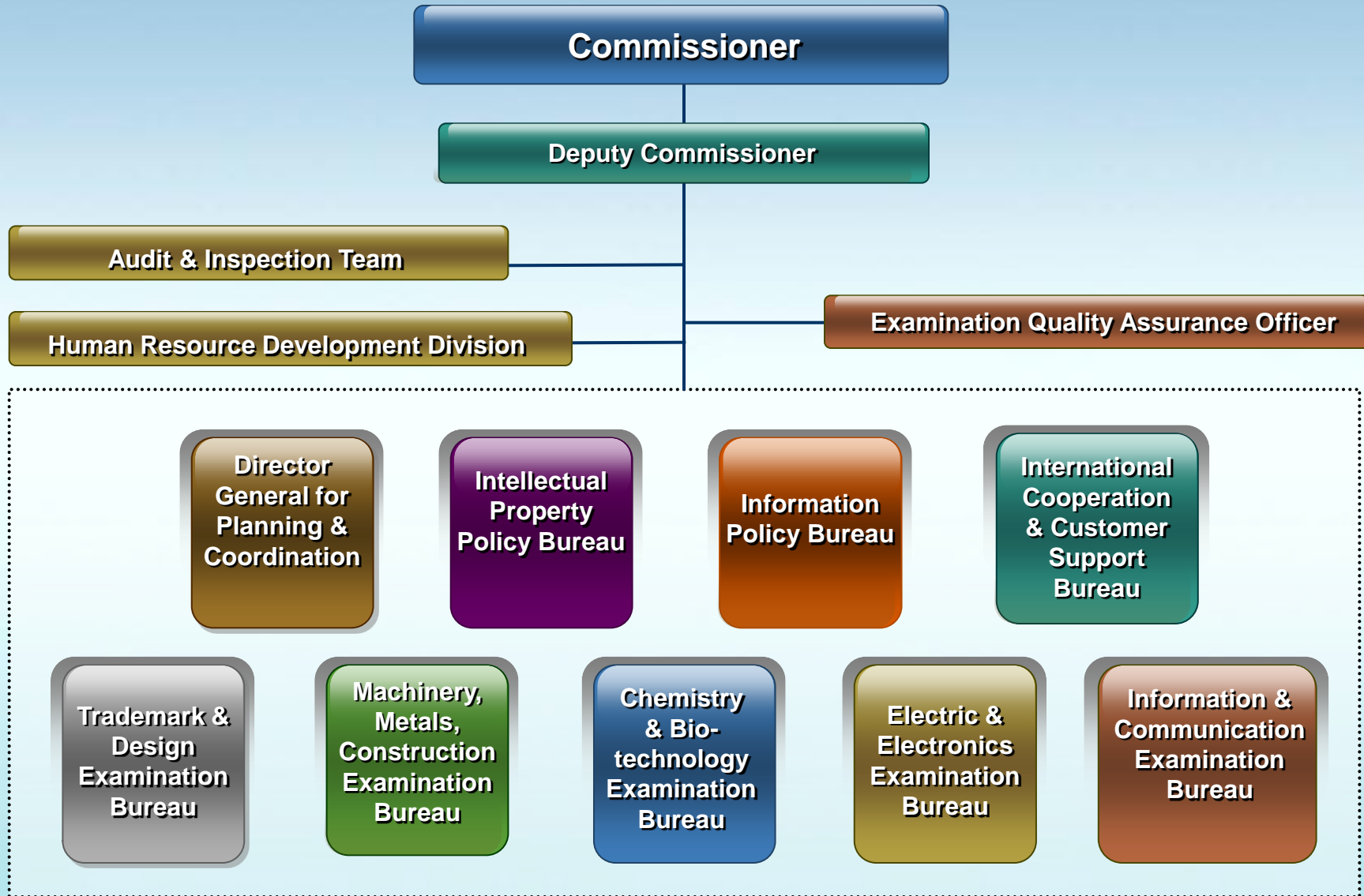
To Contribute to technological innovation and industrial development by facilitating the creation, commercialization, and use of IP, and by strengthening the protection of IP

To reinforce the basis for IP Creation

To conduct World-class Examinations & Trials

To facilitate the use of IP Rights

To strengthen IPR Protection



## Information Policy Bureau (CIO)

### Information Planning Division

- Planning
- Dissemination of IP Information

### Information Development Division

- System Development
- System Operation
- User Support & Training

### Information Management Division

- System Management
- Internet publication
- Digitalization of paper document

### IT Infrastructure Division

- Hardware operation & System security

### Technical Cooperation Division

- International Cooperation for IP Automation & IP Information

(Unit: cases)

	2006	2007	2008	2009
Patents	166,189	172,469	170,632	163,523
Utility Models	32,908	21,084	17,405	17,114
Designs	51,039	54,362	56,750	57,903
Trademarks	122,384	132,288	127,910	126,420
Total	372,520	380,203	372,697	364,960

\* In 2008, the e-filing rate of applications reached 97.4% (JPO 97%, USPTO 72%)

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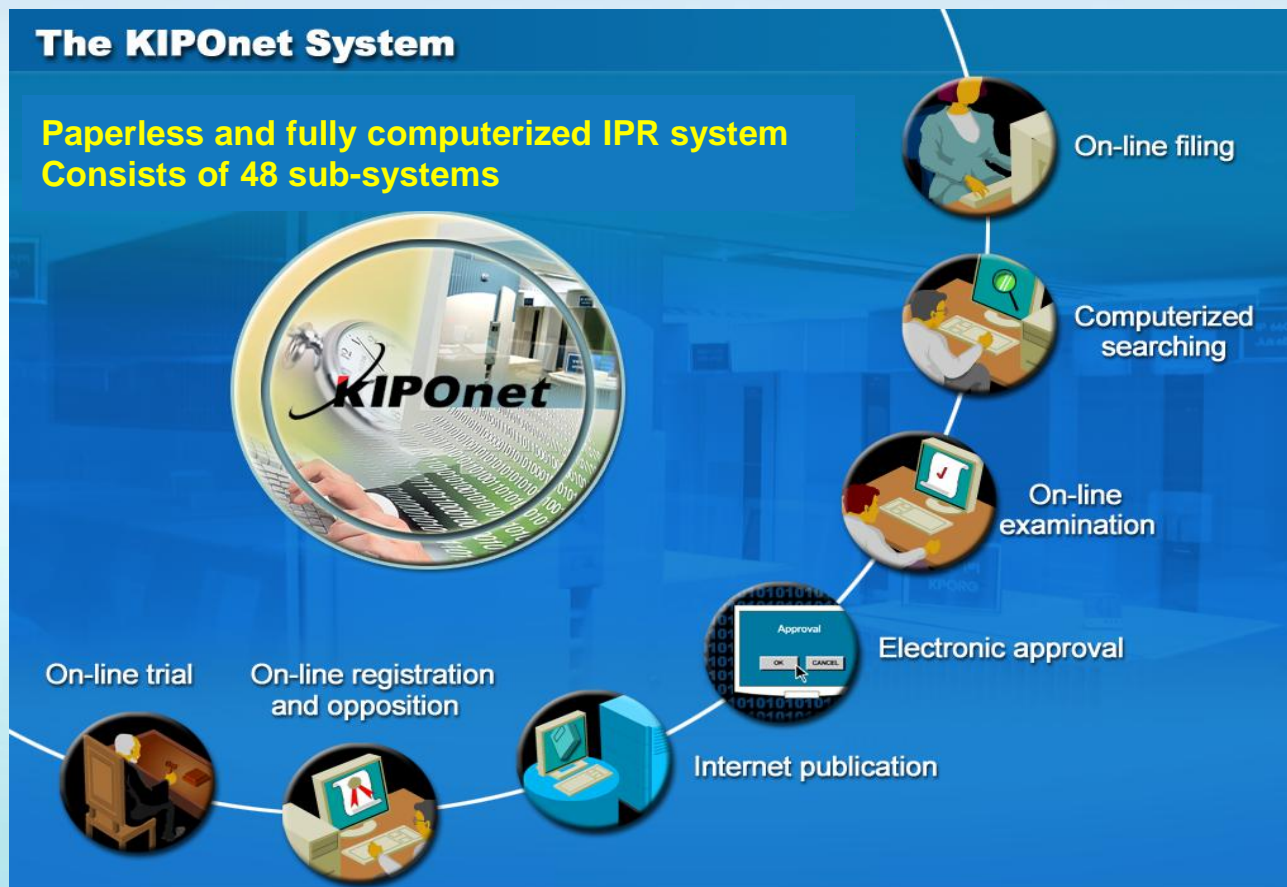
**V**

Lessons to be shared



A fully integrated IPR automation system that processes applications and internal administration of all kinds of IPRs

- Electronic handling of all customer-services
- Full automation of internal administration





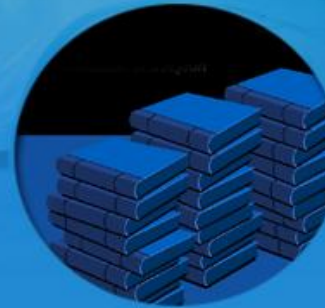
The number of IP applications has reached more than 200,000 annually



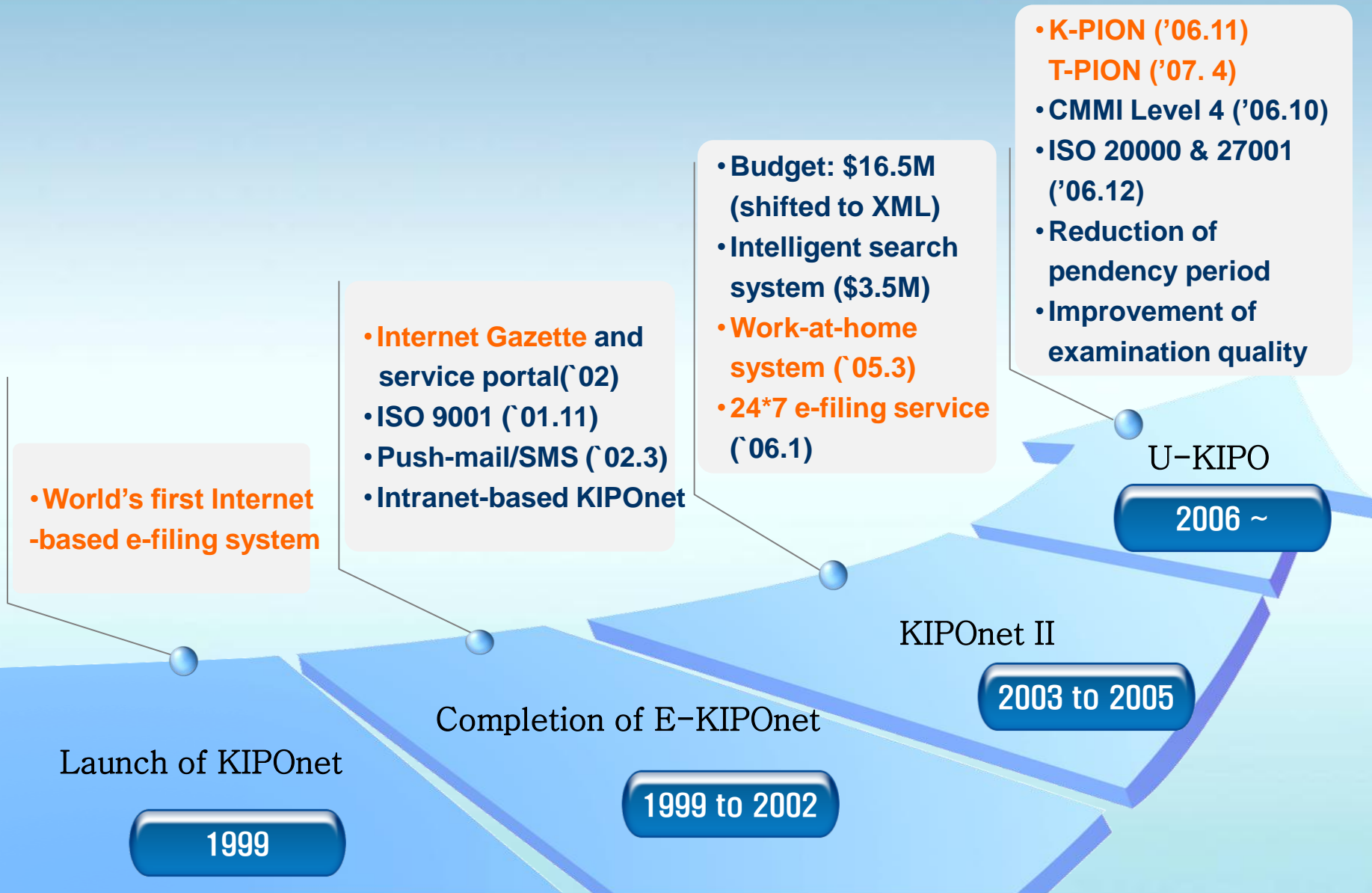
Limitations in handling paper documents



Inconvenience due to geographical relocation at Daejeon



Cost increase of disseminating IP information



## Cost of Development

- Phase 1 ('95 ~ '98) : 31.8 million dollars
- Phase 2 ('99 ~ '02) : 16 million dollars (H/W excluded)
- Phase 3 ('03 ~ '05) : 16.4 million dollars (H/W excluded)

## User Training

- Strengthen basic training for internal/external users before launching KIPOnet
- Training of users immediately after upgrading
- Feedback from the internal users (examiners)
  - adopted such feedback to upgrade sub-systems of KIPOnet

- A computerized retrieval system for prior-art search of local & foreign patent documents for internal users by applying Web technology and optimized search engine



- Integrated user-interface and search procedure
- Optimized search engine
- Supporting 3 Languages (Korean, English, Japanese)
- Real-time translation of Japanese into Korean
- Expanded query by user's synonym and thesaurus
- Systematic connection between search system and internal administration system
- Simple-query search for all databases in Korean and in English respectively

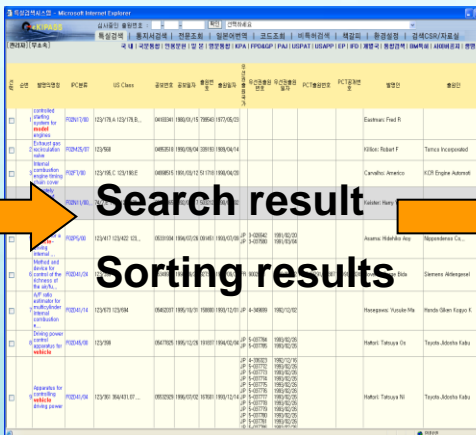
## Search Process of Integrated Search System

Inquiry



Input keyword  
Itemized Search

Result



Search result  
Sorting results

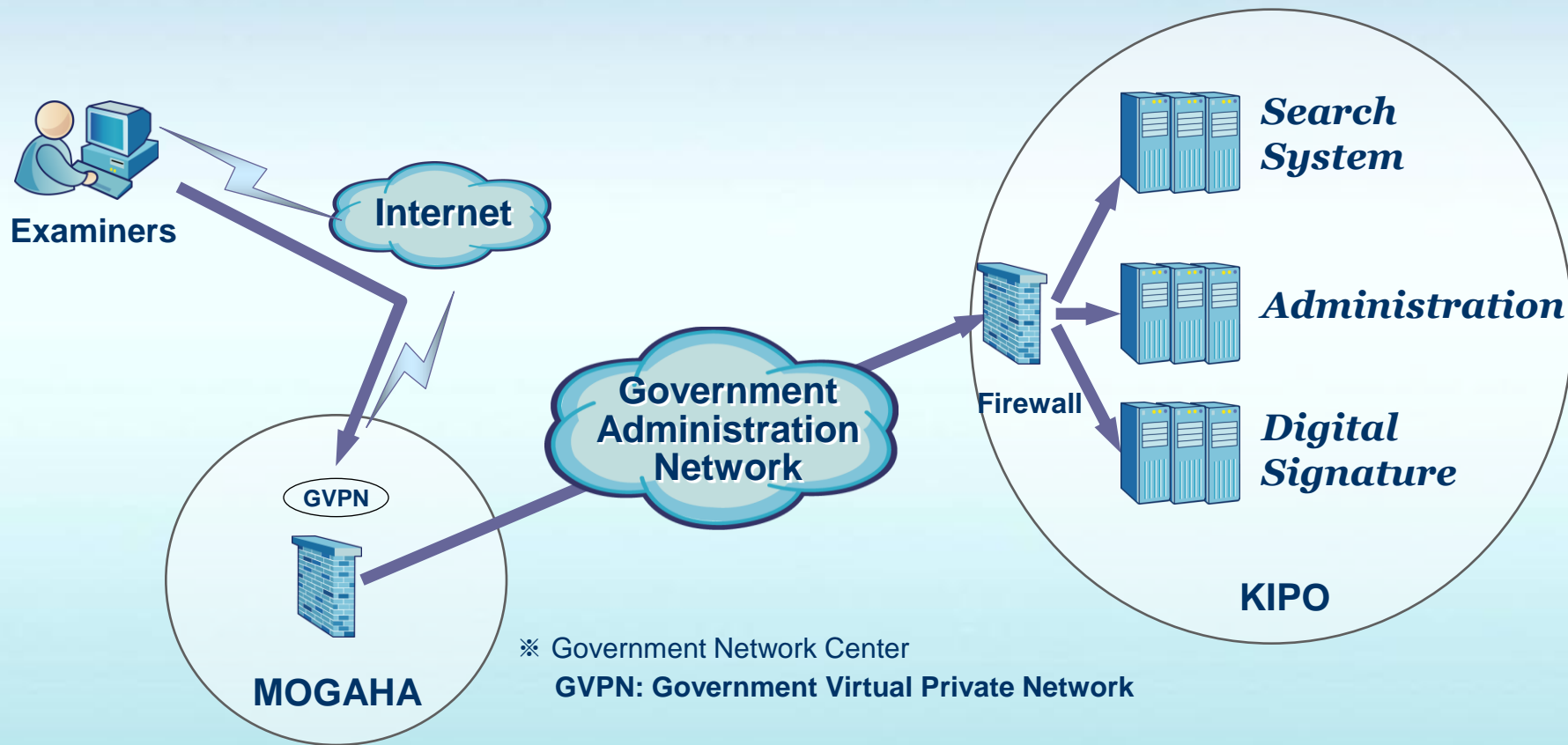
Detailed Information



Abstract  
Drawing  
Full text







## What is Work-at-home System?

KIPO's examiners do patent and trademark work online at home



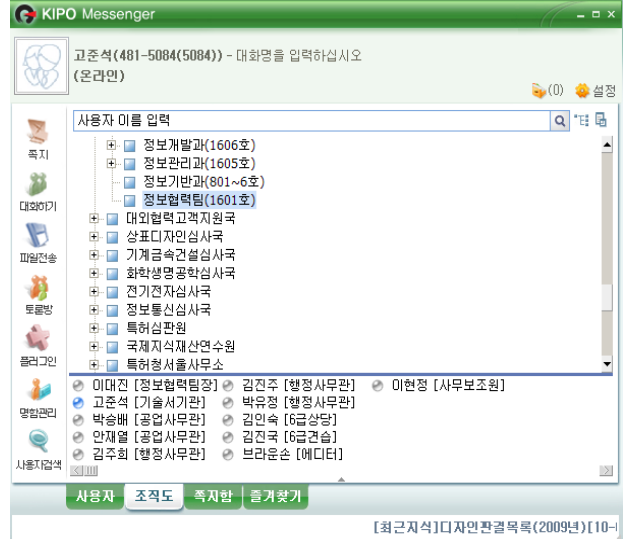
### What is KIPO Messenger?

**Existing communication media**

 In person	 e-mail
 telephone	 Meeting
 Circular, notification	 Liaison

*Real-time*

**KIPO Messenger**



- Real-time file exchange
- Real-time communication
- Real-time notice

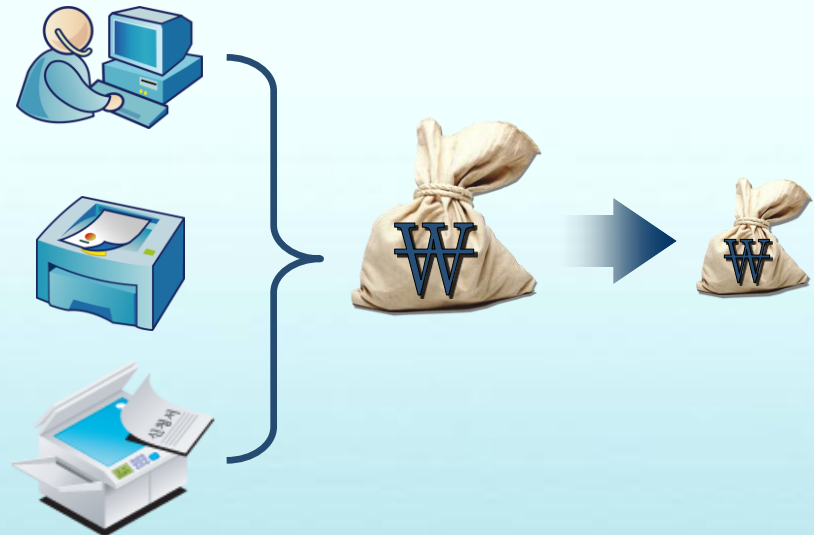


### Benefits of KIPO Messenger

- Efficient utilization of IT resources
  - KIPO messenger replaced the existing internal email.
  - 100GB disk available to other systems
- Reduced calls (to work-at-home examiners around the country, Seoul branch office)
- Reduced paper (for circulations, notifications)
- Reduced printing (for a telephone directory)



Utilizing disk space for other systems



## What is KMS?

a portal system allowing sharing, utilization and evaluation of various knowledge inside and outside the Office

**공지**

- ▶ 제12기 특허법기초과정 연수안내
- ▶ 제4기 심사사례연구II과정 연수안내
- ▶ 제9기 상표법기초과정 연수안내
- ▶ 제2기 디지털카메라와 포토샵의 활용과정 수요조사
- ▶ 제10기 심사사례연구I과정 수요조사
- 추석연휴기간 특허넷시스템 운영시간 안내
- 2010년 하반기 특허영어(DL-101) 교육과정 안내
- 공직자 선물신고 안내
- [보안업데이트] 애플 쿼타임 플레이어 보안업데이트 권고
- [보안업데이트] 2010년 9월 MS 정기 보안업데이트 권고

**언론**

**인사**

**Schedule**

- **청장 일정** MORE ▶
- 2010년 09월 19일
- WIPO 총회 출장 (9/18~24) 00:00
- **주요 행사** MORE ▶
- 등록된 데이터가 없습니다.

**우리는 한가족**

• **동고동락 나눔장터** MORE ▶

**[슬픈소식] 정보기획과 선동국사무관 모친상 꽃살리크 참가팀 추가모집**

삼가 감사 인사 올립니다.(우경필)  
 <슬픈소식> 전 특허청 근무하시던 권주현씨 사망  
 아식스 런닝화/마라톤화 필요하신 분!

**최근 지식**

제목	작성일
▶ BEST 디자인 주요제도별 통계	2010-09-14
진보성 판단시 단계별 유의점	2010-09-10
진보성 판단 흐름도	2010-09-10
최근 상표권 침해소송에서 변리사 소송대리권 공방 이후 ...	2010-09-09
2010 중소기업지원제도 요람	2010-09-07
▶ BEST 한국의 디자인보호법 혁신의 주요 내용(일본어)	2010-09-06

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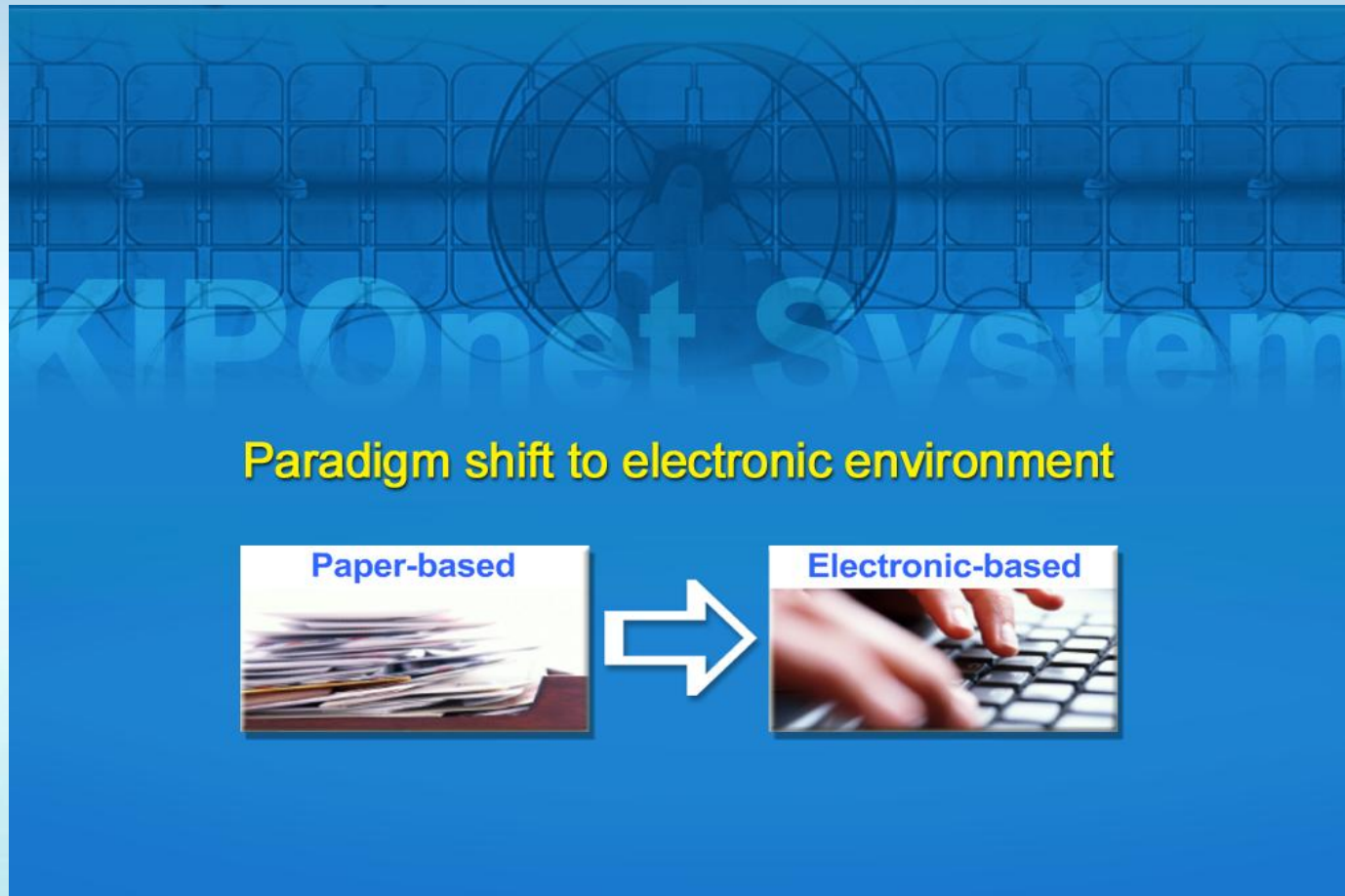
**Benefits of KIPOnet**

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Global KIPO

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Lessons to be shared



### Profound changes in IPR administration

**Electronic process**

**On-line filing**

**Computerized searching**

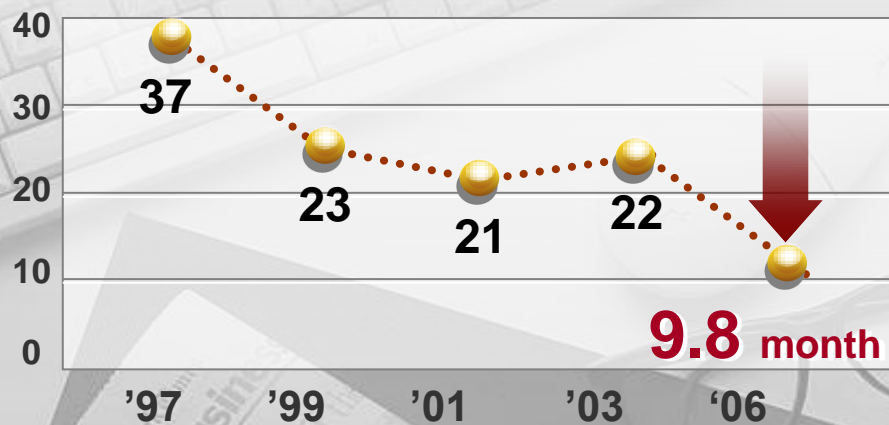
**Electronic approval**

**On-line fee-payment**

- o Traditional business process
- o Paper filing
- o Manual searching
- o Traditional approval
- o Manual fee-payment

## Examination period for patent applications

- Shortened to 9.8 months through enhanced efficiency



## Economic benefit

- 39 million dollars saved from gazette publication ('05)
- 63.8 million dollars saved from administrative cost ('05)



<Korea Information Society Agency, 2006>

- **Cost-saving by electronic documents**
  - fee reduction for e-filing
- **Opportunity cost saving**
  - on-line filing
  - on-line search of patent information



<Korea Information Society Agency, 2006>





- ✓ On the customer's side, opportunity cost savings thanks to e-filing and computerized IP search amounted to more than 7.3 billion dollars between 1999 and 2008.

### <Customers Opportunity Cost Savings due to the Improvement of Public Services>

(Unit: US \$ million)

Section	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Savings
E-filing	1.8	2.4	2.9	8.2	9.1	10.5	11.9	13.3	14	14	88.1
Search	60.4	165.1	330.1	401.7	465	536.1	621.4	1044.3	1493	2127.3	7244.4
Total	62.2	167.5	333	409.9	474.1	546.6	633.3	1057.6	1507	2141.3	7332.5

(US \$1 = KR ₩ 1,052.65 )

(These figures may be different from other sources due to the assumed exchange rate.)

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Lessons to be shared

Since the launch of the KIPOnet in 1999, more than 34 Intellectual Property Offices (IPOs) have benchmarked KIPOnet in modernizing their IP examination and administration systems.

KIPO is providing technical consultation to several countries on office automation and is enhancing cooperation with other IPOs and international organizations such as WIPO and APEC.

**In collaboration with WIPO, KIPO developed the PCT-Receiving Office Administration system, so-called PCT-ROAD in 2005.**

- ✓ As at 2010, this system has been deployed to 28 countries around the world, including Brazil, Peru, Mongol, Singapore, Uzbekistan and the Eurasian Patent Organization.
- ✓ PCT-ROAD has contributed to increasing the e-filing rate of international patent applications and decreasing the digital divide between developed and developing PCT member states.



- **ISP (Information Strategy Plan) Consulting**  
: Brazil, Philippines, Papua New Guinea, Taiwan, Thailand, Peru, Vietnam, India
- **Feasibility Study for technical cooperation**
  - Indonesia, Vietnam, Philippines (2007)
  - Mongolia (2008)
  - Uzbekistan (2009)
- **Development of IP office automation system**

## Source of funding

- **Economic Development Cooperation Fund (EDCF)**
- **Grant (from Korean International Cooperation Agency)**

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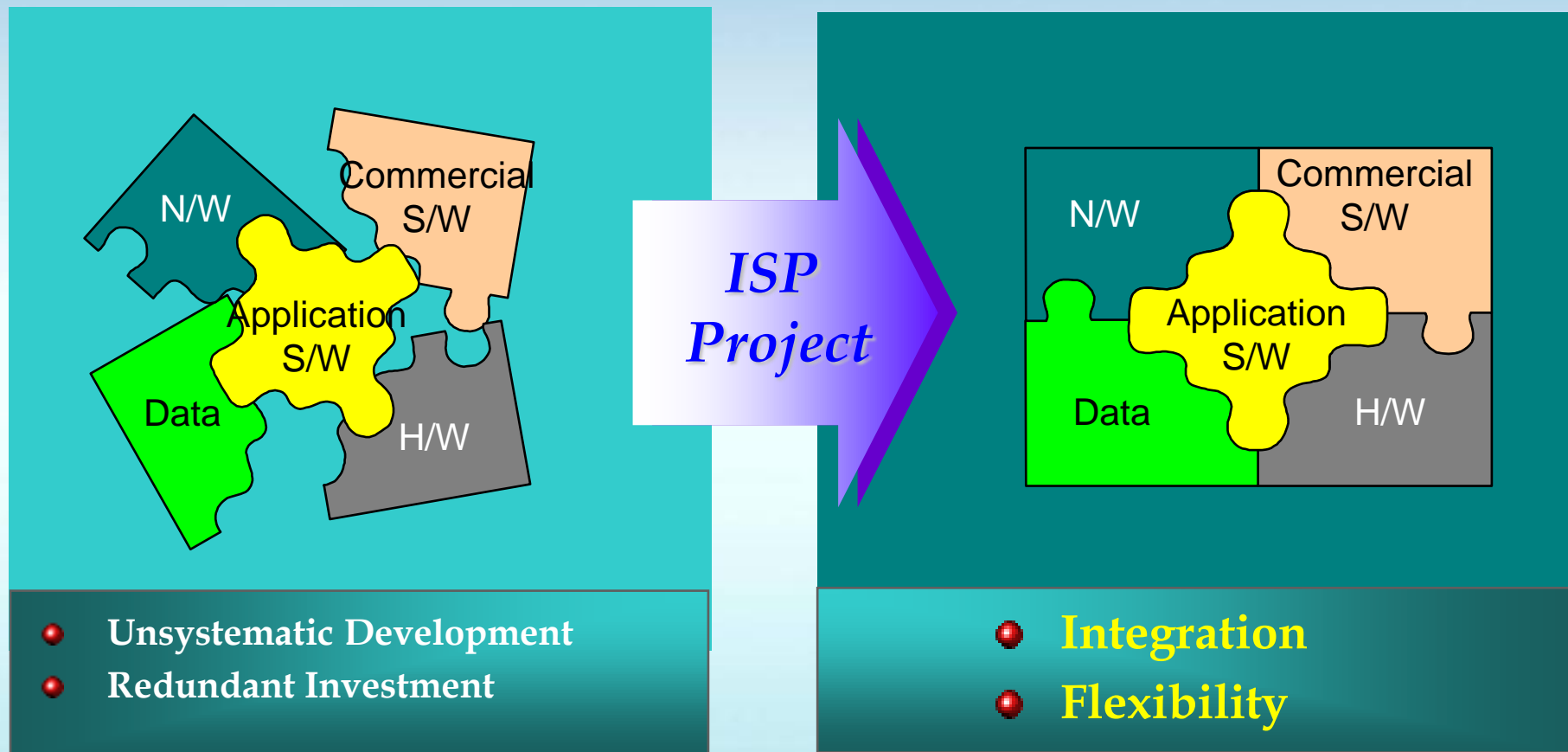
Benefits of KIPOnet

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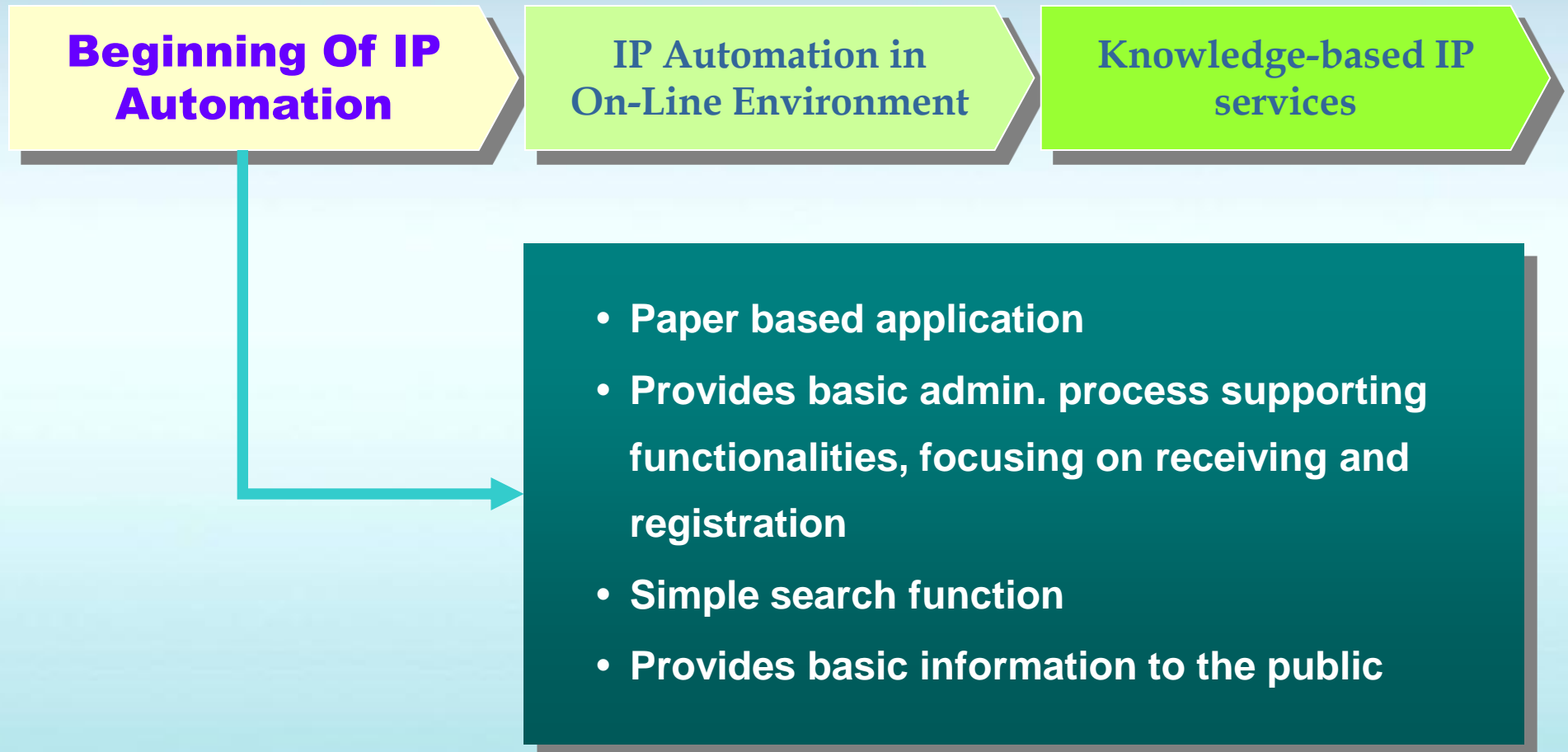
**“An automation system, development of which takes more than three years, is often outdated before its completion.”**

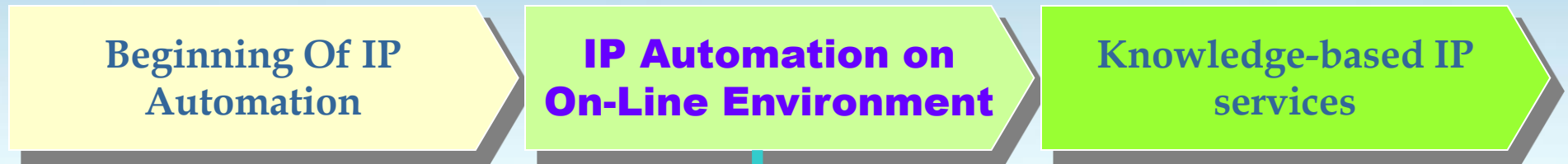
**“Such case is not rare in a rapidly changing IP and IT environment .”**



## *Changes after launch of KIPOnet (1999)*

- **IT newly available**
  - XML DBMS (Extensible Markup Language  
Data Base Management System)
  - Workflow
  - VPN (Virtual Private Network )
  - EAM (Enterprise Access Management )
  - ESM (Enterprise Security Management )





- E-filing
- Electronic gazette publication (by CD-ROM)
- Automated IPR administration
- Provides integrated search functionalities
- Provides various information services to the public
- Electronic document handling
- Interface with other government agencies
- Streamlined and standardized processes

Beginning Of IP  
Automation

IP Automation on  
On-Line Environment

**Knowledge-based IP  
services**

- High value-added services using accumulated data
- Provides various training courses by e-learning system
- Provides knowledge-based IP administration environment to IPO staffs and the public
- Connects with other IPOs for information exchange
- Standardized processes reflecting PLT, TLT, Madrid Protocol, etc.

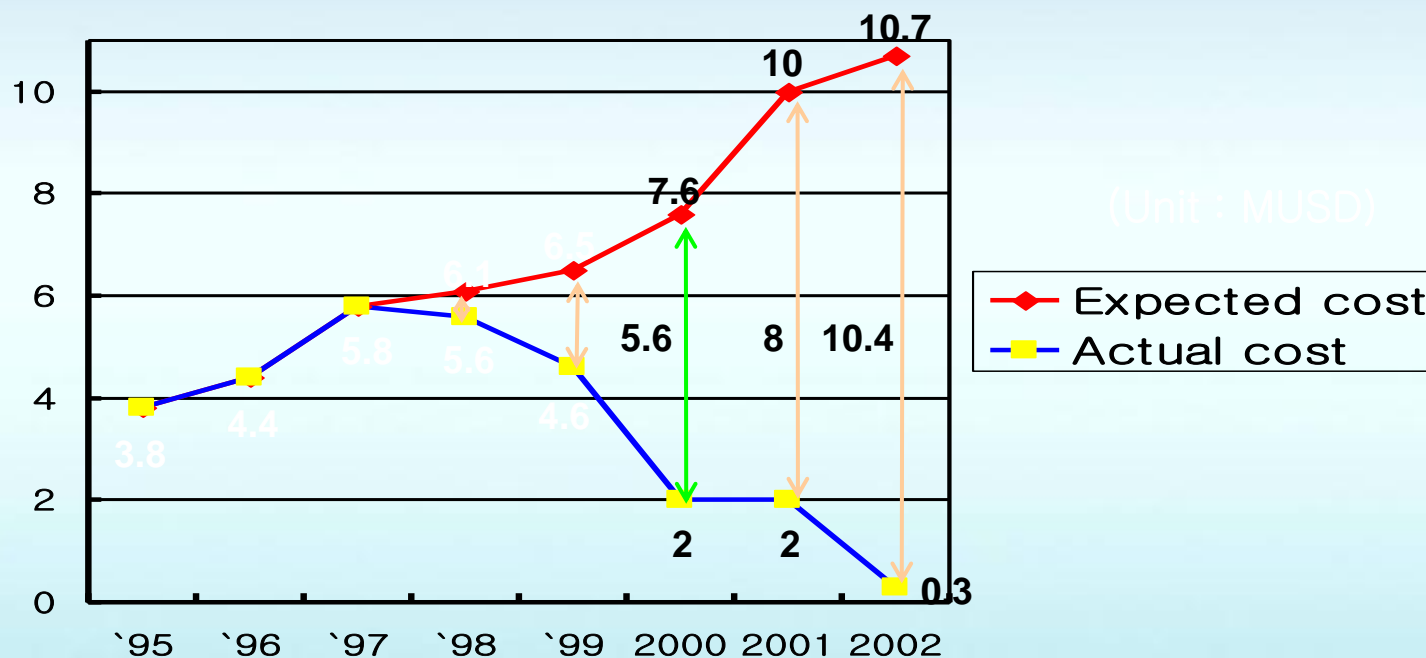
- **Divide Automation project into several phases**
- **Clarify goals of each phase** and keep the number of the goals within manageable level
- **Begin a project in the next phase**  
after acquiring internal and external supports  
by completing projects in the prior phase successfully

## *This strategy is useful*

- to show the benefit of automation
- to secure budget and other resources necessary for further automation

## Focus in e-filing and e-gazettes

### ➤ Online Publication( CD-ROM & Internet)



**- The saved budget is reinvested for further automation.**

- **Nationwide Internet Infrastructure (2003)**
  - Internet users : 64.5% of the population
  - 70% of them subscribed High-speed network
- **An IPO cannot change national IT Infrastructure (2003)**
- **Document Digitalization Center can be an alternative**
  - **When Internet Infrastructure is not sufficient**



*Thank you.*

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