

北投

尋幽殊未已，言訪北投泉；  
曲路陰迴壑，海流碧噴煙，  
土膏溫弱苻，溪色澹霏煙，  
苦憶湯山淥，明陵在眼前。

民初·梁啟超

關渡

南北安瀾頌禹勲，而今渡口各成紋。  
誰將素練中拖界，却把洄潮兩道分。  
二水蒼茫含皓魄，雙條縹緲暗斜曛。  
莫嫌欲濟無舟楫，幾度津頭思不群。

清·黃敬

烏來

鐵綫橋邊屋數椽，天寒地熱水浮煙。  
一泓澈澈能除病，半日清閒可樂禪。  
濁世幾時拋俗慮，深山是處得溫泉。  
解衣浴罷吾忘我，林影溪聲共灑然。

清·魏清德

臺北文廟

宮牆萬仞睹重新，憶有餘灰歷劫塵。  
振觸滄桑懷舊感，仰瞻俎豆溯前陳。  
尼山道統圓山外，泗水源通淡水濱。  
夫子天將爲木鐸，淹留麗島覺斯民。

清·顏笏山









# The promotion of technologicalization in criminal investigation<sup>1</sup>

Hu Han-Guang<sup>2</sup>



1. In the era of technology 4.0, the Internet is everywhere. Which with the power of connection not only joins people to people, but also people to things, things to things, and facilitates the "Connection Economy". The most commonly seen are the changes of currency and payment methods. In the past, you paid with banknotes, now you can pay with your smartphone and pick up the goods at the same time. Even bank remittances, investments, accounting, taxes filing and many more can be done through the Internet (Technology 4.0 the new business model in the era of internet, author Kenichi Ohmae, translated by Chen Meiyu, published by Kadokawa Taiwan Corporation on September 27, 2017). Under the trend of this era, Taipei District Prosecutors Office is working hard on technological and digital programs, hoping to improve the efficiency of investigation and keep up with the times.

2. This article is compiled by Section Chief Hu Han-Guang.



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III Conclusion



## **I. Foreword**

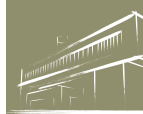
The development of science and technology are in tremendous speed. The technologized and digitized products have been closely connected to the daily activities of human beings. In response to the rapidly changing times, environment and the needs of the public, the criminal investigation and prosecution administration must keep pace with the times by using technology to strengthen investigation practice and enhance administrative efficiency, Taipei District Prosecutors Office has set up a "Technology Enhancement Team" aiming to get rid of traditional thinking and to introduce increasingly matured intellectual technology to assist promoting various services and enhancing the functions of the prosecution agency in order to achieve "quality", "efficiency", "specialty" and "expediency".

## **II. Sourcing Technology Equipment to Assist Investigation**

### **Promotion**

#### **A. The Science and Technology Investigation Center**

The Prosecutors Office has always attached great importance to the enhancement of scientific and technological investigation capabilities. Since 2012 to 2013, the Prosecutors Office began to develop our own drug database. In 2015, it received funding from the Ministry of Science and Technology's Science and Technology Development Plan to augment the drug information. In addition, it is also expected that the communication monitoring of the traditional communication records will become increasingly inadequate. In 2016, the Prosecutors Office took the lead in purchasing mobile phone identification



tools for drills. In 2017, the effectiveness has effectively assisted the prosecutor. The results of the case handling were also highly valued by the Taiwan High Prosecutor's Office. the Prosecutors Office's excellent experience in combining drug investigation and digital collection was promoted nationwide. In 2018, it was further supported by the implementation of the major anti-drug policy and the digital collection in the whole country.

On January 14 2019, the "Northern Seizure, Price Change and Digital Collection Education Training Center" was launched. The Center combines with the establishment and maintenance the "Drug Enforcement Database" and the "Digital Collection Office" of the Prosecutors Office. Then the Prosecutors Office set up the "Investigation and Case Handling Centre" to enhance the use of their technological equipment, digital information and space. The Prosecutors Office will continue to train and strengthen all law enforcement colleagues core competencies of extracting, analyzing, reading and judging digital information. Furthermore, the Center also centralizes the local prosecutors office in the northern region to conduct education and training , and at the same time, they can timely support other local prosecutors office or assist the police, Investigation bureau, coast guard administration, military police command, independent commission against corruption, immigration administration and other criminal investigation agencies. In order to achieve the goal of resource sharing and maximization of efficiency.



## B. Remote-surveillance Equipments

To accompany with times change and improvement of economic activities, financial crimes are also increasing. Financial crimes are related to professional commercial and accounting knowledge. It's a time-and-wits consuming battle for prosecutors to tackle with suspects.

The Prosecutors Office is in the political and economic center. The types of economic activities diverse, so do the techniques of financial activities. Except for team handling, The Prosecutors Office uses technological devices to fight against financial crimes. Remote-surveillance equipments are adopted to synchronously monitor interrogation records of investigation court. It helps the team to figure out problems and find out contradiction of each suspect. Through mobile instant messaging applications, prosecutors of the team can call the suspect out to avoid being misled.

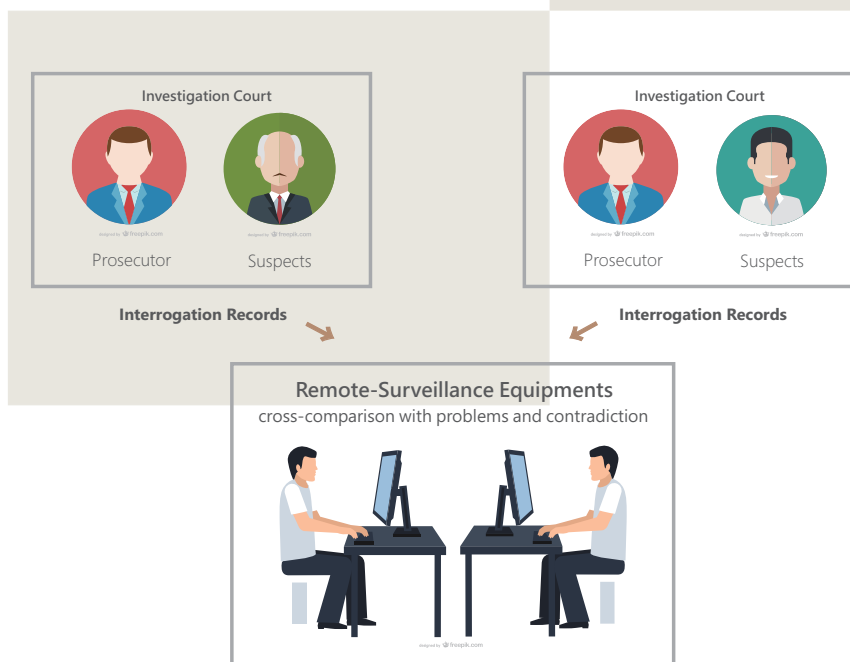
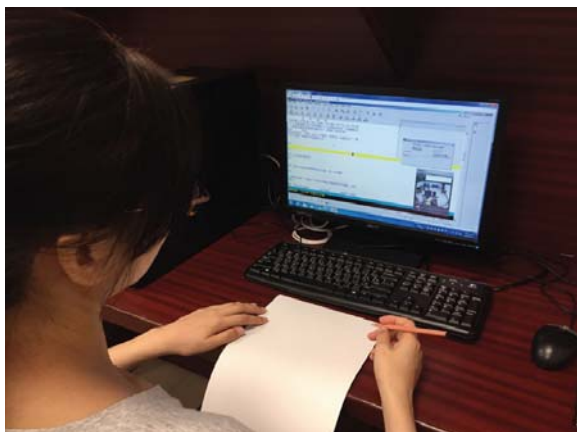
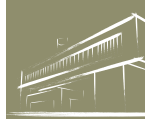


diagram of remote-surveillance devices



2019.05.14 The team adopts remote-surveillance equipments to synchronously monitor interrogation records of investigation court



2019.05.14 Cross-comparison with records of each investigation court and find out contradiction



2019.06.10 Team Investigation Center



2019.07.09 performed presentation of Technology Anti-bribery Center



2019.07.09 simulated synchronous interrogation screen at Technology Anti-bribery Center



2019.07.09 performed presentation of Technology Anti-bribery Center





### C. Records Retention and Management

Records retention and management of Prosecutors Office is an essential part of testimony in history of judicial heritage. As the technology advances, the applications of technological products toward specialization, standardization and informationization could lighten the burden on our fellow workers and could improve work efficiency

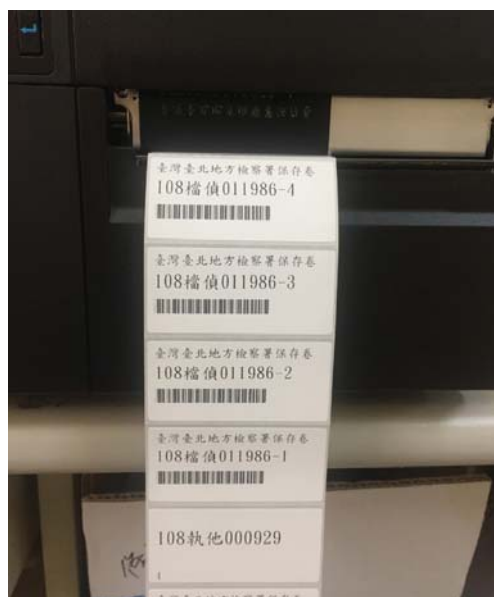
The following are problems that need to be solved while filing documents with barcode recognition.

1. There are some problems like paper jam or blurry barcode scanning matters while operators in archive room print barcode labels by using laser printer.
2. Barcodes on documents before December 2018 were incompatible with our file tracking and management system and were hard to read. Information cannot be displayed while using barcode scanner for check-in/check-out. After December 2018 file number can be displayed, but other information like dates or section in charge still cannot be displayed while using barcode scanner for check-in/check-out.

In response to the questions above, we had purchased two barcode printers for identification with higher performance on 1st, May 2019. As for other matters, we had submitted an application to ask MOJ to improve functionality for other information could be displayed while using barcode scanner for check-in/check-out.



The barcode printer newly purchased in archive room




Quality improvement and identification with higher performance are caused by the new barcode printer

#### D. Expanding of payment instruments diversification to achieve diminishing of cash payment

With the rapid development of information or network technology and the increase in mobile phone penetration rate, consumers are increasingly dependent on mobile devices, affecting consumers' consumption behaviors and payment habits; in order to provide convenient payment methods for citizens and take into consideration of criminal policy purposes, how to expand the diversification feasibility of payment instruments on the existing basis, implement the concept of serving the people, and achieve the goal of reducing cash payment.

The Office collects fees such as criminal bail, criminal fines, deferred prosecution payments, data usage fees (lawyers view, hand-copy, duplicate and copy files). However, the current criminal bail and criminal fines payment process restricts the surety and the sentenced person (payer) can only raise or withdraw



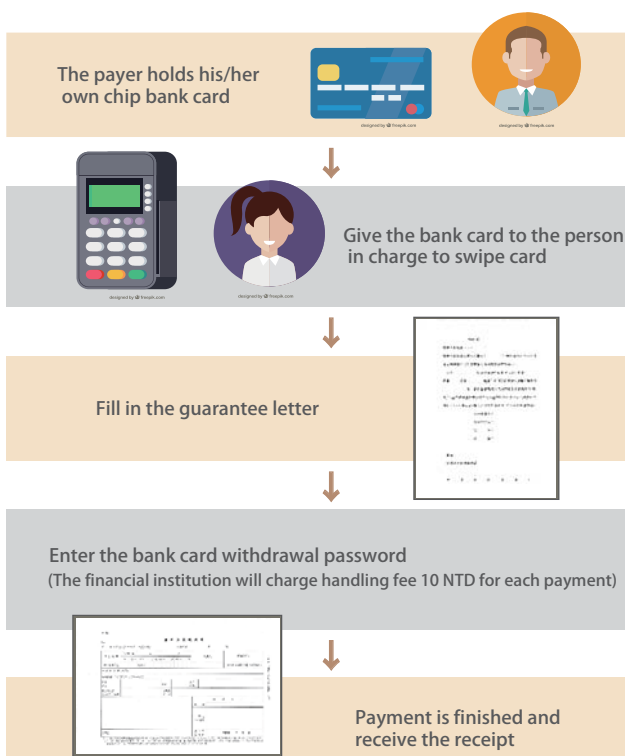


cash, which is inconvenient, especially the public is not easy to raise money or has the safety doubt on cash withdrawal at night. And the cashiers or the night duty bailiffs are responsible for the risk of keeping large amounts of cash and accepting counterfeit bills.

The Office's statistics on the criminal bail payment of 2 million NTD less accounted for 99.5% in 2018. Since April 18 2019 the bank card has been used to pay the criminal bail, criminal fines, and the deferred prosecution payments. The maximum amount is still stipulated by each bank (minimum of 100,000 NTD and up to 3 million NTD). The financial institution will charge the cardholder a handling fee of 10 NTD calculated in each payment.

From the implementation from April 18 2019 to May 21 2019, the parties used the bank card to pay the total amount of the lawsuits as follows: 4 criminal bail(total 630,000 NTD) , 2 fines (total 173,000 NTD), deferred prosecution payments(90,000 NTD).

At the same time as the implementation of the bank card payment, the Office will also plan to gradually promote the payment by the JKOPAY, the Taiwan Pay and the EASY CARD bundled with bank card, and apply to the criminal fines, the deferred prosecution payments, and the payment of the data usage fee. Providing convenient payment methods for the public and taking into account the purpose of criminal policy, implementing the concept of serving the people and achieving the goal of reducing cash payments, it is expected to be fully implemented on August 16 2019.



The process of the financial card payment to criminal bail, criminal fines, and the deferred prosecution payments



Financial card payment POS machine



The Enforcement Department sets up a POS machine for the public to pay criminal fines and deferred prosecution payments



At night, during the holiday, a criminal bail can be paid in the Bailiffs Office by bank card



The Office sets up a POS machine for counter 7 of the Service Center to facilitate public payment



E. Prosecutorial documents were stamped and binded on automatically

Technology change with each passing day and with the progress of the times, many work projects have used machinery to replace human in order to reducing the workload of staff and improving work efficiency and quality. Our office purchase the printing equipment based on professional needs to decrease to shorten the printing and stampind timetable for the prosecutorial documents, Improve the efficiency of document printing, simplify the process of document transfer and reach the goal of energy conservation and carbon reduction. In other hand, it could prevent clerks and seal Manager from occupational injuries caused by the repetitive stamping actions and heavy workload.

Our office surmount all obstacles and difficulties to raise funds of 1.27 million NTD, develop software programs with manufacturers, purchase the RISO ComColor printer which could print documents in red and black inkjet and low temperature without exhaust gas and toner production. It would be high-speed with software developed by the manufacturer for printing and binding the prosecutorial documents which need to be autographed by clerks and affixed the agencies seal and tally impression such as indictments, written rulings not to prosecute, written rulings of deferred prosecution, prosecutor's requests for summary judgment on a sentence, additional prosection indictments, written rulings of setting aside a ruling of deferred prosecution and written rulings of withdrawal of a prosecution.



Prosecutorial documents were stamped and bound on automatically--RISO ComColor printer



108.05.16 The Chief Prosecutor and the supervisor of each department inspect the RISO ComColor printer



108.05.16 The Achievement of automated manufacturing prosecutorial documents

The Comparison Chart between the Prosecutorial documents Automatic and traditional printing

	Copying Prosecutorial documents by photocopier	Automatic printing, stamping, binding
work process	<ol style="list-style-type: none"> <li>1. The clerk in charge of the case has to edit original prosecutorial documents, copy about 10 to 15 copies with photocopier, bind by himself and make the laborers send documents to the seal manager.</li> <li>2. The seal manager affixes the agencies seal and tally impression and ask the laborers to sent documents back to the case clerk.</li> </ol>	<ol style="list-style-type: none"> <li>1. The clerk in charge of the case edits original prosecutorial documents with system and saves the prosecutorial documents with barcode as a PDF file after confirming that the content is correct. Opening this PDF file and affixing the stamp of position name and signer in autographed field with software developed by the manufacturer. Uploading the file after coding the amount of copies then.</li> <li>2. The seal manager downloads the file with the software offered by the manufacturer, affixing the agencies seal, printing the designated amount by the printing equipment. Printing the prosecutorial documents, stamping, affixing the tally impression and binding could be finished at once.</li> </ol>
Summary process	The clerk in charge of the case has to copy the prosecutorial documents with photocopier by himself and send the prosecutorial documents to the seal manager for affixing the agencies seal and tally impression. The prosecutorial documents would be sent back to the case clerk then. The work process is complex and time consuming.	The clerk in charge of the case uploads the PDF file of prosecutorial documents to server, then the seal manager finishes downloading the file, printing the prosecutorial documents, stamping, affixing the tally impression and binding at once and sends back to the case clerk. It would be a saving of time and labour.
Printing type	Black	Black and red
Consumables	Toner	Ink
Environmental quality	Less environmentally friendly for exhaust gas and toner production	More environmentally friendly for inkjet printing in low temperature
power consumption	About 2400 watt	About 350 to 450 watt in 95% efficiency
Printing rate	65 pages per min	120 pages per min
occupational injuries caused by the repetitive actions	V	X



#### F. Application of technical equipments for enhancing the security of our office

Bailiffs were responsible for the security tasks and always stood in the first line. As the amount of criminal cases increased, the amount of diverse security incidents also increased, and so did the burden of the bailiffs. Thus, the flexibility of reacting to diverse security incidents faced more and more challenges. How to adopt technical equipments to efficiently assist the tasks of bailiffs and even to reduce the dependence of manpower became an important topic.

Our office had already adopted technical equipments, as mentioned below, to enhance the security and reduce the burden of our bailiffs.

1. Using access control equipment as a substitute for bailiffs: For those suspects or prisoners waiting for interrogation in the temporary detention room, multiple access control equipments were installed in their moving routes. This measure increased the inconvenience of passing these gates so as to reduce the possibility of escape.
2. Using hand-held metal detector to exactly implement body inspection: When implementing body inspection to a suspect or a prisoner waiting for interrogation in the temporary detention room, a bailiff could practice not only by hand but also by a metal detector. With the assistance of the metal detector, the positions prone to be ignored or the dead ends occurred in hand inspection could be exactly examined, thus avoiding the contrabands to be carried.
3. Using metal detection doors and X-ray baggage scanners to assist access control: With metal detection doors and X-ray baggage scanners, bailiffs could detect the contents of the baggages through the screen, without the need of







multiple access control equipments were installed in the temporary detention room



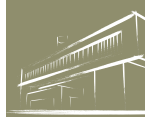
Using hand-held metal detector to exactly implement body inspection

actually opening the baggages. This measure not only eliminates the pontenial disputes between the inspector and the examinee, but also promoted the efficiency of monitoring the objects carried in or out through the entrance.

4.Using video surveillance system as auxiliar for bailiffs: The surveillance camera lens were installed in the entrance of the fifth floor of our office building, and was linked to the monitor screen installed in the duty table of the fourth floor. Thus , bailiffs were no longer deployed in the entrance of the fifth floor and the situation of that entrance was monitored, via a screen, by the on-duty bailiff deployed in the fourth floor to save the manpower.

5.Using video surveillance system as auxiliar for bailiffs: Bailiffs patrolling on line or standing in the important sentry stations were equipped with hand-held radio intercom, wireless headphones, and even micro cameras. So, the bailiff center could communicated with them instantly and they could also record in time when encountering sudden incidents.

In addition to applying the previously mentioned technical equipments, our bailiff office also set up a emergency team and the rule of duty bailiff officer. Through the architecture of layered responsibilities to specify the task of staff members, and through



Using metal detection doors and X-ray baggage scanners to assist access control



Using video surveillance system as auxiliar for bailiffs

the communication implemented by the radio intercoms to achieve the integration of command, the efficiency of bailiff duties and the capability of response to sudden incidents were highly elevated.

### III. Conclusion

The "Technology Enhancement Team" of Taipei District Prosecutors Office consists of the Prosecutors , the Prosecutor Investigators, the Information Management Office, the Records Section, the Enforcement Section, the Documentation Section, the Research and Evaluation Section, the Data Section and the General Affairs Section. The Chief Secretary of Taipei District Prosecutors Office is the convener of this team and the Chief of the Documentation Section serves as the Executive Secretary. This team continues to study and think about how to use technology and how to introduce relevant technological equipment to assist the operation of criminal investigation and prosecution administration affairs in order to achieve the goals of investigation preciseness, professional case handling, simplifying operation procedure and hence to reduce the workload of our colleagues and to improve work efficiency and the quality of citizen services.