

# Policing Photography Technology in China<sup>\*</sup>

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**Abstract** - Policing photography generalized, documentary photography refers to all the activities associated with police work. The narrow sense refers specifically refers to the police law enforcement activities in a variety of documentary photography. Policing photography originated in the era of black and white film photography technology popularization and application. 1800 first appeared in the London Police (Scotland Yard). The development of policing photography in China, roughly divided into three important historical stage of development, from 20th Century 50's in the early to the late 70's is the phase of reference and learning; from the early 80's to mid 90 is popularization and improvement stage; from the late 90's to today, it is reforming and the innovation stage. At present, the development of policing photography technology in China, it is toward the high-tech industry and high-tech direction, exploring its continuous improvement and innovation on the road.

**Index Terms** - Chinese police, policing photography, history, development process, development trends

## 1. Introduction

"Policing Photography" is a China type formulation. It is a new concept along with Chinese public security science and technology and its application scope expands gradually formed.

Policing photography generalized, documentary photography refers to all the activities associated with police work. For example, in the case of detection, security management, security, rescue, image advertising and other work, the use of photographic methods, description of the work process, record job scenario, showing the progress of work, and to save characters, events or objects, such as image file information with police work. Policing photography is general photography in public safety industry applications<sup>[1]</sup>. From the perspective of this understanding, it belongs to an industry working photography categories. Its photographic process, can be said to be a way of police work. Because it is police work content, methods, results reflect. As various photographic image data obtained by the police, there are some image data is a live recording of police operational work, there are some image data is copied documents related to the case evidence or documentary evidence, and some photos or video data is disclosed or confirmed as direct evidence of a crime.

Generalized policing photography, In addition to including criminal investigations, security management, public safety and other police operations photographic work outside, also included in the police scientific photography, police news photography etc.

Policing photography narrowly, specifically refers to the police law enforcement activities in a variety of documentary photography. For example, engaging in crime scene investigation work of professional police, in criminal cases detected, Public Security Case Investigation or the processing of road traffic accidents, in accordance with the jurisdiction of the case, and site inspection the procedures and regulations, with photographic equipment as tools, the use of the expression in the form of a combination of images and text, record case occurred site to its original state or related changes, fixed site and the details of traces or article.<sup>[2]</sup> It is expressed site law enforcement scenarios, describe the content and form of the scene forensics, display field investigation or in the field dispose with the results and processes etc. These are part of the police scene investigation photography, it is the basic content of Policing photography. To understand from this meaning, it is the police investigation to find and collect clues or evidence of a technical method, also a kind of investigative measures and means, its photographic process is a process of site investigation work, legal process<sup>[3]</sup>. As for the crime scene photographs or video material, is an important part of the crime scene investigation records. Site survey records contain, written records, live drawings and photographic data complementary and mutually confirmed<sup>[4]</sup>. Narrowly Policing photography, the main content of photographic including: inquest, examination, interrogations, search, seizure, detention, experimental investigation, inquired, interrogation and other investigative acts scenes and the process of its implementation. Sometimes also includes: Face to face someone or something pointed out that to assist the investigation, joint prevention, tracking and surveillance, manhunt, check stolen money, handover stolen property, work report and other spot photography, as well ways to use photography reflecting incidental physical evidence; written evidence; video sources of evidence or technical expertise in identifying ways and means.

With the upgrading of photographic equipment and digital photography technology application, And general photographic technique approached people's lives and work, policing photography from start-up to the transition steering, From the integration of resources to technological innovation, and the simultaneous development of modern science and technology and public security technology, after a long and winding development road.

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## 2. Origin of Policing Photography

Policing photography originated in the black and white film photography<sup>[5]</sup> to promote the application the era. At that time, the use of photographic way to record the scene of the crime scene, visualize reproduce the original state of the crime scene evidence, first appeared in the United Kingdom. According to historical records, 1800's Scotland Yard first ever filmed scene investigations photos.

Since then, policing photography is as a crime clues discover and evidence preservation techniques, as an important part of forensic science and technology, has been widely used in the case detective work of various countries.<sup>[6]</sup> In the prosecution, trial activities, various types of crime scene's photography information by a large number of cited, as part of cases evidence. In the history of both Chinese and foreign police can find many examples.

Photography services in the case of detective work in China for a long time. Since the founding of New China, earliest spread Policing photography knowledge and skills's textbooks, was written by the former Soviet Union, Moscow State University's "criminal countermeasures study" (upper and lower volumes) a book. In the of this book "Judicial Photography" chapter, specifically describes the nature of the task and role of crime scene photography, well as Crime scene photography's basic content and general methods.

In China, the history of research and application Policing photography, can be traced back to the twentieth century the mid-50s.

## 3. Development process of Policing photographic in China

From theory to applied practice, Policing photography in China's development process can be divided into stages of For Reference and Learning, popularization and improvement, transformation and innovation.

### A. Reference and Learning stage

At the end of 1949 to the beginning of the 1950, engaged in photography work in the interior of China's public security organs staff, mainly composed of individual retained personnel of the Republic of China and the Soviet Union experts old police "mentoring" novice. Number is little, photographic equipment is extremely limited, only the city of Beijing, Tianjin, Shanghai, Shenyang, Chongqing, Nanjing, Qingdao and other cameras such as part of an illicit technology. For the country as a whole, basically is a blank.<sup>[7]</sup> With the increasing of Chinese politics and law in public security colleges have been established all levels and professional and technical training opportunities, funds, plus the scene urgent demand for professional photography personnel work, as well as black and white photo printing process for the special requirements of employees, which is a professional photography among the ranks of China's public security organs, the schedule has been mentioned in this period.

After 1955, all levels of Public Security university of politics and law police short-term courses, training class opened gradually begin to move towards the normalization,

institutionalization. Among them, criminal photography, imparting knowledge and skills, from the exchange of experience in business seminars, from theory to skill training courses, has been as one of the essential contents, business and technical training courses. Chinese police education and training in various forms and further study of the various channels, for the police departments at all levels to train and bring up the new China's first generation know the crime scene photography knowledge, with professional and technical personnel engaged in the crime scene photography practical working ability.

"During the ten years of the Cultural Revolution",<sup>[8]</sup> the construction of public security and technical team in China also have a significant impact, the professional and technical work under construction therefore forced to stop and interrupt, police departments once in a state of paralysis, serious loss of talents. In the "Cultural Revolution" period, the public security works to restart.

After 1974, in the work of public security technology in the recovery, in order to solve the shortage of professional and technical personnel, lean, leave no successor problem, local police departments at all levels have done a lot of work: to build the original public security technology departments and agencies canceled or merged; "sent to labor"<sup>[9]</sup> or removed from the public security organs of the original professional the backbone technology "implementation of the policy of"<sup>[10]</sup> back to the original units, mobilization, reinstatement to work; selection and recruitment of colleges and universities and resumed running law in public security college graduates, or from the grass-roots units at all levels of public security from the police, or recruits from the society, selected to the Central People's Public Security College (now the Chinese People's Public Security University), Central Police cadre school (now the China Criminal Police University) or regional Institute of political science and law, as well as provinces, later established municipal public security school, for professional learning and education, in a relatively short period of time, through professional training, training, technical training, self-study, and "Apprentice" and so on the many kinds of culture mode and method for our country's police department, timely delivery. A number of different forces play a vital role in restoring public security technology team and working at the time as soon as possible.

Because of the "ten years of the Cultural Revolution", in our city (county) of shared security department level and above equipped with police Photography Professionals, until twentieth century at the end of 70's began to become a reality. In this period of development, its characteristic is:

In the photography, are in use, small professional camera. The representative models are the earlier period fixed focus paraxial type framing camera, 6-8 inch sheet film outdoor machine and later the popularization and application of single lens, twin lens reflex viewfinder cameras and optional zoom lens, a million times electronic flash, close the accessories and equipment; representative brand has earlier period of Linda,

the, Lycra, imported Zorn camera and later popularized gulls, panda, Pearl River and other domestic brands of camera.

The use of earlier period of our country's police department in camera, although are empirical estimation of photometric, manual focus, manual control exposure without any automatic control function of the camera, but at that time can be regarded as the top product, generally has the optical glass lens, excellent mechanical shutter, manual winding, yellow spot focusing or cut like focusing methods. Application of the camera, the camera function expansion, the introduction of alien brand camera with electronic shutter, automatic metering or aperture priority, shutter priority, full automatic control mode, and some have been configured automatic focusing.

The popularization of photography, photographic materials utilized, there are negative (a photographic film or film) and positive (photo) photosensitive material to, choose to utilize Kodak products earlier period. Until the last century 70 generations later, because the localization of photographic materials, photographic film, the police began to use domestic ad, Shanghai, southern series products, photo paper mainly use domestic ad, Xiamen products, the individual also use other imported products, for example, the use of Fuji panchromatic film, using originating in Hungary Yale import paper. According to the unique sense of color film, police common varieties of panchromatic film, color film separations and blind. According to the sensitivity of discrete, the ordinary varieties of more than ISO200 (soprano), ISO100 (medium), ISO50 (muted) film. According to the film specifications

#### *B. Popularization and improvement stage*

After 1979, national implementation of "foreign reform, open, liven" policy <sup>[11]</sup>, the public security organ to the face of the rapid development of national economic construction and the political situation of stability and unity, how to play the study and application of how to adapt to the development of the times, the important role of escort the scientific technology of public security police work, has become a major research topic Chinese police. Among them, strategic planning on the technical team in China Criminal Science and standardization, specialization, modernization of the concept of crime scene photography, normalization and standardization, special research on police special photographic equipment, the introduction and development of the crime scene photography and evidence theory and method, as well as the criminal photography specialty construction, criminal science and technology the discipline construction, public security technology education research and practice, has been hot topic, topic, teaching practice of the new proposition of industry.

Along with the progress of science and technology of public security, public security academic prosperity, frequent public security technology exchange, technical cooperation, security technology and equipment renewal, the public security and technical team to enrich and stability, security and technical personnel to improve the position and to improve the

treatment, full-time and part-time personnel engaged in Police photography inside the public security organs at all levels of our country the huge increase, number, covering almost all levels of every criminal investigation department (bureau), the police team (Department), a special service to the scene investigation, the special investigation and evidence inspection work of the professional photography team emerge as the times require.

In the ranks of the invisible, a number of police photography "academic" senior scholars, the backbone of scientific research and the application of "type" of renowned experts, technical experts talent showing itself. In this period of development, its characteristic is:

The reason of photographic equipment to accelerate the pace of localization due to the introduction of Japanese imports substantial sales, imported brands of camera production technology, in police photography, police camera, chooses the Japanese production and domestic well-known trademark camera. The earlier period the use of unfamiliar brands has a Ricoh, yeshiva, Minolta, while domestic brands mainly gulls, Pearl River SLR camera series. Later, will be gradually replaced by a large number of entering the Chinese market Japan Canon, Nikon SLR camera and domestic Phoenix SLR camera series.

In twentieth Century 80 in the early 1990s, when the color film photography global vogue, Kodak Konica Agfa, Fuji., color film production companies look to the Chinese market, have come to China looking for agents, temporarily between foreign Cajun monopoly and imported paper printing a body shop across large, in Chinese city, color photographic materials abroad the production of large amounts of consumption in China, the birth of the technological progress of domestic color photographic materials, color printing equipment development and production enterprises, domestic brands represent -- was lucky series of photographic materials, further boosting the development of color film and printing consumables nationalization, popularization and domestic technology and industry, popularization and color photography technology in china.

At the same time, big city police department of political science and law, some domestic police colleges, engaged in police photography, forensic photography research scholars, experts and technical backbone of the business, the first purchase of equipment of color film, color film, color paper Aisha chemicals, film processing machine, color photo enlarger, the color red safety light, automatic punching machine, color dryer color photos artificial seminal discharge, began a special study of color photography used in the police work. Some units to form the group related to the subject, from the color film photography technology to track the product promotion trend, from the experimental study of color film trial to the case of field color photography technology, analyzed and demonstrated necessity, application of color film photography technology in police work is feasible, the crime scene photography the color film photography, preparation conditions.

Application of black and white film photography when the scene in China is still not fully road to maturity, color film photography, first successfully used in the murder scene photography practice, has the epoch-making significance for the expansion of the crime scene photography technology upgrades and color photography technology application. In twentieth Century the mid 80's to the early 90's, is a color film photography art and technology in China's rapid spread period, is also our country public security departments in the recommended the use of color film, color photography technology introduction and digestion, unified and normative case crime scene photography program and method at the same time, the popularity of Policing photography knowledge and skills to the grass-roots public security unit of time.

From the mid-1980s began, black and white film of reduced production, range gradually reduced, increasing the amount of color film, using a range gradually expanded.<sup>[12]</sup> In Policing photography, black and white film and color film and use.

The vast majority of provincial and municipal police departments, and individual needs in the murder case scenario reproduces the effect of color photography, on-site inspection article traces photography, has started using Kodak, Fuji, Konica, or Lucky color negative film, the main use of the local ordinary generation of impulse generation of photofinishing store expansion, easy and fast access to color photographs taken at the crime scene. Of course, there are some units and departments, to use their own Simple Caijuan wash, color photographs of the crime scene amplification equipment made color photos.

Because color than black and white printing process Chongkuo demanding, through manual operation and get a color photograph, in addition to a wealth of experience and in strict accordance with dispensing prescriptions, according to Chong unwinding phase process, but also need to have regular fixed temperature, filtered color color correction hardware conditions, even so, sometimes it is difficult to control the print quality. In addition, because the artificial color red color put into a higher cost of equipment and materials, high energy consumption, low-volume production efficiency and other problems can not be solved, as well as the development of brewing and crime scene photography, evidence photography ministerial standards were introduced of the crime scene photos of the production quality standards put forward higher requirements and other reasons, there are many provinces across the country, municipal Criminal Investigation department purchased Caijuan Kodak, Fuji or Noritsu etc. Caizhao Chongkuo automation equipment to meet the system and its subordinate units of the growing film and color photos automation, standardization, quality production needs.

In 1986, Chinese character input method Wangmawubi universal application to guide the initial Chinese office automation work. Our police department and other departments, configure the computer and dot matrix printing equipment 286/386 since then, at the crime scene photo files of production, from the front cover, inside front cover, Table

of Contents, Introduction to the merits of all text within the page photograph, hand-written way gradually being abolished, computer typing became popular, the standardization work at the crime scene photo system volume is a big step forward.

Into the late 1980s, color film photography in crime scene photography application coverage has expanded from initially limited in the murder, a large site survey to be used in the case, and gradually developed into a general case in the field, such as theft exploration can also be used, especially in the black and white photo prints prints inconvenience or relatively poor conditions of public security department, as well as new or newly formed police department business, science, the, team, color film photography first to enter into these units Policing and departments among the criminal investigation department in the country, the crime scene is only part of the color film photography color photo printing outlets no no universal remote areas.

Although the introduction of color film photography, a great alternative to black and white film photography intention, however, black and white film photography research and application in police work, and not because of the introduction of color film photography stagnation, abolished. In contrast, during this period, the results of research and development related to police use live imaging device and product promotion after another, all kinds of special photographic techniques based on studies of black and white photography mode, a lot of research has been the formation of hot spots, and embarked on a public security toward depth Highland forefront of science and technology.

Policing photography in the development of this period, China's relevant laws and regulations of the sound also plays an important role, mainly in: photographic data with the case, not only as a clue to the handling department investigators used in more situations, can be directly used as legal evidence or transformed into a new kind of "audio-visual materials, electronic data" <sup>[13]</sup>, one of the relevant legal provisions have been written into the country's being, as with the case more and more into the photographic data litigation related links and prosecution, trial, found a legal basis.

### *C. Reforming and the innovation stage*

Along with the progress of communication technology and photography industry and industry toward digital imaging, the transition to digital image processing technology and the steering, research and development and popularization of digital camera, and the photographic feature phone, come one after another of the "global digital photography" and the rise, has aroused strong repercussions in the law circle of our nation and all levels of public security departments. In this period of development, its characteristic is:

In late twentieth Century 90, scientific research institution in China each big city public security technology, practical Department of criminal technology research units and some public security university of politics and law, has purchased a digital imaging equipment and the introduction of digital image processing system, with the digital image by the law

circle of China can be modified, proof and as a national debate the problem of evidence the feasibility, started the theoretical research and the scientific experiments related to the work.

Digital photography technology, new methods, first as a new way of investigation, in the crime clues found, successful application of secret investigation, confession, evidence that the practice of backup.<sup>[14]</sup> Digital cameras use earlier period, in the domestic digital camera, for example: Kodak household digital camera was popular, optical zoom lens and airframe integration, CCD photosensitive element, liquid crystal display, five AA batteries power supply, 16MB or 32MB CF card, 200,000 pixels, the main advantage is that the film that is significant, but straight to the computer to browse, fatal weakness is the image of coarse particles, low resolution, color reduction is poor, small picture quality and film the photograph comparing, also has the very big disparity. Canon, Nikon and other household digital camera appeared in the late period, the individual models with optional optical zoom lens special, using CAOS photosensitive element, liquid crystal display, lithium battery power supply, more than 32MB SD card, 500,000 or more pixels, images of fine particles, high resolution, color reproduction is good, ordinary photo production quality and film camera photos are compared, gap significantly reduced, the main problem is reduction of poor digital photo stereo feeling and the texture is not strong, detail characteristics of high light and shadow regions, true color reproduction. Methods of making the digital photograph: computer image into Digital Minilab printing system to produce the laser optical projection exposure photo paper, printing process after chemical exposure of digital color photographs; digital camera and sublimation photo printer, print directly connected to obtain digital color photos; digital image upload by computer control color ink jet printer or color laser printers print obtained digital color photographs.

At the beginning of 2000, with the Ministry of public security of China put forward the development strategy of science and technology to the police, to combat, household type, professional digital camera products has entered the Chinese public security grass-roots departments and units, mainly used for scientific research and other police work, image features and Photoshop digital image processing specialized software to handle Win98/2000/XP environment Office, ACD based on See, with the development of image technology professional young undergraduate, graduate and senior technical personnel to enrich public security technology team, a new generation of police college graduate students into the police department and quickly spread, development of relevant domestic software development company, college computer R & D cooperation with local public security departments professional traces of digital image acquisition system, police forensic image analysis and comparison system, in the economic developed area, the city public security departments under the drive of national public security departments, internal a self-study digital photography, digital image processing of the boom. Due to differences in regions, industries and the case-handling personnel know, digital

photography, digital image processing technology applied in the grass-roots public security departments, the once experienced waiting, watching, feeling attitude, at that time, the scene technicians shooting digital photos at the crime scene, only experimental research or as a the scene image data acquisition way, generally no breakthrough "cases will use film photography" area. In the case of the scene photography, is still the color film photography and traditional pictures of the world. For example: crime scene photography, digital and film photography and digital photography, first use the way of finding the composition view the best exposure parameters or check the real effect of ideal angle, light, and then use the film filmed, digital photography as a solid preparation, shooting results of the check and verification method. Another example: Exploration in the case of the scene, sometimes need to present discussion or to report to work, sometimes for preventing the scene photography of mistaking, leakage need to take important plot or scene in the film photography, before, after or at the same time, some digital photo shooting for standby.

After 2005, with the development of digital imaging, image processing hardware and software equipment and products to mature, standardized, high-tech, as well as the supplement, technology standard of our country public security industry relating to criminal digital photography technology index, revision and implementation of digital photography, case scene rapidly spread to China's public security the technical departments of the most basic level, at the same time, Canon G5 household digital camera of an earlier era of popular began to be later common Nikon X70/X80, Canon 400D/450D entry-level professional digital camera to replace, high-grade professional digital camera and video camera, Nikon Canon 200/300/7000 EOS1DS, Sony A1C/Z7, appeared in all levels of police around, digital camera, image acquisition card, flash memory cards, burn CDs, digital partner, scanner and other types of digital imaging equipment, storage media and general-purpose digital image processing software, excites pervasiveness in police operations and public security related advocacy work increased significantly. Domestic group of police use of electronic drawings, promote the use of electronic boom system volume, the introduction of a series of products for the development of image processing and image processing foreign material evidence related software, as well as crime scene digital photography new technologies, new methods of high, pushing the police Photography Research and application of technology, and gradually completed by the analog image to a digital image shift, a major change from the transformation of digital photography replaced film photography and so on.

Policing photographic technology and innovation in transition phase, its contribution to the theoretical study is: Along with the development of film photography technology matures, crime scene photography standardized construction and manufacturing volume of work, the advantages of digital imaging and digital image processing technology used in police work, extensive, feasibility, necessity seminars, film-

based photography the way the crime scene photography, pointing out the direction the steering transition, but also for the police work is inseparable from digital photography technology, gave full proof necessary to promote a systematic study of the theory and methods of policing digital photography and application of practice expansion.

During this period, police photography basic theory and applied research is very active, analytical testing and demonstration of image synthesis based on three components of the image of modern criminal imaging technology imaging tests, imaging new theory, a new police photographic technology development new round frame <sup>[15]</sup>, Chinese People's Public Security University Press, publishers and other people launched to criminal or criminal radiological imaging technology to prepare for the title, and the various versions of the college, undergraduate teaching, for example, China's Public Security University Professor Jiang Zhanqing edited the country's first "criminal digital image technology" teaching, first introduced the concept of digital photography scene photography among the police, the crime scene for the establishment of digital photography methodology system for digital imaging, digital image processing technology in China the popularity of the use of police work, has an important role in guiding.

To promote the application of its research results, mainly reflected in: Since the advent of digital photography and digital image processing methods, some technical methods of film photography began to disappear, to be replaced by new technology and methods <sup>[16]</sup>, while some technical methods to continue to spread, to be replaced by a new operational processes.

During this period, discussions wild scene aerial technology, 3D animation conversion and generation software product development engine scene roaming crime scene reconstruction scenarios for the production of high-tech, have begun to be applied in the case of detective work. For example, when using film shooting fingerprints, large photographic method commonly used in the original, is no longer used, replaced by a general proportion photographic approach. Because a proportion of any photographic digital photos, you can pass the image processing software to produce an original large digital photos, both simple and quick. As another example, when shooting panoramic photos using rotary continuous photographic method, hand-made or hand-pick a bottom discharge method stitching photos already eliminated, replaced the use of related image processing software for automated panorama stitching or artificial synthetic method of digital photos. During this period, discussions wild scene aerial technology, 3D animation conversion and generation software product development engine scene roaming crime scene reconstruction scenarios for the production of high-tech, have begun to be applied in the case of detective work.

Way digital imaging and digital image processing of the crime scene, and at the same time follow the film to be innovative photographic techniques, improved. For example,

the geometric correction of the image distortion traces of the past can only be captured through film negatives, adjust the angle of the paper placed less precise manual correction in the larger picture machine, and now digital imaging and digital image processing technology, can be the scanned image capture traces on the computer, use the command-related distortion correction tool and image processing software, the digital image deformation accurate artificial correction. Can also be used directly after the method of digital photography, select special scale proportionally photographic process photo shoot traces its deformation, deformation based on digital image correction processing environment, its precise artificial correction. Another example is the use of "Tianyuan", "Virtue" and other criminal cases in accordance with ministerial standards of developed-site volume crime scene photo system volume dedicated software that can help novice standardization of digital photo editing site of various cases volume, and direct print out paper photo files.

#### 4. The Development Trend in China

Photographic industrialization, science and technology, the popular trend, brought a complete change of photography industry, but also changed the way of people's life and work. The scene of digital imaging and digital image processing methods is changing the ideas and methods of work, the majority of the technical staff at the same time, also improve the position of modern policing photography technology related to policy.

In the research on Policing photography new theory and method, combining the digital photography and digital image processing technology, launched the fusion of heritage and contemporary digital photography method of classic film photography theory, its research fields and application scope is constantly extending. The traditional meaning of "criminal photography" of the word, the connotation and extension of the photography cannot be summarized in the contemporary sense, the traditional policing scene photography theory, to be replaced by the modern theory system of contemporary photography. From the present situation of research and application of Policing photography technology, its future development trend, can be summed up as follows:

##### *A. Surveillance video data into a crime scene investigation to reproduce the recorded part of the*

Along with our country "Sky net project" upgrade<sup>[17]</sup>, as well as all-weather high clear, the interval, photography and video surveillance system is widely used, help after the scene investigation, the center or near the crime scene taken by a surveillance camera crime situation and process of the video clips, and afterwards on-the-spot investigation perturbation of the scene, scene and pictures together, common case scene investigation and case fact, contribute to the site from the existing cases photos and CCTV images found more investigation clues, thus, give full play to the comprehensive utilization of image data case scene value, which extend the

image data of the scene acquisition range, and enhances the image data case scene expressive force.

#### *B. Multi-channel investigation clues and evidence for image information source, multi-angle found*

More police with professional digital camera, video camera, or with a high quality recording, photography, camera, mobile phone, police multi-function tablet computer, used to record the relevant police work what one sees and hears, for example, with filming for emergencies and it subsides, or shooting cases found in related scenes and scene protection, case investigation and the investigation and at that time, the first time for the first time, save the cases discovered after the alarm at the scene or other emergency situations encountered, the only conditions for collecting people, things, and the original image data, and audio and video synchronization acquisition in connection with the case of audio-visual materials, multiple channels help in the investigation clues and information source for video evidence, multi-angle, thus, further play important role in policing photography of criminal investigation<sup>[18]</sup>.

#### *C. Into the public security police photography technology modernization, inform atones action construction idea*

Accompanied by the public security technology modernization, inform atones action construction process, system introduced a better case spot electronic record, drawing and picture files to make integration, improved case scene photos record editing and production of electronic, integration and exploration methods, help to improve the crime scene investigation work efficiency and the working quality.

In the exploration process case scene, portable multichannel light, UV reflection photography detection system product replacement, as well as mobile wireless video surveillance system, the remote information exchange and command system, multispectral and hyper secretion imaging equipment and technology introduction, absorption and digestion, step by step from laboratory research to the case of practical application to solve in the work, will greatly enhance the spot traces, the public security image information data acquisition rate and utilization rate, at the same time, also will

promote the development and application of Policing photography technology and security related products, expand toward the high-tech and high-tech direction.

At present, based on Information Science, electronic science, computer science and digital media technology based on the practice of Chinese Policing photography, in theoretical research and practical application, are being explored for their continuous development and innovation.

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