The Chinese People’s Liberation Army Signals Intelligence and Cyber Reconnaissance Infrastructure

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Introduction

Communications are critical to everyday life. Governments rely on communications to receive information, develop policies, conduct foreign affairs, and manage administrative affairs. Businesses rely on communications for financial transactions, conducting trade, and managing supply chains. All forms of communications, such as home and office phones, cell phones, radios, data links, email, and text messages, rely on electronic transmissions that could be monitored by a third party. In the military, commanders rely on communications to coordinate operations, for logistics support, and to maintain situational awareness. Understanding of communication networks can also enable a perpetrator to disrupt or even destroy a target’s command and control centers should the need arise. Moreover, information collected and collated from intercepted diplomatic, military, commercial and financial communications offers potential competitors an advantage on the negotiation table or battlefield.

On July 19, 2010, the People’s Liberation Army (PLA) General Staff Department (GSD) unveiled the country’s first “Information Support (Assurance) Base” [中国解放军信息保障基地]. Unverified Chinese bulletin board site analyses concluded the base is China’s “cyber command,” tasked to deal with cyber threats and safeguard China’s national security. The organization within GSD to which this base reports remains uncertain, and, if known, would offer clues about its host and about the mission of the base itself. Regardless, the establishment of the base demonstrates the importance the PLA places on information technology and its role in future military development.

Indeed, the People’s Republic of China (PRC) has emerged as a global power in information and communications technology (ICT). Guided by a 15-year (2006-2020) development strategy, a priority of the Chinese Communist Party (CCP) and PRC government is the informatization [信息化] of its national civilian and military infrastructure as a means to ensure sustained economic growth, compete globally in the ICT realm, and ensure national security. Information dominance, whether for political, economic, or military purposes, requires mastery of both the electromagnetic spectrum and the global cyber sphere. The PLA GSD Third Department [总参三部] and Fourth Department [总参四部] are considered to be the two largest players in China’s burgeoning cyber-infrastructure.

This overview offers a preliminary examination of the PLA GSD Third Department, China’s premier cryptologic service. The CCP owes its success during the Chinese Civil War to signals intelligence (SIGINT) derived from interception and decoding of telegrams and radio communications. With modest origins in the 1930s, the Third Department was previously known as the Central Military Commission (CMC) Second Bureau and consisted of three entities responsible for collection, translation, and deciphering/encryption.

Today, the GSD Third Department and its counterparts within the PLA’s Military Regions (MRs), Air Force, Navy, and Second Artillery oversee a vast infrastructure for monitoring communications traffic from collection sites inside China, possibly from embassies and other facilities abroad, and perhaps from space-based assets in the future. Its network of assets are able — assuming sufficient interest and barring sophisticated encryption — to monitor almost any radio communication or phone call within line of sight of Third Department SIGINT.
stations. On the other hand, faced with increasing challenges to its communication systems and computer networks, the Third Department also has assumed the responsibility for assuring the security of PLA computer systems in order to prevent foreign adversaries from gaining access to sensitive national security information. These functions are encompassed under the concept of “technical reconnaissance” [技术侦察], which is the foundation of “informatized” warfare.7

Like its American counterpart, the National Security Agency (NSA), the GSD Third Department appears to be diversifying its traditional SIGINT mission. Cyber surveillance, or computer network exploitation (CNE) in the U.S. lexicon, represents the cutting edge of SIGINT and the Third Department may serve as the national executive agent for CNE.8 The GSD Third Department stands as a reasonable choice to act as the national PRC authority over cyber surveillance because of its traditional core competency in SIGINT, its high performance computing and encryption/decryption technical capabilities, and status as China’s largest employer of well trained linguists.9

Computer network operations (CNO) in China often are referred to as “network attack and defense” [网络攻防], based on the premise that “without understanding how to attack, one will not know how to defend.”10 In the U.S. lexicon, CNO includes computer network attack (CNA), CNE, and computer network defense (CND).11

This study offers a tentative baseline for assessing the GSD Third Department, affiliated Technical Reconnaissance Bureaus (TRBs), and supporting research and development organizations. An examination of this organization, its role and function would provide a mosaic with which to better evaluate China’s signal intelligence and cyber-infrastructure. Public information on the Third Department has been limited, with only tentative links drawn between the Third Department and CNE.12 That is because any assessment of a country’s SIGINT and CNE infrastructure can be a speculative endeavor. The data points assembled by this monograph points to an expansive yet stovepiped organization responsible for various facets of technical reconnaissance, including collection of wireless line of sight communications, satellite communications, cyber surveillance, network traffic analysis, network security, encryption and decryption, translation, and political, military, and economic analysis.

The study first examines the Third Department command structure and subordinate research institutes, and then offers an overview of the Third Department’s 12 operational bureaus. The discussion then focuses on the technical reconnaissance assets under each of the PLA’s seven MRs, Navy, Air Force, and Second Artillery Force.
Leadership and Technical Support

Nestled in the quaint Xianghongxi community in the western hills of Beijing’s Haidian District, the GSD Third Department manages a vast communications intercept infrastructure and cyber surveillance system targeting foreign diplomatic communications, military activity, economic entities, public education institutions, and individuals of interest. The Third Department headquarters complex is clustered together with the GSD Operations Department, including its 24 hour watch center in Xishan Mountain, the Academy of Military Science (AMS), and National Defense University (NDU). One unconfirmed report credits the Third Department with as many as 130,000 personnel working in general headquarters staff positions, 12 operational bureaus, and three research institutes. Third Department bureau, office, and section facilities and sites located throughout China report directly to Beijing, and are not under administrative jurisdiction of MR Commanders or Political Commissars.

Details on the Third Department leadership are scarce. Like other second level GSD departments, the Director and Political Commissar are equivalent to a Group Army Commander. Major General Meng Xuezheng [孟学政] is reported to be serving as the Third Department Director. Meng appears to have replaced Lieutenant General Wu Guohua [吴国华], who directed the Third Department between 2005 and December 2010, when Wu was assigned as Second Artillery Deputy Commander. One Western report claims that Wu Guohua was transferred out due to unauthorized cyber operations. As of late 2010, Major General Liu Xiaobei [刘晓北] served as the Third Department Political Commissar. Liu formerly served as the Third Department Deputy Director. Senior Colonel Zheng Junjie [郑俊杰] serves as a second Deputy Director. Zheng was formerly directed the Third Department’s S&T Equipment Bureau [科技装局].

The Third Department’s central command oversees headquarters, political, and logistics departments, as well as a Science and Technology (S&T) Intelligence Bureau [科技情报局].
56th Research Institute. The PLA owns some of the fastest supercomputers in the world. The 56th Research Institute, also known as the Jiangnan Computer Technology Research Institute [江南电脑科技研究所], is the PLA’s oldest and largest computing R&D organization. Located in Wuxi in Jiangsu Province, the institute is heavily invested in high performance computing, and supports the Third Department and other national-level computer centers. Supercomputing enables the making and breaking of sophisticated codes and passwords, which appear to be the mission of a counterpart Third Department research institute in Sichuan (see below). The Director of the 56th Institute, Huang Yongqin [黄永勤], is a member of the 863 Program Expert Working Group on Computing and Software.

57th Research Institute. The 57th Research Institute appears to be responsible for the development of communications intercept and signal processing systems. Formerly collocated with the First Bureau complex in the Dujiangyan area, the institute is based in Chengdu and also known as the Southwest Institute of Electronics and Telecommunications Technology [西南电子电信技术研究所]. Among the institute’s key focus areas is satellite communications technology, and it has been noted working with the China Academy of Space Technology on satellite R&D. The 57th Research Institute may have a subordinate office in Guangdong, and operates a site in Chengdu suburb of Shuangliu.

58th Research Institute. The 58th Research Institute appears to be focused on cryptology and information security technology. Based in Mianyang (Sichuan Province) and also known as the Southwest Automation Research Institute (SWAI) [西南自动化研究所], the 58th Research Institute Director is Yue Zengjin [岳曾敬]. The 58th Institute has a cooperative relationship with Nanjing University of Science and Technology [南京理工大学]. Other leading authorities assigned to or affiliated with the 58th Research Institute include Wei Zhengyao [魏正耀], Huang Minqiang [黄民强], and Nan Xianghao [南相浩].

The GSD Third Department is responsible for PLA CND and plays a central role within China’s national-level information security community. According to one U.S. study, Chinese analysts believe that the United States is already carrying out extensive CNE activities against Chinese servers. Therefore, from the Chinese perspective, defending computer networks must be the highest priority in peacetime. CND-related organizations managed by or affiliated with the Third Department include:

- The PLA Communications Security Bureau [通信机要局], China North Computation Center [北方计算中心], and the Third Department Computing Center [总参三部计算中心] in Beijing.
- Established in 2005, the National Research Center for Information Security Technology [国家信息技术安全研究中心] serves as the national authority on risk assessment for China’s network security.
- The PLA Information Security Evaluation and Certification Center [解放军信息安全测评认证中心].
- Information Security Research Institute [信息安全研究所] and National Information Center [国家信息中心], which maintains a close affiliation with the Third Department S&T Equipment Bureau.
The National Information Security Engineering Technology Center [国家信息安全工程技术研究中心] in Shanghai, managed alongside with the State Council’s Ministry of Science and Technology, National Crypto Management Center, State Secrecy Bureau, and Ministry of State Security. Training and education for Third Department personnel are generally conducted at one of two institutions. Most linguists assigned to Third Department bureaus and TRBs receive language training at the PLA University of Foreign Languages [解放军洛阳外语学院] in Luoyang, the rough counterpart of the Defense Language Institute (DLI) in Monterey, California. Upon graduation, they are assigned to a bureau for mission specific technical training. Technical training for electrical engineers, communications specialists, computer scientists, and network security personnel is conducted at the PLA Information Engineering University [解放军信息工程大学] in Zhengzhou, Henan Province. Personnel for regular duties, such as drivers, administration, facility security, and so forth, are recruited in the normal annual conscription. Personnel security requirements are likely more stringent than in other parts of the PLA, which gives the political commissar system increased stature.

Prominent PLA commentators have advocated greater integration of psychological operations and CNO, including organized efforts to monitor the internet and correct false information. Cyber network attack/defense has been linked with PLA psychological warfare training units with a primary function being to identify and counter perception management and ideological campaigns launched against China via computer networks. Key General Political Department (GPD) psychological warfare units with possible CNO missions include the 61023 Unit in Beijing and the 61716 Unit in Fujian.

Operational Third Department Bureaus

The GSD Third Department has direct authority over 12 operational bureaus. Eight of the 12 bureau headquarters are clustered in Beijing. Two others are based in Shanghai, one in Qingdao, and one in Wuhan. The Third Department’s 12 operational bureaus mostly likely report to the Headquarters Department. The operational bureaus are separate and distinct from TRBs under the PLA’s seven MRs, and the three Services: Air Force, Navy, and Second Artillery. TRB directors likely report to MR and Service Chiefs of Staff. However, the Third Department likely provides TRBs with policy guidance and tasking for collection and analysis.

The degree of control that the Third Department operational bureaus and TRBs exercise over militia and reserve assets under military districts is unknown. The militia makes up the third component of China’s armed forces, with the PLA and People’s Armed Police being the other two. One 2004 Sichuan Military District assessment calls for militia and reserves to play a more prominent role in network defense and attack, technical reconnaissance, and psychological operations. The Hubei Military District, for example, is partnered with Wuhan University’s Network Attack and Defense Center [武汉大学网络攻防中心].

Bureau-level directors and political commissars have grades equivalent to that of an army Division commander, and oversee between six and 14 subordinate sites or offices [chu; 处].
Office directors have a grade equivalent to a Deputy Division or Regiment commander. Sites/offices under bureaus are further divided into sections [科; ke], although some sections report directly to bureau headquarters. In addition to a liaison office in Shanghai, the Third Department manages a Hong Kong and Macao Liaison Bureau [总参三部港澳联络局] in Shenzhen.

Third Department bureaus likely have a specific mission, such as radio or satellite communications intercept, cryptology, translation, information assurance, and intelligence analysis. In addition to monitoring internal PLA communications traffic for security violations, Third Department offices and MR and MR/Service TRB intercept stations located around China’s periphery can monitor radio traffic and pinpoint the location of emitters through radio direction finding (e.g. homing). Specific Third Department bureaus with responsibilities for CNE remain opaque. The Third Department Seventh Bureau has been associated with technical aspects of cyber operations (see below). Regional bureaus, such as the Shanghai’s Second Bureau or Qingdao’s Fourth Bureau, may be responsible for translation of information attained from communications intercepts and cyber surveillance, and production of intelligence reports based on translated materials. The 12th Bureau, responsible for space-related technical reconnaissance, appears to have expanded in scope.

**First Bureau** (61786 Unit). The First Bureau headquarters is collocated with the Third Department command complex in northwestern Beijing. Overseeing at least 12 offices operating in various parts of China, the bureau appears to have a functional rather than regional mission. Formerly centered in the Chengdu suburb of Dujiangyan, the bureau’s mission appears to include decryption, encryption, and other information security tasks. The First Bureau, for example, is the only military representative on the national 863 Program Information Assurance Expert Working Group. At least one First Bureau element, possibly the Seventh Office, is based south of Dujiangyan. Although not in a formal subordinate relationship, the First Bureau likely maintains a close, mutually supportive relationship with related organizations in Chengdu, such as Sichuan University’s Information Security and Network Attack and Defense...
Laboratory [四川大学信息安全及网络攻防研究室]. Chengdu is also home to the GSD Third Department 57th Research Institute and the Chengdu MR First TRB (see below).

**Second Bureau** (61398 Unit). The Second Bureau appears to function as the Third Department’s premier entity targeting the United States and Canada, most likely focusing on political, economic, and military-related intelligence. Subordinate offices are concentrated in Shanghai, although one may be in the Kunming vicinity. More specifically, the Bureau’s Second Office is situated in Dachangzhen, and Third Office is based in Shanghai’s Changning District. The Fourth Office has a presence in the northern Shanghai suburb of Gucunzhen as well as Chongming Island. It appears to have a mobility mission. The Seventh Office is in Gaohangzhen. Yet another is Luodianshen. Another office is in Changning District on Yan’an Zhong Road.

**Third Bureau** (61785 Unit). Headquartered in the southern Beijing suburb of Daxing, the Third Bureau appears to have a functional mission. Given the dispersed nature of subordinate offices, the mission of the Third Bureau may be front end collection of line of sight radio communications, including border control networks, as well as direction finding, and emission control and security. The bureau has at least 13 subordinate units. Third Bureau offices are based in Harbin, Dalian, Beijing, Hangzhou, Ningdu County (Jiangxi), Xiamen, Shenzhen, Kunming, Xian, and Ürümqi. As of late 2010, Senior Colonel Wang Daowu [王道武] commanded the bureau and Li Shoukai [李守凯] served as Political Commissar. The Third Bureau’s Kunming office has been involved in counter-drug operations. Since 1992, the Third Bureau’s Fifth Office in Beijing’s southern Daxing District has been responsible for PLA emission security (e.g. TEMPEST). The Shenzhen office appears to have a unique mission, perhaps responsible for coverage of Hong Kong/Macao wireless networks.

**Fourth Bureau** (61419 Unit). Headquartered in Qingdao, the Fourth Bureau appears to be focused on Japan and Korea. Many of the Fourth Bureau offices, including the First, appear to be located in the Qingdao area. The Second Office incorporates Korean linguists. The Fourth Bureau’s Seventh Office is located in Hangzhou. Another office is located in Jimo City Wenlongzhen [即墨市温泉镇]. Other subordinate offices appear to be located in the Qingdao area, Dalian, Beijing, and Shanghai. The bureau was formerly based in the Shanxi provincial city of Xinzhou, specifically Huanglong Wanggou village. While its headquarters moved to Qingdao, the Fourth Bureau may still maintain its training base in Xinzhou.

**Fifth Bureau** (61565 Unit). Headquartered in Beijing’s Daxing District Huangcun Village, the Fifth Bureau appears to have a Russia-related mission. A substantial number of parabolic dish antennas--oriented toward a diverse range of azimuths--can be seen at the eastern end of the compound on Google Earth. Fifth Bureau offices are located in Heilongjiang’s Suihua City, Jiuquan and Xinjiang.
Sixth Bureau (61726 Unit). The Sixth Bureau is headquartered in Wuhan’s Wuchang District. Zhang Yunju [张运炬] serves as the Sixth Bureau Political Commissar. Bureau headquarters were centered in the area of Jingmen, Hubei Province until moving to Wuhan more than a decade ago. Sixth Bureau offices stretch across central China from the eastern coastal city of Xiamen to the Yunnan city of Kunming, indicating a Taiwan and South Asia mission. More specifically, offices are located in Xiamen, Nanchang (Seventh Office), Xiangfan; Ningdu County’s Xiaobu Village [小布镇], Wuhan, Jingmen, and Kunming’s Panlong District (Fourth Office). The Nanchang office may have a training mission.

Seventh Bureau (61580 Unit). Headquartered in Shucun area of Beijing’s northwest Haidian District, the Seventh Bureau’s mission is unclear. Selected bureau engineers specialize in computer network defense and attack, and have conducted joint studies with the PLA Information Engineering Academy Computer Network Attack and Defense section. Divided into at least 10 offices, the Seventh Bureau employs English translators. One Seventh Bureau study examined support vector machine (SVM) applications for detecting intrusion patterns. Two senior engineers outlined U.S. network centric warfare, while another published an assessment of the future of the internet and dense wavelength division multiplexing (DWDM). Another study focused on psychological and technical aspects of reading and interpreting written foreign language. Another addressed legal aspects of the global economy. The bureau manages a satellite ground station in the northwest Beijing suburb of Shangzhuang and oversees at least one element in Ürümqi area.
Eighth Bureau (61046 Unit). Nestled in Hanjiachuan [韩家川], the Eighth Bureau is adjacent to Third Department headquarters in Beijing’s northwest suburbs. It also appears to have a presence in Wenquanzhen [温泉镇] in far northwestern Beijing. Based on language capabilities of members assigned, the Eighth Bureau appears to focus on Western and Eastern Europe and perhaps rest of world (e.g. Middle East, Africa, and Latin America). Among its 10 offices, at least one major office is located in the Hainan Island city of Haikou. The Seventh Office is based in Hubei Province’s Xiangfan City. The Eighth Bureau satellite receiving station is in northwestern Beijing suburb of Xibeiwang.

Ninth Bureau. The Ninth Bureau appears to serve as the GSD Third Department’s primary strategic intelligence analysis and/or data base management entity. As of Spring 2010, Zhang Qinchen [张钦贞] served as Ninth Bureau Director. The Seventh Office appears to be involved in audio-visual technology [电子声像], and large scale data base management. Former Ninth Bureau Director Kuang Tao [邝涛] has been a prominent international relations commentator since retirement in the 2004 timeframe.

10th Bureau (61886 Unit). The 10th Bureau, sometimes referred to as the “7911 Unit,” is headquartered in Beijing’s northwest suburb of Shangdi on Xini Road. The 10th Bureau appears to have a Central Asia or Russia-related mission, perhaps focused specifically on telemetry and missile tracking and/or nuclear testing. The 10th Bureau First Office is said to be collocated with the 10th Bureau headquarters. The 10th Bureau’s Second Office (referred to as a 7911 Unit) is located in Xinjiang’s Yining City, near the Kazakhstan border. The Third Office is located in Kashgar’s Baren Village. Another 10th Bureau Office is in Ürümqi.

11th Bureau (61672 Unit). The 11th Bureau, also known as the “2020 Unit,” is headquartered in the Malianwa community, just east of the Third Department headquarters compound. The bureau headquarters was previously based in Jiamusi City in Heilongjiang Province until its move to Beijing in 2011. The distribution of offices throughout northern China and assignment
of Russian linguists indicate a Russia-related mission. With Russian linguists assigned to both entities, differences between the 11th and Fifth Bureau missions differ is unknown. The unit one time had a significant presence in the Hanzhong area, specifically in Chenggu County’s Xijiamiao Village [许家庙镇]. A “2020 Unit” has had a presence in the far northwestern Heilongjiang county of Jiage Daqi since 2005. Another office may be located in Ürümqi’s Anning District.

12th Bureau (61486 Unit). Headquartered in Shanghai’s Zhabei District, the 12th Bureau appears to have a functional mission involving satellites, likely inclusive of intercept of satellite communications and possibly space-based SIGINT collection. The Third Department’s 57th Research Institute has been noted working in conjunction with the CAST 50 Third Research Institute on a sub-system on board the Fengyun-3 (FY-3) weather satellite. Subordinate offices and sites in the Shanghai area, and in southeast, northeast, southwest, and northwestern China. The 12th Bureau’s Third Office is located in Shanghai’s Baoshan District and has sponsored research into extracting synthetic aperture radar (SAR) satellite images. The bureau’s southeast station began operations in the 2008-2009 timeframe and is located in Fuzhou’s Gangtoutzhen. Other 12th Bureau offices are situated in Taicang, just outside of Shanghai, and Hangzhou’s Daxiaogu Village. Its southwest site is situated outside Kunming in Songming County’s Yuejia Village, which appears to have been established within the last 10 years. The 12th Bureau’s northeast station is said to be located in Changchun’s Xinglongshan Village. A southern site is situated within Guangzhou Huadu District. Northwestern sites are located in Gansu and Xinjiang.

Military Region Technical Reconnaissance Bureaus

The Third Department’s 12 operational bureaus are separate and distinct from TRBs under the seven MR headquarters in Beijing, Chengdu, Guangzhou, Jinan, Lanzhou, Nanjing, and
Shenyang. Each Military Region Headquarters Department Chief of Staff exercises authority over at least one TRB. However, senior Third Department authorities in Beijing likely issue policy guidance and general tasking for TRB collection, analysis, and reporting. TRB missions may parallel those of the Third Department, and include communications intelligence, direction finding, traffic analysis, translation, cryptology, computer network defense, and computer network exploitation. However, their primary role is to support the MR command. Military Region TRBs also likely support border security forces.

**Beijing Military Region.** The Beijing MR TRB (66407 Unit) is headquartered in Beijing’s Xiangshan Mountain area. Assigned Russian linguists, subordinate offices appear to be based along the border in Inner Mongolia. For example, one key office may be based in the Hohhot town of Qiaobaozhen, with another situated in the Hailar area. The Eighth Office appears to be located in Neimeng Linhe.

**Chengdu Military Region.** The Chengdu MR has two TRBs. The Chengdu MR First TRB (78006 Unit) is headquartered in Chengdu. A requirement for English linguists has been noted. As of mid-2010, Senior Colonel Guan Yan served as the Chengdu MR First TRB Political Commissar. Western reporting has noted Chengdu MR First TRB as possibly being involved in CNE operations. The Chengdu MR Second TRB, assigned a cover designator of the 78020 Unit, is based in northern suburbs of Kunming with subordinate offices in Baoshan, Malipo, and other border cities.

**Guangzhou Military Region** (75770 Unit). The Guangzhou MR TRB is headquartered in the Guangzhou suburbs and oversees at least eight offices operating in southern China. As of Summer 2010, the Political Commissar is Hu Fuhui. Hu was subsequently transferred to the Guangzhou MR TRB, where he headed the Second Office. One office is in Guangzhou’s Huadu District, and another in the Guangzhou’s Baiyun District. Other offices are based in Shantou’s Nan’Ao County and just west of Sanya on Hainan Island. A senior engineer from the Hainan office was granted awards for network-related work, including possible surveillance of voice over internet protocol (VOIP). The Guangzhou MR TRB Eighth Bureau is in Shenzhen. The Guangzhou MR TRB Ninth Office, located in Guangzhou City, has been noted doing studies on internet viruses.

**Jinan Military Region.** The Jinan MR TRB (72959 Unit) is located in Jinan City, and is said to oversee 670 technical specialists. It includes an element dedicated toward microwave relay intercept. The bureau headquarters compound may be located in Jinan City at the far eastern end of Sushan Road. Overseeing at least eight offices manned by Korean, Japanese, English, and other language specialists, the Political Commissar is Fu Fengshou. The Fifth Office is collated with the bureau headquarters. The Jinan MR TRB’s Sixth Office appears to be located in Weihai.

**Lanzhou Military Region.** The Lanzhou MR oversees two TRBs. The Lanzhou MR First TRB (68002 Unit) is centered in the southern Lanzhou City’s Qilihe District. Dai Shemin serves as the bureau’s political commissar. Unlike other MRs, no subordinate offices under the Lanzhou MR First TRB could be identified. However, the Lanzhou MR’s Second TRB (69010 Unit) appears to be a play an important and unique role in China’s SIGINT community. The Lanzhou MR Second TRB is headquartered in Ürümqi’s Shuimogou village and has its roots in a section of the Third Department’s Second Bureau based in Xinjiang. It merged with the Xinjiang MR, becoming the Lanzhou MR’s second TRB in the mid-1980s. It has subordinate offices located in Kashi’s Shule County, Altay, and Yining that likely monitors
military activities along China’s borders with India, Pakistani, Afghanistan, Tajikistan, Kyrgyzstan, Kazakhstan, Russia, and Mongolia.131

**Nanjing Military Region.** The Nanjing MR Headquarters Department, led by former GSD Second Department Director Major General Yang Hui [杨晖], oversees two TRBs that are likely focused on Taiwan military and other communications and computer networks, as well as U.S. activity in the Western Pacific area of operations. The bureaus also may assist in maintaining the integrity of Nanjing MR networks.

The Nanjing MR First TRB (73610 Unit) is located in Nanjing City.132 At least one office may be located in Nanjing’s Zhuzhuang suburbs. The Third Office is situated in Shanghai’s Songjiang District’s Dongshi Village. However, it also appears to have a presence on Zhoushan Island. The Fifth or Sixth Office is in Shanghai’s Minhang District. The Seventh Office may be in Nanjing’s Zhuzhuang area. The Eighth Office may be in Hangzhou’s Jianggan District, or perhaps in Shangyu City Lihaizhen.133

The Nanjing MR’s Second TRB (73630 Unit) was founded upon the Fuzhou MR’s Third Bureau, and appears to be headquartered in an underground bunker complex in Fuzhou City’s Zhenbancun [阵坂村].134 The Nanjing MR Second TRB appears to focus almost exclusively on Taiwan. The First Office, Second Office, Fourth Office, and Sixth Office are located in Fuzhou’s Hongshan village, nestled in a bunker complex off Yuancuo Road area on Dafu Mountain. The Third Office is near the bureau headquarters on Feifeng Mountain in the Fuzhou community of Jianxin Village.135 Among a range of responsibilities, the Fifth Office appears to conduct political, military, and economic translation work, including from English to Chinese. The Seventh Office may be responsible for front end collection and is situated on Gushan [鼓山] in Fuzhou’s eastern Jin’an District.136 The Eighth Office, most likely also dedicated to front end signals collection, is situated along the Chinese mainland coast opposite Taipei on Dongjing Mountain in Donghanzhen [东瀚镇].137

**Shenyang Military Region** (65016 Unit). The Shenyang MR TRB headquarters is situated in Shenyang’s Dongling District. Focused on Russian, Korean, and Japanese targets, subordinate offices are located in Harbin, Dalian, Jiamusi, Heilongjiang’s Dongning County, Qiqihar’s Fuyu County, Inner Mongolia’s Hulunber, and Hunchun City.138

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**Service Technical Reconnaissance Bureaus**

Service TRBs appear to specialize in monitoring communications networks related to their specific areas of interest. Although unconfirmed, it appears that the PLA Air Force (PLAAF) and Navy (PLAN) technical reconnaissance units had formerly been under the MRs’ Air Force headquarters and PLAN North, East, and South Sea Fleets. Over the last several years, technical reconnaissance assets may have been consolidated under Air Force and Navy Headquarters Departments in Beijing in order to better leverage resources under centralized control.

**Air Force.** The PLAAF Headquarters Department oversees three TRBs responsible for monitoring of neighboring air forces and air activity around China’s periphery. PLAAF TRBs
likely conduct airborne SIGINT missions as well using military or civilian aircraft as platforms.

As an aside, PLAAF representatives have implied the adoption of independent computer network operations as an Air Force mission.\textsuperscript{139}

The PLAAF First TRB, assigned a cover designator of the 95830 Unit, is headquartered in Beijing’s Huangsi District. The PLAAF First TRB manages an underground network control center in the Western Hills. Among other functions, the First TRB may maintain a network of direction finding sites in northeastern and eastern China that support the national air defense mission. One subordinate PLAAF First TRB office is collocated with the bureau headquarters, has published studies on computer network security, and oversees elements in Xiaogan and Shenyang.\textsuperscript{140} Although unconfirmed, the PLAAF First TRB could support special airborne SIGINT collection missions launched from Nanyuan Airbase in Beijing’s southern suburbs.

The PLAAF Second TRB is most likely headquartered in Nanjing and oversees a network of collection and direction finding sites along the coast in Fujian and Guangdong.\textsuperscript{141} A primary mission presumably is monitoring of Republic of China Air Force (ROCAF) communications networks on Taiwan, including air tower, ground control intercept, and air to air communications. Taiwan’s introduction of advanced tactical data links under the Posheng program likely complicates the PLAAF technical reconnaissance mission. One key PLAAF Second TRB facility is located in Fuzhou City’s Donghazhen [东瀚镇], specifically on Dongjing Mountain, and possibly shares facilities with a Nanjing MR Second TRB office.\textsuperscript{142} Other PLAAF Second TRB offices/sites may be based in Shanghai, Fuzhou, Xiamen, and Guangzhou’s Xintang District. The PLAAF Second TRB is alleged to train new personnel at a site that is collocated with the Third Department Seventh Bureau’s satellite ground station in northwest Beijing.\textsuperscript{143}

The PLAAF Third TRB is headquartered in Chengdu’s Fenghuang Mountain.\textsuperscript{144} Established as recently as July 2004, subordinate PLAAF Third TRB sites most likely monitor air activity and air defense communication networks along China’s southwestern, western, and northwestern borders. The Third TRB may have as many as 13 subordinate regimental-level sites. One is a TRB office in the Hetian area, and indications exist of other elements near Ürümqi and in Ningxia.\textsuperscript{145}

**Navy.** The Navy oversees two TRBs bureaus that appear to be organized geographically. Indications exist of a reorganization that removed the Navy TRBs from the fleets and subordinated to Navy Headquarters Department. The Navy’s First TRB, probably assigned a cover designator of the 91746 Unit, is headquartered in Beijing. It appears to oversee at least 10 subordinate offices in northern China, including sites in Hunchun, Qingdao, and Yantai. The Navy’s Second TRB is headquartered in Xiamen’s Si’men District. Subordinate offices are located in Ningbo, Wenzhou, Xiamen, Shantou, and Haikou.\textsuperscript{146}

**Second Artillery.** Second Artillery Headquarters Department TRB (96669 Unit) appears to be based in Beijing’s Huilongguan suburb. Locations of subordinate elements have yet to be identified. The bureau’s political department director formerly served as Political Commissar of the Second Artillery’s communications command.\textsuperscript{147}

**The Third Department’s Active Counterpart: The GSD Fourth Department**

A discussion China’s cyber infrastructure would be incomplete without addressing the Third Department’s active, electronic warfare counterpart. Use of the doctrinal concept of “integrated network and electronic warfare” [网电一体战] implies an attempt to link computer network
attack and jamming, presumably under the purview of the GSD Fourth Department. Established in 1990, the Fourth Department has overall responsibility for electronic warfare (EW), including ELINT and tactical electronic support measures (ESM).

The Fourth Department, which could have possible computer network attack (CNA) responsibilities, has at least four bureaus, one brigade, and two regiments. The Fourth Department’s primary training and education organization for junior officers is the PLA Electronic Engineering Academy [解放军电子工程学院] in Hefei. The Fourth Department oversees the GSD 54th Research Institute, which most likely provides engineering support, and also maintains close links with a number of China Electronic Technology Corporation (CETC) entities, including the 29th Research Institute in Chengdu, the 36th Research Institute in Jiaxing, and the 38th Research Institute in Hefei.

Operational Fourth Department units include an ECM brigade with headquarters is in Langfang, Hebei Province and subordinate battalion-level entities located in Anhui, Jiangxi, Shandong, and other locations in China. At least two Fourth Department units are on Hainan Island, with one apparently dedicated to jamming of U.S. satellite assets. A regimental-level unit located on Hainan Island appears to have either operational or experimental satellite jamming responsibilities. Military Regions, Air Force, and Navy have at least one ECM regiment. The Third Department and GSD Fourth Department are said to jointly manage a network attack/defense training system [网络攻防训练系统].

Conclusion

The GSD Third Department oversees a vast bureaucracy responsible for monitoring foreign communications, assuring the security of PLA computer and communications networks, and conducting cyber surveillance on priority targets around the world. If information is power, then the GSD Third Department represents one of the most powerful bureaucracies in China today. Among its sources of strength is the country’s largest pool of well trained linguists specialized in niche areas, such as banking and financial transactions, military activities, energy, and diplomatic exchanges. The combination of SIGINT and CNE, for example, fusing transcripts of phone conversations with intercepted email exchanges, would enable a powerful understanding of plans, capabilities, and activities of an organization or individual in near real time. Key word and voice recognition technology and large data bases permit greater efficiency in collection directed against specific targets. Advanced computing facilitates breaking of all but the most sophisticated encryption and passwords. The linkage between CNO and PLA psychological warfare training units appears reasonable. Monitoring of communications, email accounts, websites, and internal networks could support sophisticated perception management operations.

Based on available information, a notional outline of Third Department SIGINT/CNE collection and analysis responsibilities could be postulated. The aforementioned discussion is tentative and theoretical, and intended to serve as a basis for further inquiry. First, functional Third Department bureaus may operate and process communications intercept systems. For example, the Third Department’s Third Bureau may be responsible for intercept and recording of VHF and UHF communications, including cellular phone and microwave networks within line of
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The Third Bureau collection may be augmented by communications intercepted by TRBs under the MRs, Air Force, Navy, and Second Artillery.

In addition to Third Bureau collection operations, Third Department 12th Bureau assets are dedicated toward intercept of foreign satellite communications. In addition to intercepting satellite communications from sites around China’s periphery, the 12th Bureau may also operate specialized equipment on board satellites that are capable of intercepting communications around the world from Chinese space-based systems. The 57th Institute’s role in the FY-3 weather satellite program could indicate at least an experimental space-based communications intelligence package. The PLA is already believed to operate a small number of electronic reconnaissance packages.

Regional bureaus appear to be responsible for translation, fused analysis, and reporting of raw communications intercepts collected by the Third and 12th Bureaus, and perhaps information collection through CNE assets. Whether or not regional bureaus have authority to task collection is unknown. The Third Department Second Bureau in Shanghai appears to be focused on the United States. Individual offices under the Second Bureau may be compartmented by specialty, for example one office dedicated to political issues, and others for economic, technology, military, and so forth. The Third Department Fourth Bureau, focused on Japan and Korea, could be organized along similar lines. The scope of the Sixth Bureau, headquartered in Wuhan, remains unclear. Subordinate offices stretch across central China from Xiamen to Kunming, suggesting a possible focus on Taiwan, southeast Asia, and South Asia. The Eighth Bureau appears focus on translation, analysis, and reporting on Western Europe.

A significant portion of Third Department collection and analytical resources are dedicated to the former Soviet Union. Three out of its 12 bureaus have a Russia-related mission – the Fifth Bureau headquartered south of Beijing, and 10th and 11th Bureaus based in northern Beijing. While speculative, the Fifth Bureau may have a translation, analysis, and reporting mission while the 10th and 11th Bureaus have functional missions, such as the 10th Bureau’s monitoring of Russian and Ukrainian missile tests and space launches. The mission of the Third Department 11th Bureau – the so-called the “2020 Unit” – remains a mystery.

Remaining bureaus may have other niche missions beyond collection and/or translation and reporting. The First Bureau may be responsible for encryption of communications intercepts to be transmitted via a dedicated, secure, and ensuring security of internal Third Department networks. It also may be responsible for decoding intercepted communications. A separate bureau, such as the Ninth, could be responsible for maintaining databases, and possibly for fused strategic analysis based on reporting from the Second, Fourth, and other regional bureaus.

Beyond its traditional SIGINT mission, the Third Department serves as the national authority for CND and most likely CNE. However, based on currently available information, there does not appear to be a Third Department bureau dedicated to the CNE mission. In addition to its encryption/decryption function, the Third Department First Bureau appears to have CND responsibilities, and hints exist that the Seventh Bureau may have some CNO role. However, the Seventh Bureau’s large ground station in northwestern Beijing, receiving from and transmitting to communication satellites positioned along the equator above Africa and the western Pacific, indicates a mission well beyond CNO.

Identifying specific units involved in CNE operations is difficult. Western reporting suggests that MR TRBs, such as the Chengdu MR First TRB, may have been involved in cyber
surveillance. Regardless, classified, internal networks of the Department of Defense, intelligence community, and rest of government presumably would be priority targets. In Senate testimony in 2011, Director of National Intelligence James Clapper outlined concerns about Chinese cyber surveillance, highlighting that the “Chinese have made a substantial investment in this area, they have a very large organization devoted to it and they’re pretty aggressive.”

The degree of control that the GSD Third Department and subordinate bureaus exercise over the TRB bureaucracies of the seven MRs, Air Force, Navy, Second Artillery, and Military Districts is unknown. If monitoring of the cybersphere and intrusion of foreign computer networks is an extension of SIGINT, then one could assume the Third Department prefers to operate surreptitiously. Alerting defenders of vulnerabilities within communications and computer networks seems to contradict a basic cryptologic principle. Third Department resources dedicated toward high performance computing—the best in China—and its large arsenal of competent linguists could constitute China’s cryptologic “A-Team.”

One possibility is that a capable yet overt “B Team” operates independently at the MR or Military District level. However, given its oversight of the cybersphere in China, alongside domestic law enforcement, Third Department authorities, at a minimum, are likely aware of CNE activities directed against foreign targets from Chinese soil. Regardless, if the “B Team” in China has been the main source of cyber surveillance, one should wonder what a GSD Third Department “A Team” could achieve when operating in a clandestine fashion.

As a final note, the linkage between psychological warfare and CNO indicates a broader perspective than that adopted in the United States. Rather than a narrow technical concern over hostile computer network attacks, Chinese authorities may also seek to counter the introduction of ideas and concepts deemed harmful to the CCP’s monopoly on state power. A priority of CNE operations may be identification of friends and foes in Washington through social network analysis.

Unsubstantiated rumors regarding the transfer of Third Department Director Wu Guohua for his inability to control CNE operations are interesting. If true, it appears that senior civilian leaders could have some understanding of the political damage caused by overt, hostile network penetration. The PRC government has legitimate information security concerns. However, aggressive and overt cyber surveillance directed against foreign targets does little to engender sympathy. The inability of the GSD Third Department to control intrusive cyber activities directed against foreign entities may indicate a profound weakness in the governance of China’s sprawling cyber-infrastructure.

1 The authors would like to extend appreciation to Dennis Blasko, Ellis Melvin, and the Leaker [漏斗子] for their useful insights, inputs, and/or comments.
2 The use of bao zhang [保障] most likely means “support” but could also be “assurance.” Initial indications suggest that the base is subordinate to the GSD Informatization Department, which was previous known as the GSD Communications Department. See “Our Hospital Examines Requirements of GSD Satellite Communications Station” [我院赴总参卫星通信总站调研卫勤保障需求], 309 Hospital website, May 17, 2011, at http://www.309gk.com/news_detail_xsdt.asp?id=8328.
4 Cryptology could be defined as the technical practice and study of secure communication in the presence
of third parties. The GSD Third Department is assigned a cover designator of the 61195 Unit.


8 See, for example, “Tracking GhostNet: Investigating a Cyber Espionage Network,” Information Warfare Monitor, March 29, 2009, at http://www.nartz.org/mirror/ghostnet.pdf. SIGINT consists of communications intelligence (COMINT) and electronic intelligence (ELINT). The latter involves collection, analysis, and storing of radar emissions. While Third Department has the COMINT portfolio, the GSD Fourth Department likely is responsible for ELINT. See Ian Easton and Mark Stokes, China’s Electronic Intelligence Satellite Developments: Implications for U.S. Air and Naval Operations (Arlington, VA: Project 2049 Institute, 23 February 2011).


14 The report asserts that due to the urging of Hu Jintao, Wu allegedly was assigned to the Second Artillery instead of forced retirement. See “Cyber-Warfare Chief Removed,” Intelligence Online, March 31, 2011. Born in March 1954, Wu Guohua was trained in Russia and spent most of his career at the PLA Foreign
Language Institute.


Senior Colonel Geng Ruihua [耿瑞华] serves as S&T Equipment Bureau Deputy Director as of August 2011. See “PLA University of Science and Technology, General Staff Third Department, Visits the Radio Reconnaissance Site Xiaobu to Observe Education” [解放军理工大学、总参三部到小布第一部无线电侦 察台旧址参观学习], Ningdu China government, http://www ningdu.gov.cn/zwzx/xzdt/201105/t20110503_58574.htm; Liu Xiangdong [刘向东] had previously been in the position. See Zhuang Hao-bin [庄浩滨], “National Information Security Engineering Technology Research Center establishes roots in Shenzhen” [国家信息安全工程技术研究中心"落地"深圳], Shenzhen News [深圳新闻网], October 2, 2008, http://www sznews.com/zhuanji/content/2008-10/12/content_3301180.htm; also see Fan Run-hu [樊润虎], “Vice President Xuan Yimin Leads Delegation to Beijing General Staff Third Department for Research and Exchange” [宣益民副校长带队赴北京总参三部调研交流], Science and Technology Agency [科技处], January 18, 2010, at http://zs njust edu.cn/news/news/xxw/20100118140939.htm. The bureau also oversees a Metrology Center [计量测试中心] (61236 Unit), which is in the Third Department headquarters area. For reference to the S&T Intelligence Bureau, see “GSD Third Department S&T Intelligence Bureau Visits Our School for Exchange Work” [总参三部科技情报局来我馆交流工作], cnliam.com, May 24, 2011, http://www cnliam com/node/168930.


For example, the 56th Research Institute may be linked with the National Information Assurance Engineering Technology Research Center [国家信息安全工程技术研究中心]. “SSL VPN Password Generator Passes National Cryptological Bureau Certification” [SSL VPN 密码机通过国家密码局鉴定], Sanjiang Space Group Communications Company website, May 14, 2011, at http://www ssnc com cn/Item/37.aspx. See “Chengdu City Southwest Electronics and Telecommunications Research Institutes Recruitment for


24 Yu Jian [余健] directs the institute, and has a grade equivalent to a deputy group army commander. Chen Huiqi [陈惠启] served as deputy director, and now appears to have been promoted to Political Commissar. Chen Huiqi was formerly 61849 Unit PC. Song Xuelei [宋学雷] and Meng Xiangping [孟祥平] are deputy directors. Cheng Jian [程健] serves as senior engineer, and Yu Ling [游凌] as deputy senior engineer. Sun Zhengbo [孙正波] is another senior engineer within the 57th Research Institute. Among various sources, see “Our School Signs Strategic Partnership Agreement with GSD 57th Research Institute” [我校与总参第五十七研究所签署战略合作协议], Xian University of Electronic S&T, March 15, 2011, at http://www.xdnice.com/news/2011-03/90181.html. The institute is located in Chengdu’s Wuhou District, 118 First Ring Road West, Section 1. The Shuangliu site is referred as a “work station” [双流工作站]. The Guangdong unit carries an MUCD of the 61849 Unit.


26 Director of SWAI [西南自动化研究所] as of early 2010 is Zuo Yanmin [左艳民].


28 “New Leap in Network Security Technology” [网络信息安全技术的新飞跃], Yanzhao (Hebei Province) Political Consultative Committee website, undated, at http://www.zswx.gov.cn/ReadNews.asp?NewsID=2578&BigClassName=%E5%A7%94%E5%91%08%E5%95%86%E5%8A%A1&SmallClassName=%E5%A7%94%E5%91%08%E5%95%86%E5%8A%A1&SpecialID=0. In the past, Huang was affiliated with a office under a unit with an old MUCD of the 57405 Unit.


30 Yao Jingsong [姚京松] is a key player within the Third Department Computing Center. The China North Computing Center is said to be involved in a number of major computing and information security projects, and is located at 100 Shaoziying, Haidian District. The center is said to be managed jointly with the National Computing Center. The Communications Security Bureau is the 通信机要局 in Chinese. The China North Computing Center [北方计算中心] has also been referred to as the 61539 Unit or “418所.”


32 For linkage between the PLA Information Security Evaluation and Certification Center [解放军信息安全测评认证中心] and the Third Bureau, see “High Tech Zone S&T Committee Holds Annual and Next Year Work Meeting” [高新区科技局年度工作总结及明年工作安排], Chengdu High Technology Development Zone website, October 10, 2008, at http://www.cnwzmz.com/zongjiebaogao/200810/77065_3.html. Wu
Shizhong [吴世忠] serves as Director of the Information Security Evaluation and Certification Center, although it is unclear if this is the PLA center or a civilian counterpart. Deputy Director of the PLA center is Zhou Xuefeng [周学锋], who previously commanded the 61377 Unit in Shenzhen.


35 In addition to the Third Department’s Luoyang language center [解放军外国语学院], the GSD Second Department may also have a foreign language training center in Nanjing.

36 The Information Engineering University was formed in 1999 through merging of several academies responsible for information engineering, surveying, and other specialties. The University’s website can be accessed at http://www.plaieu.cn/. The original PLA Information Engineering Academy was formed in 1985 and was formerly known as the Engineering Technology Academy [解放军工程技术学院]. A branch of the Information Engineering University (95811 Unit) is in the northwestern Yongfengxiang [永丰乡] suburb of Beijing, near the Seventh Bureau Satellite Ground Station. Use of an Air Force MUCD implies a possible Service link, and affi


38 See “Deeds of Wu Lianfeng [吴连丰事迹], Xinhua News (Hebei), March 14, 2007, at http://www.he.xinhuanet.com/test/2007-03/14/content_9531515_1.htm. For an interesting U.S. perspective on the linkage between cyber and psychological operations, see Christopher Ford, “China and
43 “Announcement of Advanced Information Security Courses for Young Professionals” [关于举办高校信息安全专业青年骨干教师高级研修班的通知], Wuhan University, April 27, 2007, at http://es.whu.edu.cn/article_view.php?id=725. Also see “Concept of Militia and Attack/Defense” [着眼军事准备大力推进民兵信息化建设], Gan


47 00006&name=

48 Bureau.

49 http://sy.mca.gov.cn/article/200805/20080500015675.shtml. The unit may be located south of Dujiangyan, in Jiezi Village [街子镇]. 61480 Unit Political Commissar as of 2010 was Jiang Yinghui [姜颖慧]. See Also see “City People’s Congress Leaders Pay Visit to 61480 Unit” [市人大领导慰问 61480 部队官兵], Chongzhou City National People’s Congress network, August 2, 2010, at http://jjj.chongzhou.gov.cn/sdbz.php?act=show&iid=127903&headpic=r d&tpl=bm&ccid=865&headpic=r d. A training-related office (61482 Unit) may be in Zhongxing Village [中兴镇].

50 Dujiangyan was formerly known as Guanxian [灌县].


53 For reference to the First, Eighth, and S&T Intelligence Bureaus in Hanjiachuan [韩家川], see http://sy.mca.gov.cn/article/200805/20080500015675.shtml. Li Jianhua [李建华] directs the expert working group. Other members include Chen Xiaohua [陈晓桦] from the MSS 13th Bureau.


50 Former 2nd Bureau Director Lu Peng [吕篷] now serves as Director of the Shanghai Institute for International Strategic Studies.

51 The Third Department Second Bureau was formerly the 57322 Unit. For reference to the Third Office (61587 Unit) in Changning, see “Construction Engineering Design Concept” [建设工程项目设计方案], Shanghai Tianqiao website, January 9, 2010, at [http://www.shgtj.gov.cn/ghsp/ghxk/gesifa/200903/t20090327_295374.htm](http://www.shgtj.gov.cn/ghsp/ghxk/gesifa/200903/t20090327_295374.htm). The office may have previously been assigned an MUCD of the 57343 Unit. Also see “Changning District Officials Visit GSD Third Office for Chinese New Year” [新春佳节长宁区领导慰问总参三处], Changning Cultural Bureau website, February 9, 2009, at [http://wgi.sh.gov.cn/node2/node741/node742/node753/11a35870.html](http://wgi.sh.gov.cn/node2/node741/node742/node753/11a35870.html).

52 The 61800 Unit or the 61398 Unit was formerly the 57334 Unit. As of Sept 2011, the 61398 Unit Fourth Office PC is [秦夕 银] serves as Fourth Office Political Commissar. The Fourth Office (61800 Unit) may previously have been known as the 57334 Unit.

53 The 61800 Unit or the 61398 Unit was formerly the 57334 Unit. As of Sept 2011, the 61398 Unit Fourth Office PC is [秦夕 银]. See [http://bsjyj.eicbs.com/Disp.Aspx?ID=25451&ClassID=632&UserID=..A](http://bsjyj.eicbs.com/Disp.Aspx?ID=25451&ClassID=632&UserID=..A) previous PC was Liu Qizheng [刘其正].

54 The 61789 Unit in Changning [长宁区] was formerly assigned a cover designator of the 57374 Unit. As of 2010, Gao Lei [高磊] served as Political Commissar. See “Jing’an Government Officials Visit Expo Security Forces” [静安区政府领导走访慰问驻区世博安保部队], Shanghai City website, November 12, 2010, at [http://www.shanghai.gov.cn/shanghai/node2314/node2315/node15343/u21ai458427.html](http://www.shanghai.gov.cn/shanghai/node2314/node2315/node15343/u21ai458427.html). The unit address is 810 Yan’an Zhong Road [延安中路 810 号]. The Luodianzhen office cover designator may be the 61158 Unit.


57 Dalian (61120 Unit) is the Third Bureau’s First Office. Formerly designated the 57346 Unit, the Sixth Office (61542 Unit) appears to be situated in Xian. For reference to Ningdu, see “GSD Third Department Officers Conduct Revolutionary Education in Ningdu County” [总参三部军官在宁都县进行革命传统教育], Red Star News, September 9, 2009 at [http://www.zg1929.com/news/yaowen/20090909/919.html](http://www.zg1929.com/news/yaowen/20090909/919.html). Former Director, Third Bureau Political Department was Zhao Zhenqing [赵振庆], who was noted traveling to Ningdu County in 2009. In the mid-2000s, Third Bureau director was Chen Daiyi [陈诗义]. Another key Third Bureau figure is Xiao Jinghua [肖京华]. Possible office cover designators are: Harbin (61401 Unit), Dalian (61120 Unit), Hangzhou (61791 Unit), Xiamen (61816 Unit), Shenzhen (either the 61377 or 61508 Unit), and Xian (61542 Unit).

Department Director. Zhao Jiaping [赵家平] serves as Deputy Political Commissar and Wang Hong [王宏] is Director, Political Department.

The Third Bureau Kunming office (61538 Unit) was formerly designated the 57344 Unit. Another affiliated previous MUCD may be the 57341 Unit. For discussion of the Third Bureau’s Kunming site, see “Advanced on the National Anti-Drug Effort” [全国禁毒战线先进集体及先进个人代表简要事迹], China Network, June 2, 2007, at http://www.china.com.cn/law/zhuanti/ylzp/2007-06/02/content_8332019.htm.

See “Overview of China Liberation Army Secrecy Committee Technology Security Institute” [中国人民解放军保密委技术安全研究所简介], Baomi.com.cn, at http://www.baomi.com.cn/?article-36.html. The unit is under the Third Department’s Logistics Department, and affiliated with the PLA Secrecy Committee Technology Security Institute [解放军保密委员会安全技术研究所]. This may be the 61600 Unit in Daxing’s Dinghaizhen (former 57351 Unit).

The Shenzhen Office (61508 Unit) is located in the city’s Yinhua district. The 61508 Unit Commander is SrCol Liu Dongyi [刘东义]. For a graphic of the 61508 Unit compound in Shenzhen, see “Guangzhou Construction Design Academy Shenzhen Branch,” undated, at http://www.szgdi.com/view_p.asp?p_id=164&class_id=3. Former 61377 Unit Commander Zhou Xuefeng [周学锋] transferred to the PLA Information Security [解放军信息安全测评认证中心] in the 2009 timeframe, implying a Third Bureau linkage. He was replaced as 61377 Unit Commander by Meng Zetian [孟泽田].

The Fourth Bureau may have previously carried a cover designation of the 57324 Unit.


See “To Provide Better Quality Services to Military Retirees” [以更优质的服务态度做好军休工作], Hanzhou Civil Affairs Bureau website, undated, http://www.hzmz.gov.cn/files/20110328/c988dc99-1d7a-4868-b666-8d06cc1087f8.shtml. The Fourth Bureau’s Seventh Office (probably the 61085 Unit) may have formerly been the 57367 Unit. The Eighth Office is the former 57368 Unit.

The 61680 Unit was formerly designated as the 57369 Unit.

Fourth Bureau headquarters complex is located in Qingdao on 5 Luxun Road [青岛市抚顺路 5 号]. The previous MUCD of the Fourth Bureau’s Eighth Office is the 57368 Unit. See “Recognizing Top Translators for 2009” [2009 年受表彰资深翻译家], China Translators Association website, at http://www.tac-online.org.cn/ch/tran/2010-12/09/content_3888394.htm. Huanglong Wanggou [黄龙王沟] is about 20 kilometers west of Xinzhou.


The Sixth Bureau was formerly assigned an MUCD of the 57316 Unit.

Jingmen Zone B [荆门乙区] has been associated with Sixth Bureau Second Office, and possibly located in Luoji Village, southeast of Jingmen. Reference to a Third Department-affiliated Jingmen Zone A [荆门甲区] has also been noted. The Sixth Bureau also had a presence in the village of Ziling, possibly the Sixth Office.

The Nanchang Seventh Office may have a cover designator of the 61121 Unit. Xiangfan may be the 61245 Unit, and Jingmen the 61367 Unit. The Fourth Office in Kunming’s Panlong District may be the 61815 Unit. For reference to the Kunming office, see Xundian County Lei Feng Hope SchoolRecalls the Past: Looking Toward the 10th Anniversary of School Building” [寻甸县雷锋希望小学举办“回顾过去，展望未来”建校十周年庆祝活动], Yunnan Province Youth Network, July 19, 2007, at http://www.ynyouth.cn/city/HTML/26873.htm. For reference to a 61815 study on satellite communications, see Fu Di and Gao Yong, “Asymmetric PCMA Satellite Signal Interception Method” [非对称 PCMA 卫星信号的截获方法], Modern Electronic Technology, (2007), 30(7): 28-34, at http://read.pudn.com/downloads96/doc/390099%E6%9D%A5%E5%AF%9B%E7%8E%B0%80PCMA%E5%8D%AB%E6%98%AF%E4%BF%A1%E5%8F%B7%E7%9A%84%E6%88%AA%E8%8E%B7%E6%96%B9%
E6%B3%95.pdf. See a reference to a former unit researcher, see “Team of Experts” [专家团队], *Interconnected Network* [互联网], November 19, 2007, at http://www.sbwhcm.com/yldq/ShowArticle.asp?ArticleID=490.


73 For example, Li Hongqiang [李宏强] has been associated with the Seventh Bureau and has published translated volumes written by prominent U.S. and British writers.

74 Li Jian, Jiang Chengshun, and Dong Liying, “Data Type Recognition Based on Selective Integration of SVM” [基于选择性集成 SVM 的数据类型识别], *Computer Engineering*, 2010, Vol 36 (13), at http://d.wanfangdata.com.cn/Periodical_isjg201013064.aspx. Dong Liying is from the 61580 Unit.

75 See Wang Qi and Dan Jun, “Network Centric Warfare Development and Technology Strategy” [网络中心战网络建设和技术策略], *Information Assurance and Communications Security* [信息安全与通信保密], December 2005, pp. 82-84, at http://www.lw23.com/pdf_9od6ia36-6c45-48bc-b6c2-4e2dded8edd8/jlunwen.pdf. The authors are senior engineers within the bureau who specialize in computer network attack and defense.

76 For the internet study, see Yu Hongbo, “Internet Networks of the New Century” [新世纪的互联网], *National Senior Conference on Information Technology* [全国信息技术高级研讨会], 2001, at http://scholar.ilib.cn/A-%E4%BC%9A%E8%AE%AE%E8%AE%B0%E5%BD%95ID~6061126.html. The author has been a member of a national level encryption working group. See http://blog.sina.com.cn/s/blog_5dd035dc0100egiq.html.


79 Sources available upon request. The Third Department Seventh Bureau facility maintains an affiliation with, or oversight of, the Beijing-1 satellite ground station [北京一号卫星地面站]. A senior Third Department engineer assigned to the Beijing-1 ground station’s S&T Office is Zhang Xiaoqin [张晓钦]. The Beijing-1 station has participated in research projects related to satellite optical communications and new forms of signal encoding. The ground station, which uses a Beijing post office box of 1965, maintains a computer monitoring center [计算机监控中心].

80 “GSD Eighth Bureau Satellite Receiving System” [总参三部八局卫星电视接收系统], Beijing Blue Satellite Company website, undated, at http://www.chinabsc.com/html/265.html. The Eighth Bureau was formerly assigned a 57318 Unit designation. Former Eighth Bureau Political Commissar in the 2005 timeframe was Senior Colonel Hu Dengqiang [胡登强]. However, he appears to have been recently transferred to serve as 11th Bureau Political Commissar. See “Performing the Sacred Duties of Discipline Inspection Cadre” [履行神圣职责 争做合格纪检干部], *Military Party Life*, 2011(4), at http://oldweb.cqvip.com/qk/60743A/201104/37100809.html.

81 See “Branch Construction” [分馆建设], Beijing Haidian District Library website, undated, at http://www.hdlib.net/hdlib/opencms/hdlib/htgk/fjgs.html. The Wenquanzhen site is collocated with Air Force communication unit.


83 One of 10 major generals serving as senior engineers within the Eighth Bureau Second Office is Ran Chongwei [冉崇伟]. Born in Chongqing in February 1962, Ran is a graduate of the PLA Information

83 It was formerly the 57401 Unit. See “Notice of the Xiangfan City Committee of the Chinese Communist Party” [中国共产党襄樊市委员会] (通知), Xiangfan City website, August 13, 2010, at http://www.xf.gov.cn/contents/2357/355663.html. Address of the Xiangfan office (61245 Unit) main compound is 43 Zhongyuan Road.

84 The downlink site (61449 Unit) is visible on Google Earth along Xibeiwang East and Houchangcun Roads. More specifically, the site is located in Liulitun Village [六里屯村].


86 “Tai’an Division of Beijing Shandong Enterprise Association Formed” [北京山东企业商会泰安分会成立], Beijing Shandong Enterprise Association, April 14, 2010, at http://www.lushang.org/news_Detail.asp?id=130. Zhang has been referenced as serving in a Deputy Group Army-level grade.


89 One reference asserts that the unit is headquartered in Jiamusi. See “Post 8684,” undated, at http://post.8684.cn/o4985030_1645.htm. One Office under the 10th Bureau may be the old 57398 Unit. Ma Lanzhu [麻兰柱] was Political Commissar. The unit appears to maintain a Beijing post office box address of 2651 [北京市 2651 信箱], and address of 33 Xinxi Road in Shangdi.

90 A China Academy of Social Sciences study notes cooperation along these lines after establishment of relations with the United States in 1979 (thus a 7911 Unit designation for subordinate offices). For a China Academy of Social Sciences assessment of the western sites, see Tao Wenzhao, “‘History of U.S.-China Relations,’ Vol. 2 (1972-2000), Chapter 5: Peaceful Development” [中美关系史下卷（1972-2000）之第五章：平稳发展] (Shanghai:People’s Publishing, 2004), at http://ias.cass.cn/show/show_project_ls.asp?id=733. At least one Tenth Bureau senior engineer is Guo Shoujin [郭守晋], who has been cited as an authority in telemetry-related technical reconnaissance.


92 Another unit in the area has a cover designation of 69018. For reference to the 7911 Unit, see “Military and Locals Linked Heart to Heart” [军地联谊心连心 军民团结齐共进], Shule County website, June 21, 2006, at http://www.shule.gov.cn/ShowNews_Content901.shtml. The Third Office in Kashgar may be the 61865 Unit. For reference to a visit to Barenxiang by Third Department Political Commissar, see “General Staff Department Investment into Construction of ‘Bayi Aimin School’ Put Into Use” [总参援建疏勒县“八一爱民学校”竣工投入使用], Shule Government website, September 26, 2010, at http://www.shule.gov.cn/ShowNews_Content4457.shtml. As of 2010, Tenth Bureau Third Office Director is Liu Bing [刘冰] and Political Commissar is Zhang Zhimin [张志民].

93 See “Postal Code for 61762 Unit” [61762 部队邮编], Postal Code Net [邮编网], undated, at...
The 11th Bureau’s previous MUCD may have been 57321 (or 总字 791 部队). Commander or Political Commissar of the 11th Bureau may be Yang Keqiao [杨可巧].


The 11th Bureau’s Anning office may have a cover designator of the 61291 Unit. It had been broken down into areas, such as Area A, Area B, and so on. The 61291 Unit may have previously been known as the 57389 Unit. An 11th Bureau office in Hanzhong may be the 61090 Unit.

For linkage of the 12th Bureau with the MUCD, see “Human Resources Information” [人才信息], Kunshan Human Resources Market website, undated, at http://www.kshr.cn/ksasp/unit/SHOWEMPL.ASP?employee_id=660550. The 12th Bureau likely is directed by Chen Genbao [陈根宝]. It was previously commanded by Ju Qiansheng [巨乾生], with Zeng Qin [曾勤] serving as Political Commissar. See “District leaders Zhou Ping, Cao Liqiang Meet with Unit 61486 Leadership” [区领导周平、曹立强会见 61486 部队领导], Shanghai Zhabei Civil Affairs Bureau, July 14, 2011, at http://mzj.sh.gov.cn/gb/mzzbq/mzxw/zxw/userobject1ai637.html. Also see http://www.hzsouth.com/nanfang_3GroundApplicationSystemHeld‖. The 12th Bureau’s Deputy Director is Zhang Kaiwen [张开文]. Third Department 12th Bureau Headquarters appears to be located on 46 Yuexiu Road in Shanghai’s Zhabei District [闸北区粤秀路 46 号]. The Jiangnan Institute Remote Sensing Applications [江南遥感应用研究所] shares the same address. The 12th Bureau’s former designation was the 57394 Unit.


The Gangtouzhen [港头镇] site carries of cover designator of the 61296 Unit.

The Taiang cover designation is the 61728 Unit and the Hangzhou Daxiaogu Village office may be the 61232 Unit. As an aside, former Third Department Director Qiu Rulin [邱如林] is from Taicang.

The cover designator of the Kunming Yuejia Village [月家村] site has not been identified yet. The 61538 Unit is likely under the Third Bureau.

The 12th Bureau’s Changchun Xinglongshan Village [兴隆山镇] site may have a cover designator of the 61467 Unit. The Guangzhou site may be the 61148 Unit. References are available upon request.

Despite the Nanjing Military Region’s absorption of the Fuzhou Military Region, Chengdu Military Region’s absorption of the Kunming Military Region, and Lanzhou Military Region absorption of the Xinjiang Military Regions, the TRBs in the absorbed Military Regions remained independent and active. Therefore, Nanjing, Chengdu, and Lanzhou Military Regions each have two TRBs.


For background on the PLA’s role in border defense, see Blasko, The Chinese Army Today, pp. 70-71.

The Beijing MR Technical Reconnaissance Bureau [北京军区司令部技术侦察局] was formerly referred
Signals Intelligence and Cyber Reconnaissance Infrastructure


The Hohhot office carries an MUCD of the 66196 Unit. The office appears to be in Saihan's Qiaobaozhen [赛罕区巧报镇]. The Hailar cover designator is the 66367 Unit.

See “Center Deputy Director” [中心副主任], Dongcheng District website, December 19, 2008, at http://zfxxgk.cwi.gov.cn/CWXXGK2j.ycs?xxid=10799. 66019 Unit may be another Beijing MR TRB office.


More specifically, the Huadu office, assigned a cover designator of the 75773 Unit, appears to be located in Tanbuzhen Jiangjuntan [花都区炭步将军潭] village. For reference to the 75774 Unit in the Baiyun District, see “Guangzhou Military Region 75774 Unit‖ [广州 军区 75774 部队], China Guangzhou Network, June 13, 2006, at http://www.guangzhou.gov.cn/node_559/node_1077/2006/06/13/1150186550110483.shtml.

The Nan'Ao County [汕头市南澳县] office may have a cover designator of the 75779 Unit. See “Research on Worm Target


128 More specifically, the Lanzhou MR First TRB is in the Qilihe [七里河] District village of Biliyao [八里窑].


130 For an interesting overview of the Second TRB’s scope, see Zhu Wenjun and Gao Lu, “Small Entities Also Have a Big Stage” [小支部也有大舞台], *PLA Daily*, August 28, 2011, at http://www.chinamil.com.cn/jfbmap/content/2011-08/28/content_65740.htm. Subordinate units appear to include the 69022 Unit at 库车县 and the Second Bureau (69036 Unit).

131 Subordinate office MUCDs are: Kashii’s Shule County (69018 Unit), Altay (69022 Unit), and Yining (69023 Unit). Elements of the 69022 Unit also seem to have a presence in Hotian. Wang Guofu [王国富] was 69018 Unit Commander as of mid-2010. Peng Lixin [彭立新] appears to be Political Commissar. Among various sources, see “Loving Civil-Military Unit” [爱心拥军民情], Kashi School website, April 1, 2010, at http://www.ksz2.com/ReadNews.asp?NewsID=1479. The 69018 Unit is located in the vicinity of the Third Department’s 61865 Unit.

132 Commander of the Nanjing MR First Technical Reconnaissance Bureau, formerly the 83597 Unit, is said to be Shao Baoxiang [邵保祥] and Ping Xingzhong [平兴中] is said to be Political Commissar. References available upon request. The Nanjing MR 1st Bureau Third Office may be the 73613 Unit. The Sixth Office may be the 73616 Unit.


134 The Jianxin office has an MUCD of the 73633 Unit.

135 MUCDs for units in Fuzhou’s Hongshan [洪山] village are: First Office (73631 Unit), Second Office (73632 Unit), Fourth Office (73633 Unit), Fifth Office (73635 Unit), Sixth Office (73636 Unit), and Seventh Office (73637 Unit).

136 References available upon request. The Eighth Bureau has a cover designator of the 73638 Unit.

137 References available upon request.

See Guo Yujie, “Research on Computer Information Security Architecture” [计算机信息安全体系研究], *Computer Programming Skills and Maintenance*, 2011(10), at http://d.wanfangdata.com.cn/periodical_dnbqgywh201110050.aspx. Guo is from the 95847 Unit. As a side note, PLAAF SIGINT units were previously organized into technical service institutes [技术勤务所]. Based on unit members authoring publications regarding Russian language training, another possible candidate for a PLAAF TRB office is the 95869 Unit in Hohhot City.

Other references indicate the Air Force Second TRB headquarters may be based in Xiamen.


The Shanghai office may be located in Fengxian [奉贤] Fengchengzhen [奉城镇] and have an MUCD of the 95826 Unit. However, the 95826 Unit has also been noted in the Guangzhou City area. It’s possible that the unit could have a direction finding mission, with elements in both Shanghai and Guangzhou. For reference to the Xiamen office (95807 Unit), see “Unit 95807 Stationed in Xiamen Utilizes “Three Promises” to Service Citizens [驻厦 95807 部队拥政爱民 “三承诺”服务群众], Fujian Province National Defense Education Network, July 21, 2011, accessed November 1, 2011, http://mil.fjsen.com/2011-07/21/content_5281181.htm. The PLAAF Second TRB unit in Xintang [新塘] is the Sixth Office, which may have a cover designator of the 95834 Unit. See “Notice to Units in the Xintang Region” [关于调整新 塘地区党建联席会会员单位及理事会成员的通知], Tianhe District website, November 1, 2010, at http://www.thnet.gov.cn/xzgk/TH08/201102/t20110228_4699.html. Another Air Force Second TRB office may be the 95813 Unit in Fuzhou. The training unit cover designator is the 95957 Unit.

The PLAAF Third TRB may have a cover designator of the 95879 Unit. Fenghuangshan [凤凰山] is located in Chengdu’s northern suburbs. See “College Holds Meeting on 95879 Unit Masters Thesis Leaders Conference” [学院召开“电子科技大学—95879 部队在职硕士研究生学位论文指导会”], University of Electronic Science and Technology (UESTC) website, May 3, 2011, at http://www.ee.uestc.edu.cn/2008/index/detail.php?id=5051.


The Navy Second TRB likely has a cover designator of the 92762 Unit. For one reference to the Xiamen office, see “Xiamen City Haohe Trading Company” [厦门市好和惠商贸有限公司], Xiamen City Simen District business portal, undated, at http://www.smgsxh.org/honorBusiness/detail.asp?id=356.


References available upon request.


As of mid-2010, GSD Fourth Department Director is Major General Wan Xiaoyuan [万晓援]. Born in December 1952, Wan previously directed the Fourth Department’s Technology and Equipment Department, served as the department deputy director, and Deputy Commander, 1st Group Army. He was promoted to Major General in July 2004. Former GSD 54th Research Institute Director Senior Colonel Hao Yueli [郝叶力] was promoted to Fourth Department Deputy Director in 2010. Fourth
Department Political Department Director is Lu Chunxiang [卢春祥].
