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Master's Thesis



中國大陸山寨手機產業發展  
Development of Shanzhaiji Handset Industry  
in Mainland China

Student: Frankie Ming-Te Huang

Advisor: Dr. Jack Wen-Chieh Wu

中華民國 98 年 12 月

December 2009

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## Abstract

The emergence of shanzhaiji handset industry or bandit handset industry (山寨機手機產業) is an interesting phenomenon that is the only socioeconomic behavior occurring in mainland china. According to the National Development and Reform Commission of PRC, a company is permitted to produce the cellular phones with 200 million RMB and R&D capabilities. However, with only 100 thousands RMB capital, a shanzhaiji handset producer can deliver the cellular phones in mainland china by getting a core technology of one package of chipset total solution (turnkey) from MediaTek / MTK (聯發科) in Taiwan. This new business model has been impacting the phone industry significantly in the mainland china. My research will focus on the development of entire shanzhaiji industry development from its origin to the status quo as well as future development. Three aspects of supply chain, market channel and government policy in terms of shanzhaiji industry are addressed in this research.

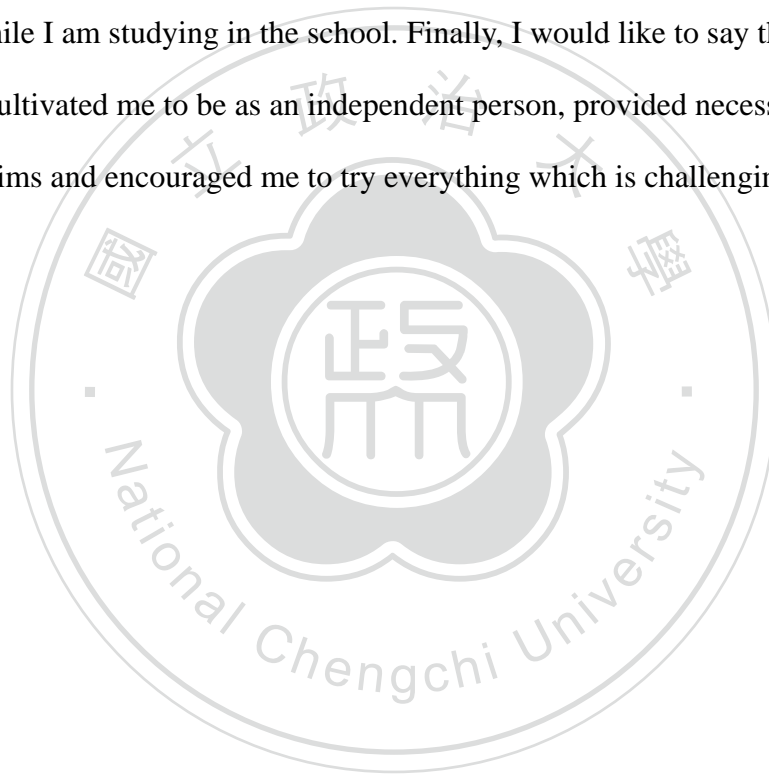
Key words: MTK, shanzhaiji handset, bandit handset and industry development.

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# 1. Introduction

## 1.1 Research background

The term of the shanzhaiji or bandit handset stands for the illegal cellular phones produced in some manufacturing factories in the Shenzhen, Guangdong, China. The shanzhaiji handset stemmed from smuggling handset, inferior brands and non branded handsets producers in the beginning. Those handsets were attached with brand labels of CECT (中电通信) by paying fees for the usage of CECT trademark since 2003.<sup>1</sup> As time goes by, inferior brands and non branded Shanzhaiji handsets producers now are threatening other branded handset companies not only Chinese domestic branded but also international branded handset companies. Those shanzhaiji handsets have been mushrooming and booming in the phone market by duplicating tier-one companies' logo such as SAMSUNG, Sunyericcsun, and NCKIA.<sup>2</sup> Appearance and functions of tier-one companies' have been duplicated as well. In recent years, those shanzhaiji producers are getting more innovative that plenty of novel technologies and designs were combined together in order to cater to the demand of cellular phone market.<sup>3</sup>

## 1.2 Research motivation

To produce a cellular phone, it takes technology-intensive capability. However, MTK incorporates hardware and software as a total solution package (turnkey) in Taiwan that core technologies are not crucial factors for the shanzhaiji handset manufacturers.<sup>4</sup> Without entrance difficulty, the shanzhaiji handset companies can produce their handsets easily due to manufacturing and assembly industries are the highly developed industries in China. At the

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<sup>1</sup> 潘少钦, 杨奕编 (2008) The Blue Ocean Strategy of Shanzhai Ji

<sup>2</sup> 赵浚宏 (2008) 山寨机突出市场重围 正规军谋求创新求变 — 中国手机行业发展的思考

<sup>3</sup> 天马行空 大话山寨机的创意 (2008)

<sup>4</sup> 王一春 (2008) 山寨機與國產手機的發展



same time, Taiwanese companies have invested many handset-related component sectors in mainland. Thus, full-fledged mechanical, electrical and electromechanical components supply chain in mainland china. This highly integrated industry structure has made the shanzhaiji handset development an “IN” industry in mainland china.

### **1.3 Research purpose**

The emergence of the shanzhaiji handset is an interesting socioeconomic phenomenon in mainland china. The shanzhaiji producers utilize its strengths which are ultra low cost, individual appearance and fully functions to take the market share in mainland china from the Chinese domestic branded handset producers as well as foreign branded handset producers. The key successful factors of the shanzhaiji handset producers, the structure of the shanzhaiji handset industry, the shanzhaiji handset market channel, and its future development are important factors worthwhile to take the attention.

### **1.4 Expectation**

This research is defined as an industry study report. It might be the first academic research because the shanzhaiji handset industry is emerging since 2004 that the academic literatures are scarce. This thesis is to review the overall development of the shanzhaiji handset industry: First, this thesis reviews an overview of development of the shanzhaiji handset industry from its origin to status quo. Second, a structure of the shanzhaiji handset industry will be addressed in its manufacturing supply chain. Third, market channel is discussed among foreign branded handset producers, Chinese domestic branded handset producers and the shanzhaiji handset producers. Fourth, the future development of the shanzhaiji handset industry is reviewed. Fifth, the report summarizes the analysis from all sources.

## **2. Research methodologies**

### **2.1 Research framework**

The research topic is the development of shanzhaiji handset industry in mainland china. First, I will identify the direction of the research topic when the research is initiated. Second, by collecting the information, scholars' papers and literatures, I will conduct the analyses from the standpoints of economic theory, strategic theory and comparison to reveal the development of the shanzhaiji industry. Third, after the analyses are down, I will submit the conclusion on my research paper.

### **2.2 Research target scope**

This study focuses on the entire development of the shanzhaiji industry in mainland china from its origin to status quo due to the fact that the shanzhaiji industry has rewritten ordinarily business model of the handset market in mainland china. Therefore, some domestic handset companies in mainland china are losing money or even leaving the handset market. To find out nature of the shanzhaiji industry, it will be beneficial to some companies in the handset industry as a reference.

### **2.3 Research data collection**

The research data and material used in this paper are mostly referred to industry research papers, technology periodicals, newspapers, literatures and internet information from specialists and experts for the shanzhaiji handset industry information.

## 2.4 Research procedure



### **3. Shanzhaiji handset industry development**

#### **3.1 Origin of shanzhaiji handset industries**

The shanzhaiji or bandit handset means smuggling, inferior brands and non-branded cellular phones which have been avoiding the Chinese government's supervision, copying appearance and duplicating the functions on the products from some tier-1 company's handsets.<sup>5</sup> Due to avoiding the Chinese government's supervision, value-added tax and sale tax are ignored by the shanzhaiji handsets developers. There are barely advertisements and promotions on the shanzhaiji handsets so the expenditures on marketing campaign are low. The shanzhaiji distributing channels can penetrate into remote areas and rural areas to sell the shanzhaiji handsets with incredibly operational efficiency. Mostly the shanzhaiji handsets are incorporated with MTK's turnkey solution leading to highly fast product launch. With low cost advantage, agile distributing channel and highly fast product launch with attractive appearance and functions, those elements have made the shanzhaiji handsets a cash cow.

The shanzhaiji handset can be classified into three categories: First, black shanzhaiji handsets are smuggled to export to overseas markets or import from overseas markets that it is an illegal activity. Second, absolutely duplicated shanzhaiji handsets are just copying appearance or functions from some international branded handset companies leading to infringement of intellectual property right or trade mark. Third, small branded shanzhaiji handsets are the mainstream of the market that they don't infringe the intellectual property right or trade mark but they do violate the Chinese government's handset regulation.<sup>6</sup> All of the shanzhaiji handsets have the same problem that is avoiding Chinese government's supervision and regulation.

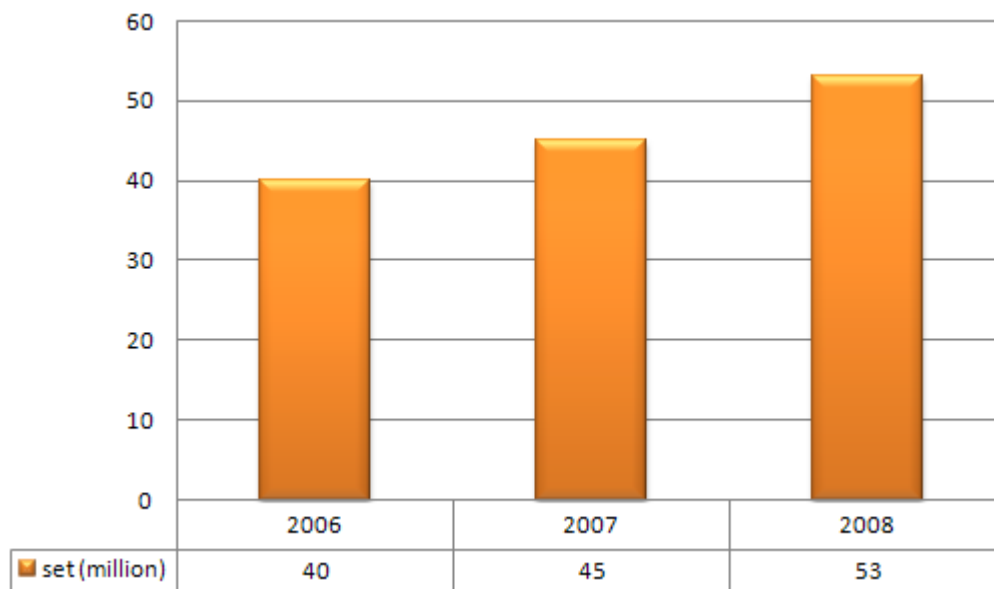
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<sup>5</sup> 王一春 (2008) 山寨機與國產手機的發展

<sup>6</sup> 阚凯力 北京邮电大学经济管理学院教授

The following table shows the sale volume of the shanzhaiji handsets in Chinese domestic market from 2006 to 2008. The sale volume has a trend to increase continuously from 40 million sets of shanzhaiji handsets in 2006, 45 million sets of shanzhaiji handsets in 2007 to 53 million sets of shanzhaiji handsets in 2008.

**Figure 3.1: Sale volume of Shanzhaiji handsets in Chinese domestic market**



Source: 王京莹 (2009) 赛迪顾问通信产业研究中心: 经济观察报-山寨机市场规模扩大 亟待政策引导良性发展 and 李学芳 (2009) 赛迪顾问通信产业研究中心: “山寨”机走出“山寨”

The entire shanzhaiji handset industry cluster is situated in huaqiangbei road (華強北路) business district in Shenzhen, Guangdong, China. There are over thousands of the business-related shanzhaiji handset companies in this area forming a center of a manufacture and production supply chain. It serves as one-stop shopping of phone businesses that including project management, product design, manufacture, production, procurement, sales and distribution. The reason why Shenzhen is the center of the shanzhaiji handset industry today can be traced back to the change of industry structure in Taiwan due to majority of low

value-added sectors in pursuit of lower cost have been migrating to mainland china. In the beginning, manufacturing sectors moved to mainland china from Taiwan such as tooling shops and assembly factories...etc. As the industry restructure continuing, there has been following with more component sectors of PCB, LCD, camera, housing, keypad, connector, and battery...etc.

The migration of many Taiwanese companies moving to mainland china can be traced back to the 1978. Since the 3rd Plenary Session of the 11th CPC Central Committee in 1978, the PRC government has decided to reform the national economic setup. One of the earliest and the most successful Special Economic Zones were founded by the government of the People's Republic of China under Deng Xiaoping in the early 1980s. Since then, China has gained enormous economic growth and average 10% GDP growth per year. The government of the PRC grants special economic zones (SEZs) special economic policies and flexible governmental measures. This allows SEZs to utilize an economic management system that is especially conducive to doing business. Since 1980, the PRC has established special economic zones in Shenzhen, Zhuhai, Shantou, Xiamen and Hainan.

Under the Chinese government fully support, Shenzhen city can offer the preferential policies to those foreign direct investment (FDI). In 1988, the State Council further opened Pearl River Delta which is adjacent to Shenzhen. In 1999, Shenzhen's new-and high-tech industry became one with best prospects and the output value of new-and high-tech products reached 81.98 billion yuan, making up 40.5% of the city's total industrial output value.<sup>7</sup> The special economic zone in Shenzhen is foreign-oriented area. As it adopts different preferential policies, it plays a significant role as developing the regional economy.

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<sup>7</sup> Special Economic Zones and Open Coastal Cities, <http://www.china.org.cn/e-china/openingup/sez.htm>

The PRC government has provided preferential policies for SEZs that special tax incentives for foreign investments in the SEZs and greater independence on international trade activities. Economic characteristics are represented as 4 principles. First, construction primarily relies on attracting and utilizing foreign capital. Second, primary economic forms are sino-foreign joint ventures and partnerships as well as wholly foreign-owned enterprises. Third, products are primarily export-oriented. Fourth, economic activities are primarily driven by market forces.<sup>8</sup> These preferential incentives make Shenzhen a full-fledged supply chain especially on manufacturing and component sectors.

In the shanzhaiji handset industry, there are four major roles. They are handset chip vender who supplies turnkey solution as MTK is the leading player, scheme design houses who follow reference design from MTK to provide the schemes of PCB-related to the shanzhaiji handset developers with fully integrated semi-product, the shanzhaiji handset developers who engage in ID (industrial design) and MD (mechanical design) as well as phone system manufacture and production to provide the final goods to channel agents and channel agents who distribute the handsets to markets. The structure of the shanzhaiji handset industry in Shenzhen is huge and complicated that there are over 10 thousand upstream and downstream participants that the chip vendors are around 3, the scheme design houses are around 200, the shanzhaiji handset developers are around 2000, the provincial and local channels are around 1000 and the components suppliers are around 3000.<sup>9 10</sup>

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<sup>8</sup> Rajkumar S. Adukia, A handbook on Special Economic Zones

<sup>9</sup> 林柏全 (2008) 解讀聯發科的成長密碼

<sup>10</sup> 李学芳 (2009) 赛迪顾问通信产业研究中心: “山寨”机走出“山寨”

**Figure 3.2: Four major roles in Shanzhaiji handset industry**



Source: self compiling

### **3.2 Role of MTK to make shanzhaiji handset industry booming**

The most critical technology to manufacture the shanzhaiji handsets is the chipset platform. MediaTek Inc / MTK is playing an significant role in the shanzhaiji handset industry. MTK has introduced turnkey solutions integrating the plenty of functions in 2004.<sup>11</sup> MTK has possessed around seventy to ninety percent of market share in the shanzhaiji handset segment since 2007.<sup>12 13</sup> In China's shanzhaiji handset segment, the MTK has strong brand power which is deeply rooted in the shanzhaiji developers' minds that it is the top cell phone platform choice like the Intel. It is the MTK make the shanzhaiji industry booming that many Chinese media and developers describe MTK's chairman Ming-Kai Tsai (蔡明介) as the "godfather of bandit cell phones." MTK's success is the provision of a cheap and easy-to-develop turnkey solution

<sup>11</sup> 林柏全 (2008) 解讀聯發科的成長密碼

<sup>12</sup> 林柏全 (2008) 解讀聯發科的成長密碼

<sup>13</sup> Karl J. Weaver (2009) Shan Zhai Ji 山寨機



that integrates the software and hardware for all of the complex functions such as radio, digital camera, video camera, touch and MP3...etc on a single chip as well as offering a menu of functions selection that it is easy for the shanzhaiji developers to tailor their products.<sup>14</sup> Thus, the shanzhaiji developers have swarmed MTK's turnkey solution to develop diverse functions. To decide the functions in the phone, it is like in a restaurant ordering a meal. Once the functions in the menu are checked, MTK's sales representatives immediately quote a price to the shanzhaiji developers. Within a few days, the shanzhaiji developers have a recommended chipset and customized software. With its turnkey solution, Mediatek has lowered the threshold for producing handsets.

The shanzhaiji handset developers have no or little R&D capabilities. The main reason why the shanzhaiji industry is booming in mainland china is that MTK's turnkey solution with both hardware and software incorporated with low cost advantage, providing the entirely system reference design as well as giving excellent after service for the shanzhaiji handset developers.<sup>15</sup> This new business model has changed the game rule of entire phone sector and structured phone industry value chain. In 2004, when MTK's turnkey solution was just launched, there were very few phone developers to adopt it. As mentioned previously, the efforts for the shanzhaiji handset developers are quite low when they are developing the shanzhaiji handset as well as they have scarce R&D resource problems and barely R&D capabilities. Thus, the shanzhaiji handset developers in mainland china have been willing to cooperate with MTK due to fully supports of turnkey solution.

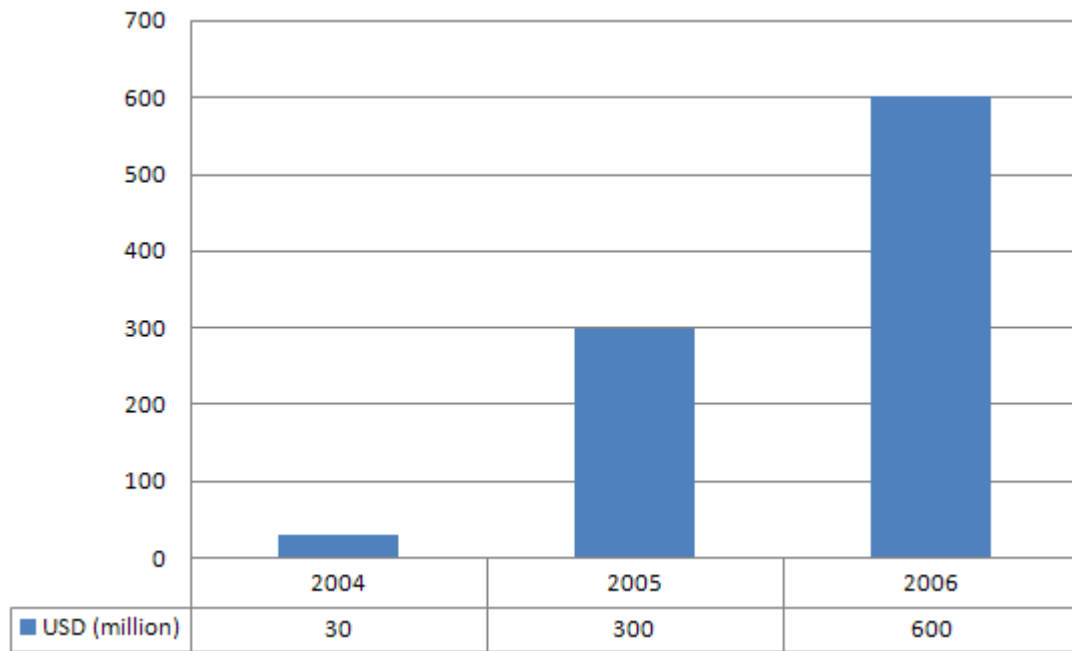
In the beginning, MTK's chipset sale revenue was only 30 million USD in 2004. It was amazing that it earned 300 million USD in 2005. Following, it doubled sale revenue to 600 million USD in 2006.

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<sup>14</sup> Karl J. Weaver (2009) Shan Zhai Ji 山寨機

<sup>15</sup> 林柏全 (2008) 解讀聯發科的成長密碼

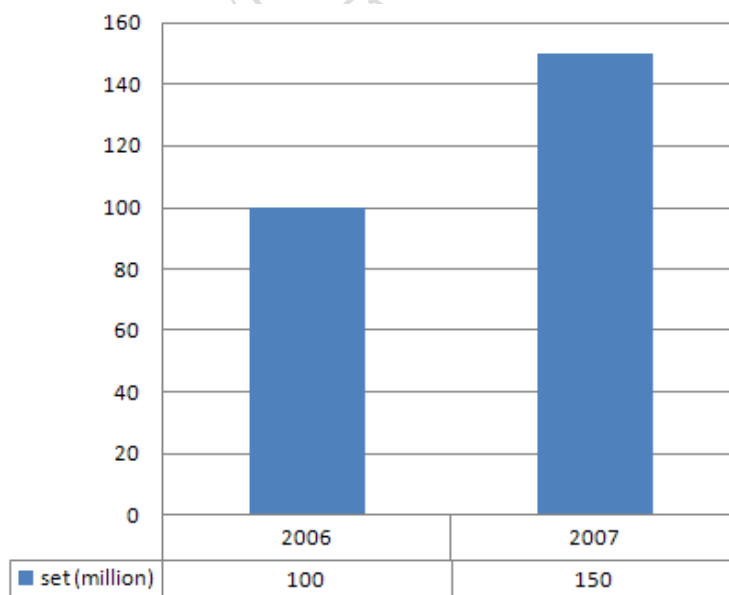
**Figure 3.3: MTK's chipset sale revenue**



Source: 林柏全 (2008) 解讀聯發科的成長密碼

Furthermore, according to figure, 100 million chipsets had shipped out from MTK in 2006 and 150 million chipsets in 2007.

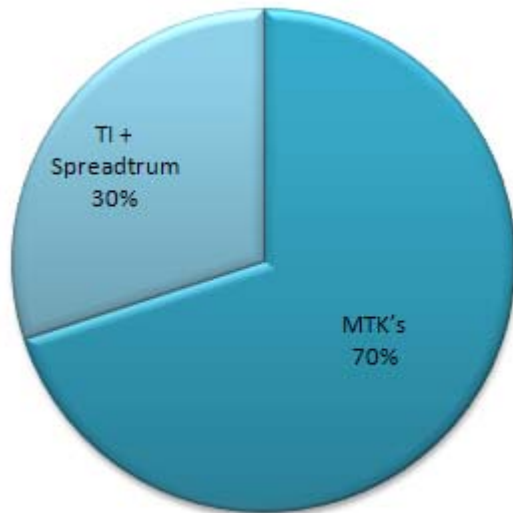
**Figure 3.4: MTK's chipset shipped out volume**



Source: 林柏全 (2008) 解讀聯發科的成長密碼

The market share of MTK's turnkey solution is around 70% in mainland china as a leader in 2007, second is Taxes instrument (TI) and third Spreadtrum Communications (展訊通信).<sup>16</sup>

**Figure 3.5: The market share of MTK, TI and Spreadtrum in mainland china**



Source: 林柏全 (2008) 解讀聯發科的成長密碼

### 3.3 Shanzhaiji handset developing process

There are eight major high level steps for shanzhaiji handset development from product concept proposal to product delivery. First, when the shanzhaiji developers are interested on a newly launched handset or they have some brilliant ideas for their products, they can gather the related information quickly to scheme design house for the study report showing all technical aspects for developing a type of shanzhaiji handset that it takes around 8 days. Second, after study report is approved by the shanzhaiji developers, it takes 10 days for a prototype or product proposition. Third, the shanzhaiji developers provide the handset proposal to the channel to see the reactions that it takes 1 to 3 days. Fourth, based on channel reactions, the shanzhaiji developers do some specification adjustments on the phone that

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<sup>16</sup> 林柏全 (2008) 解讀聯發科的成長密碼

taking 7 to 10 days. Fifth, doing no verification or doing simplified verification or doing fully verification of handset taking 45 to 60 days (some the shanzhaiji developers ignore this step in order to save the time). Sixth, the shanzhaiji developers hold a meeting in a hotel for product announcement for the agents or retailers to acquire the handset order taking 2 to 3 days. Seventh, tooling development is based on the handset orders received from the agents and retailers taking 7 days. Eighth, deliver the shanzhaiji handsets to the agents and retailers that a batch is around 3000 to 5000 handsets per day that it takes 7 days. From the following table, it shows the shortest time of new type of the shanzhaiji handset development is 42 days and the longest time of new type of the shanzhaiji handset development is 108 days. The developing time difference is depending on whether the steps of the shanzhaiji handset development are fully conducted or not.

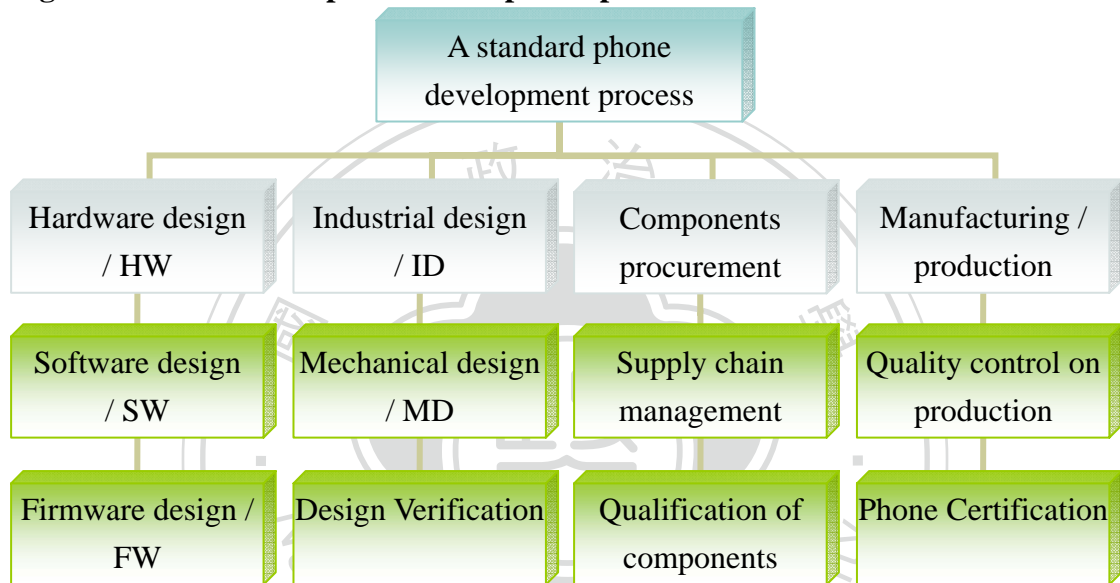
**Table 3.1: A high level procedure of shanzhaiji handset development**

Steps	The Shortest to longest developing time (unit: day)		
	Shortest	Longest	Other
1 Product concept	8	8	8
2 Prototype or product proposition	10	10	10
3 Handset proposal	1	1	3
4 Specification adjustment	7	7	10
5 Development and test	0	45	60
6 Product Announcement	2	2	3
7 Tooling development	7	7	7
8 Delivery	7	7	7
	42 days	87 days	108 days

Source: 夏勇峰 (2008) 山寨機產業鏈解析 and self compiling

To develop a new handset to the market, a company has to go through the entire process as Hardware Design, Software Design, Firmware Design, Industrial Design, Mechanical Design, design verification, components procurement, supply chain management, qualification of components, manufacturing production, quality control on production and phone certification in order to secure a handset with good quality.

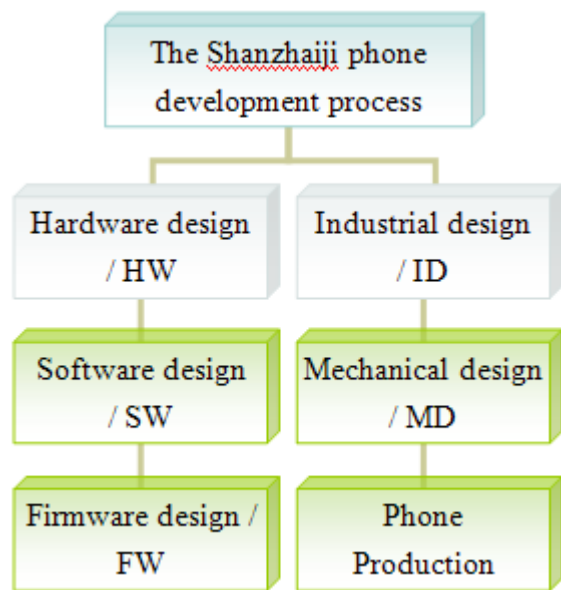
**Figure 3.6: A standard phone development process**



Source: self study

However, the shanzhaiji developers don't have any ideas of development process of the product. Under the support from MTK's turnkey solution of Hardware, Software and Firmware integrated, what they normally do is only on Industrial Design, Mechanical Design and manufacturing production only. Those shanzhaiji developers normally ignore and avoid the quality control on production, qualification of components and certification for their products. Thus, many problems are occurring when the shanzhaiji handset end users are using the shanzhaiji handset due to the carelessness attitude to develop a phone as well as saving the time and costs.

**Figure 3.7: The shanzhaiji phone development process**



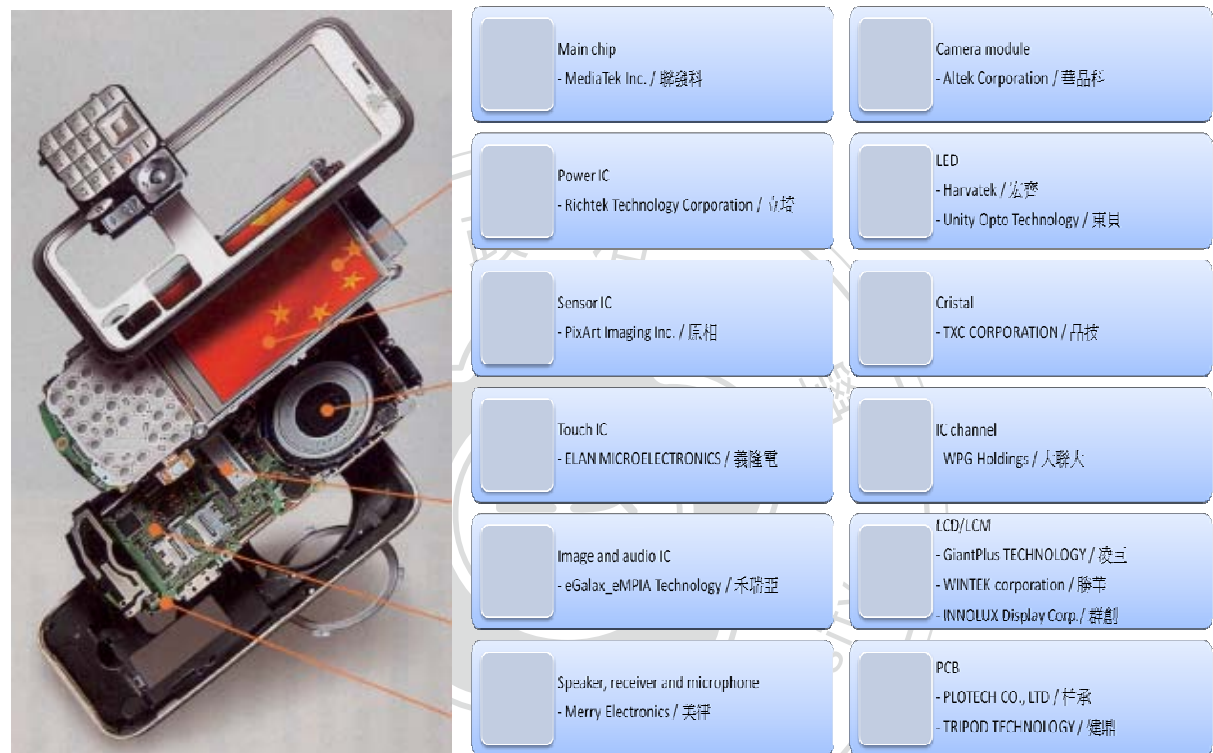
Source: self study

### **3.4 Component Supply chain overview**

In fact, MTK's turnkey solution is quite stable. As mentioned previously, when Shanzhaiji handset developers are using the turnkey solution, MTK provides the entirely system reference design to them. The system reference design normally suggests what components that the shanzhaiji developers should comply with due to those components are co-verified or co-validated by MTK and the component vendors. Actually, almost all of the key components are supplied by Taiwanese vendors accounting for 90% in the shanzhaiji handset product. In fact, Taiwanese component vendors have served as the main driving force in the shanzhaiji handset industry. Main chip is MediaTek Inc. the solution providers accompanying with Power IC vendor - Richtek Technology, Sensor IC vendor - PixArt Imaging Inc. , Touch IC vendor - ELAN MICROELECTRONICS, Image and audio IC vendor - eGalax\_eMPIA Technology, Speaker, receiver and microphone vendor - Merry Electronics, Camera module vendor - Atek Corporation, LED vendor - Harvatek and Unity Opto Technology, Cristal vendor - TXC CORPORATION, IC channel vendor - WPG Holdings, LCD/LCM vendor -

GiantPlus TECHNOLOGY and WINTEK corporation and INNOLUX Display Corp, and PCB vender - PLOTECH CO., LTD and TRIPOD TECHNOLOGY. Taiwanese companies have built the world's biggest handset supply mainland china. The following figure shows the key component vendors supply chain on the shanzhaiji handset industry.

**Figure 3.8: Taiwanese components supply chain for Shanzhaiji industry**



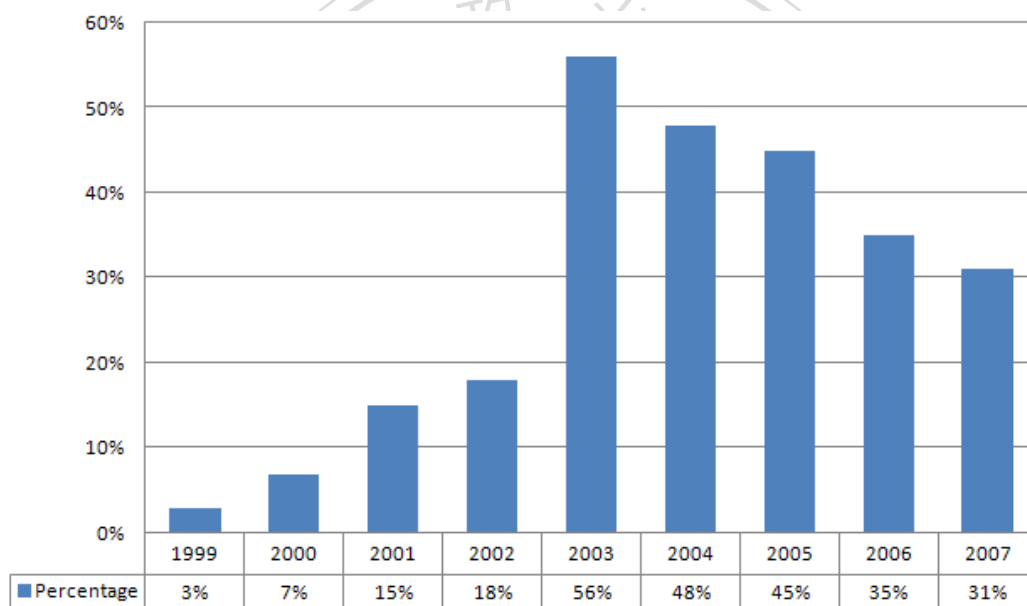
Source: DIGITIME and Karl J. Weaver (2009) Shan Zhai Ji 山寨機

### 3.5 Chinese handset market and shanzhaiji handset distribution

The international branded companies dominated the entire Chinese handset market before 1998 due to there was no competition. In the 1999, the Chinese domestic branded phone started to rise and gained some market share of 3%. In the 2000, its market share came to 7%. The Chinese domestic branded phone was sold to 102 million sets or market share of 15% in 2001. It continued to reach the market share of 18% in 2002. In the 2003, the Chinese

domestic branded phone came to an unprecedented market share of 56%.<sup>17</sup> However, after reaching the highest market share of 56% in 2003, the Chinese domestic branded phone started to decline gradually. The market share of Chinese domestic branded phone were 48% in 2004, 45% in 2005, 35% in 2006 and 31% in 2007.<sup>18</sup> What happened to the Chinese domestic branded phone market in the year of 2004 that its market share was shrank? The MTK obviously has something to do with this situation when it announced its turnkey solution aiming at the shanzhaiji industry in 2004.

**Figure 3.9: Market share Chinese domestic branded phone in mainland china**



Source: 杜舟 (2008) 山寨机疯狂内幕调查 and 程平芳 (2004) 渠道在國產手機成長中的作用

The territory of mainland china is extensive. The difference and discrepancy are quite drastic from tier-one cities to rural areas as well as from eastern coast regions to western inner land regions. It is such circumstance leading to multilayer and diversified handset market. There

<sup>17</sup> 程平芳(2004) 渠道在國產手機成長中的作用

<sup>18</sup> 杜舟 (2008) 山寨机疯狂内幕调查



are over a thousand shanzhaiji handsets delivered to Chinese domestic market in a year.<sup>19</sup> It still cannot meet the demands from each consumer group such a little gap becoming a niche for the shanzhaiji industry to survive. The shanzhaiji developers have applied a strategy of taking the handset market by penetrating tier-two and three cities as well as rural areas at the outset.<sup>20</sup> As some Chinese domestic branded handset companies had gone through the same path initial in 1999 in order to avoid the tremendous competition in tier-one cities with tier-one handset companies.<sup>21</sup> Comparing with Chinese domestic branded companies, the shanzhaiji handset has more advantages on the cost, function and good appearance. Thus, the shanzhaiji handset gains the market share. Most of the Chinese people in those regions have lower disposable income and do not have or have very few brand recognition. Low end segment is the Shanzhaiji's target market that some multinational branded companies have ignored.

Without commercial advertisement and sales promotion, the shanzhaiji handsets can be delivered to the end users in the tier-two and three cities as well as rural areas. In fact, the shanzhaiji handset channel is extraordinary efficiency. In a normal case, when the phones are produced from manufacturing production factories to terminal retailers, there should be at least 4 layers of consignees from the handset makers to the agents. Each layer takes some margins leading to the price increase imposed to end users. However, there may be around 1 to 3 layers of consignees to the shanzhaiji handset channel. The structure of layers of distribution is shorter resulting in the imposed price is lower to the end users. As aforementioned, the shanzhaiji handset industry cluster is located in huaqiangbei business district in Shenzhen, Guangdong as a one-stop shop. Thus, majority of the merchants are

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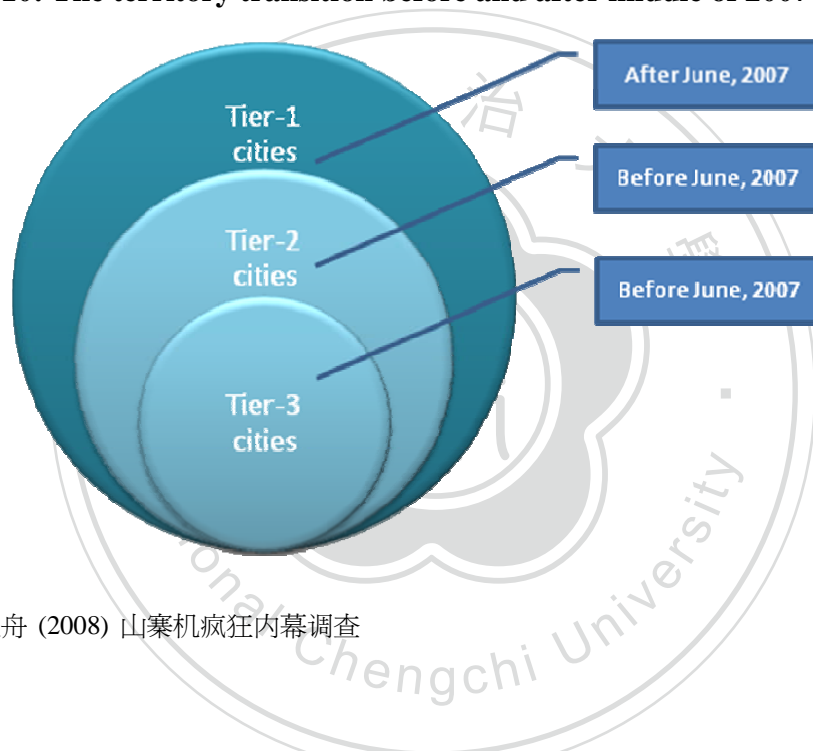
<sup>19</sup> 夏勇峰 (2008) 山寨机产业链解析

<sup>20</sup> 王京莹 (2009) 赛迪顾问通信产业研究中心:经济观察报-山寨机市场规模扩大 亟待政策引导良性发展

<sup>21</sup> 程平芳 (2004) 渠道在國產手機成長中的作用

from tier-two and tier-three cities to procure the goods in huaqiangbei business district and there are very few merchants are from tier-one cities. Before the June 2007, the shanzhaiji handsets were found only in tier-two and tier-three cities as well as rural area. After June 2007, the shanzhaiji handsets have shown up in tier-one cities penetrating into the market.<sup>22</sup> Under low cost, multiple function and good appearance strategy and experienced channel agents, the shanzhaiji handsets have taken majority of the market share in those areas.

**Figure 3.10: The territory transition before and after middle of 2007**



Source: 杜舟 (2008) 山寨机疯狂内幕调查

In order to lower the risk of financial default from the agents and the retailers as well as avoid Chinese authority's supervision, all business activities of the shanzhaiji handset are cash only for deals from upstream business to downstream business. Furthermore, in the entire shanzhaiji handset channel, the rule of profit margin is defined at each layer of consignees. The shanzhaiji handset developers can get 10 to 20% profit margins, region wholesale agents as well as local wholesale agents gain 20 to 25% profit margins and the rest of the profit margins

<sup>22</sup> 杜舟 (2008) 山寨机疯狂内幕调查

are around 55% to 70% for terminal retailers.<sup>23</sup> Profit margin maximizing for terminal retailers, it is an immense motivation to sell harder on the shanzhaiji handsets.<sup>24</sup> Furthermore, with attractive low cost, full function and individual appearance on the shanzhaiji handsets, the shanzhaiji handsets have been even exporting to overseas markets especially in the developing countries such as India, Pakistan, Vietnam and Russia...etc. Moreover, some buyers come to Shenzhen to procure the shanzhaiji handsets to cater to their domestic demands respectively and some small operators or carriers from offshore have established the offices in Shenzhen for handset customization.<sup>25</sup>



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<sup>23</sup> 顾列铭 (2008) 山寨机:手机业的搅局者?

<sup>24</sup> 王一春 (2008) 山寨機與國產手機的發展

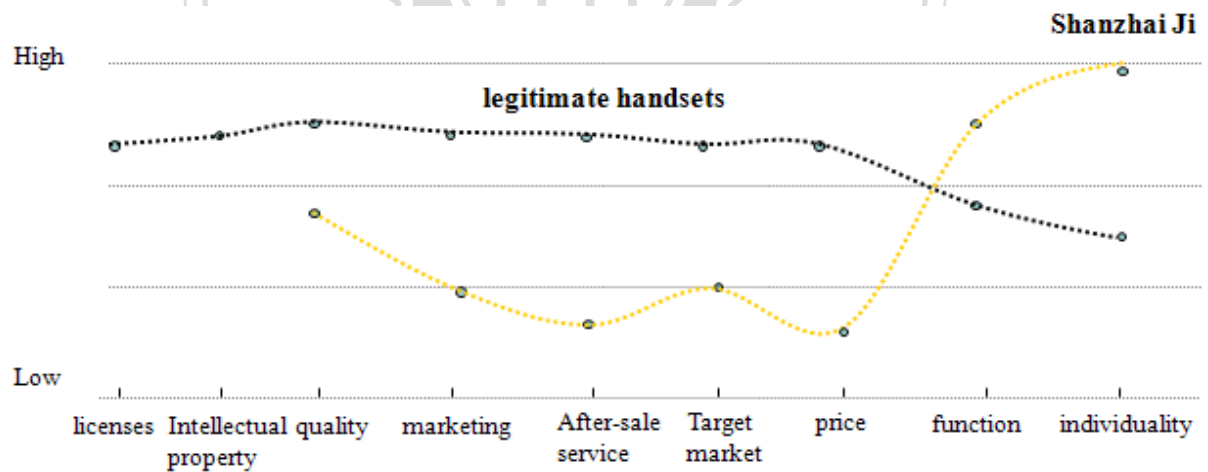
<sup>25</sup> 杜舟 (2008) “山寨機” 狡兔三窟應對嚴打 草根創新不示弱令正規品牌汗顏

## 4. Analysis and comparison

### 4.1 Key successful factors of shanzhaiji handset

The shanzhaiji handsets' advantages are no license fee, no cost of royalty of intellectual property, reducing marketing operation cost as well as after service expenditure accompanying with low quality of product. With low cost which are saved mentioned previously, fully functions which are meeting the end users' needs, individual product design on appearance as well as aiming at the particular end users in second-tier and third-tier cities and rural regions, it is the shanzhaiji handset's blue sea strategy. The advantages of the shanzhaiji handset aforementioned are difficult and impossible to achieve by Chinese domestic branded phone companies as well as multinational handset companies. Thus, the shanzhaiji handsets can penetrate into the market drastically and dramatically.

Figure 4.1: The Blue Ocean Strategy of Shanzhai Ji: sitemap and coordinate graph



Source: 潘少钦, 杨奕编 (2008) The Blue Ocean Strategy of Shanzhai Ji

**Figure 4.2: Shanzhaiji handset SWOP**

<b>Delete</b>	<b>Add</b>
<ul style="list-style-type: none"> <li>• Licenses</li> <li>• Intellectual property</li> </ul>	<ul style="list-style-type: none"> <li>• Functions</li> <li>• Low price</li> </ul>
<b>Reduce</b>	<b>Create</b>
<ul style="list-style-type: none"> <li>• Quality (low-cost SOCs, processing)</li> <li>• Marketing</li> <li>• After-sale service,</li> <li>• Target market</li> </ul>	<ul style="list-style-type: none"> <li>• Individuality</li> </ul>

Source: 潘少钦, 杨奕编 (2008) The Blue Ocean Strategy of Shanzhai Ji

To make the whole story short, the following is a quick summary of the shanzhaiji handset. Chinese and global markets are multilayered and diversified. Handsets are becoming daily consumables. Nothing impossible, as long as the consumer demands exists. Super large touch screen, multi-loudspeaker, handwriting recognition, digital camera, MP3, MP4, memory card, bluetooth... Almost everything you can imagine. And above all, they are multi-functioned handsets with the most favorable prices. Shanzhai Ji have shorter product development time. TTM for Shanzhai Ji is usually 2 months, while for legitimate handset brands half a year to one year. The Achilles' heel of Shanzhai Ji lies in its low quality. SOC produced by MTK in Taiwan incorporate handset main board and software. Core technologies are longer essential for the handset manufacturers. They can produce their handsets by adding faceplates and batteries to semi-finished products provided by MTK. Processing industry is a traditional, advantageous and highly developed industry in China. Shanzhai Ji have a mature industry chain. Handsets are becoming daily consumables. Ultra-low cost guarantees price competitiveness. Shanzhai Ji set rural areas and secondary, tertiary markets as target market and individuality.<sup>26</sup>

<sup>26</sup> 潘少钦, 杨奕编 (2008) The Blue Ocean Strategy of Shanzhai Ji

## 4.2 Shanzhaiji handset innovation

The shanzhaiji handset developers do not have or little R&D capabilities. Actually, those developers just build the cellular phone as putting the semi-finished products or qualified parts supplied by Taiwanese component companies together. However, they do have their expertise that they can react agilely according to the trend of the phone market in mainland china. When they receive the latest phone information from media, internet and customer...etc, they can quickly evaluate the market demand and confirm cellular phone developing plan with chip vender, components vendors, scheme design houses, assembly factories and channel agents.

The shanzhaiji handset developers are really good at mastering Chinese peoples' needs especially on tendency and fashion. Normally, when the branded phone companies develop a phone, they have to find a segment of the target market but it is not applied to the shanzhaiji developers. As long as there are very few demands in the market, the shanzhaiji handset developers will go for phone development and production in order to meeting every customer's needs. Some end users cannot find the phone they really want but they can find the phone in the shanzhaiji segment. There is debut of 3~5 types of the shanzhaiji handsets per day in mainland china.<sup>27</sup> Thus, it can be over a thousand new types of handset per year in the Chinese cellular phone market. Copying and duplicating from tier-one handset company's portfolio is a symbol of the shanzhaiji handset products in the ordinary peoples' mind. However, there are a lot of original and brilliant innovations on the shanzhaiji handset products. The creativity of the shanzhaiji handset is usually represented in a way that is over one's imagination. The following shows the examples on how creative that the Shanzhaiji handset developers are.

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<sup>27</sup> 夏勇峰 (2008) 山寨机产业链解析



1. A pack of cigarette? A mobile phone? Or a combination of cigarette pack and phone?



It is the perfect combination of mobile phone and a cigarette pack for those who are addictive smokers.



The most incredible thing is that the phone can be inserted at most 7 cigarettes.



Various cigarette brands such as Chonghwa, Panda, Marlbara and 555 are selling in the market as they are cigarette phone disguising as a cigarette pack.

2. My Ferrari consumes no gasoline?



Looking down from top side, it seems like a Ferrari toy car. When the toy car has been turnover, it is a phone with Ferrari appearance.





### 3. Big Thunder phone



It looks just like a normal shanzhaiji handset with dual SIM cards. That is no difference to any other shanzhai mobile phone.



When turning it over, you may be touched by its unique style which is eight loudspeakers. When the main loudspeaker is adjusted to the minimal sound volume (level 1), it is quite heart shaking. When coming to level 2, it is a little bit noisy. When coming to level 3, the sound effect is throughout the entire room. When above level 3, people staying in the same area would get very annoyed.

#### 4. Paparazzo mobile phone



It is a phone with cannon lens. The cannon lens is easy to install that just aiming it to the slot closing to camera and then turn the cannon lens clockwise until locking it up to the phone.



This handset built-in 6x optical zoom camera is impressive. With such amazing 6x optical zoom camera, you can zoom in/out to focus distant objects clearly and make a high quality photograph easily.



To check the 'telescope' effect of its 6x optical zoom, a picture was taken in front of clothing store on the street. The left image above was taken without cannon lens that the letters on the signboard and the person cannot be seen clearly. However, the image on the right with cannon lens, we can see some letters on the signboard as well as the shopkeeper preparing for the store opening. This omnipotent handset is almost equipped with everything over one can imagine. The functions of 3-inch touch screen, Chinese handwriting recognition, dual sim card slot, Micro SD card support, Bluetooth, MP3, 6+1 super-powerful loudspeakers and 1.3 megapixel built-in digital camera...etc are the unique philosophy of the Shanzhaiji handset.



Furthermore, at its back side, there is an ordinary battery lid with an incredible function. Pressing the rectangular button, the part of the lid is giving off a purple light. It's neither a flashlight nor a photoflash lamp. It turns out to be a money authentication reader.





5. A phone with surveillance function



This Sangda SD999 can expose one's secrets to the public easily. Sangda SD999 is built-in a wireless function to connect to its extended surveillance function. Sangda SD999 together with a surveillance video camera, they can exchange the data through the air. The effect distance is around 10-30 meters. For those who want to monitor their house but have no professional equipment such as mothers cooking in the kitchen who worry about their babies playing in the living room, mother can cook and monitor the baby's movement simultaneously.



No extra transmission fees are charged, Sangda SD999 gives one to monitor on the phone screen within an area of 10 square meters from the surveillance video camera.

6. Handset watch with built-in candid camera



When taking a glance, one may think it is a watch. The handset watch is packed with a piece of sponge in a protective box that it just looks like an ordinary watch. Looking closer again, there is a number keypad on the watch band for dialing out.



The handset watch is equipped with a tiny 0.3 megapixel camera. The candid camera is camouflaged as part of handset that one can hardly tell the difference. One can pretend to check time, but shooting some objects without knowing by others.

The following are some more various creative designs of handset watch:





## 6. Orange HiPhone



At the first glance, one may think this is iPhone produced by APPLE inc. Actually, this is a shanzhaiji mobile phone which is called HiPhone.



The figures above are iPhone at left side and HiPhone at right side. Both of them looking from appearance and user interface are very similar that it is difficult to tell the difference. HiPhone has plenty of functions, for example, games, calculator, WAP, memorandum, MP3, MP4, scheduler, touch interface, shake sensor playlist, recorder, eBook, Bluetooth etc...



In addition, the image in the screen can be rotated 90 degree as the different direction of the cell phone due to a gravity sensor support. HiPhone supports 26 different languages. Asia SIM card, Europe SIM card and SIM cards from elsewhere of the world are applicable.



The packaging box and instruction manual are looked high quality which can compete with some famous domestic brands. A HiPhone costs  $\frac{1}{4}$  of an I Phone that one can purchase it for only 999 RMB.



7. A Vertu priced at 800 RMB ?



In Latin, Vertu means high quality and unique. Vertu is a manufacturer and retailer of luxury mobile phones based in British. The company is a wholly-owned subsidiary of Nokia. The concept of the company is to make mobile phones in the same vein as luxury watch manufacturers such as Rolex. The most expensive model is the Signature Cobra at US\$310,000 (~€217,000). The most expensive regular model is the Signature Diamond at US\$88,000 (~€62,000). Each Vertu phone is handmade with precious gems and noble metals by high-skilled craftsmen. Prices start at \$4,350 for the Vertu Constellation model as above picture at left side. Nonetheless, A Vertu at right side costs only 800 RMB with unique appearance. It is a Shanzhai version Vertu looks exactly the same with a real Vertu.

## 8. PSP handset



Before Sony Ericsson announces PSP mobile phone which is a rumor in the market for a long time, the shanzhaiji PSP handset has already been launched.



PSP handset of shanzhai version has over 90% appearance comparing with an original Sony PSP. PSP handset of shanzhai version is also much smaller and lighter. PSP handset of shanzhai version is incorporated with Nintendo Entertainment System and several classical Nintendo games such as Super Mario, Contra, Bomberman and Solaris etc...

9. The Olympic FUWA handset of shanzhaiji handset



There are five mascots of the FUWA with different colors in the 2008 Summer Olympics Games in Beijing. This Olympic FUWA handset in red with the Chinese tie is really of traditional Chinese style.



The atmosphere of Beijing Olympic has influenced broadly. Thus, a new handset inspired by Fuwa came out. The FUWA handset is aiming at children as the target market.



10. Buddha handset.

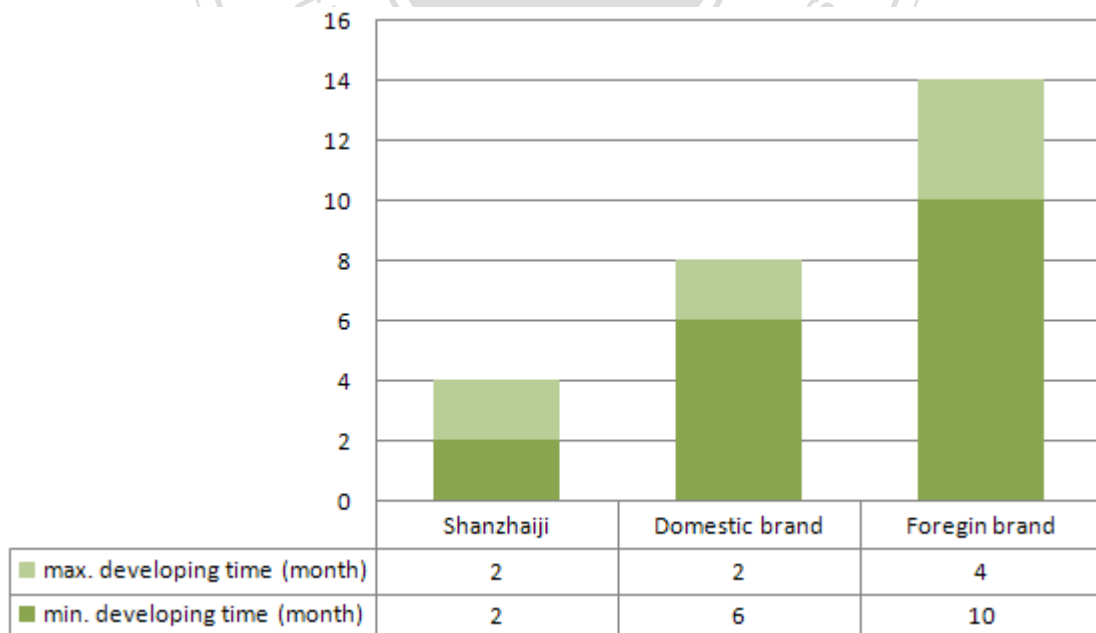


This Buddha handset, blessed by eminent monks accompanying with a certificated proof, is a perfect combination of religion and high-tech. This Buddha mobile is made of metal body with 24k golden plating and dedicated pattern. The Buddha handset can even support Micro SD, MP4, camera, and touch functions...etc.

### 4.3 Shanzhaiji handset Time to Market (TTM) comparison

A standard phone development process takes plenty steps from product concept, design, verification, manufacture, production, certification and delivery that those steps are time consuming. However, as the shanzhaiji industry supply chain in terms of design-wise, component-wise, manufacturing-wise, and channel-wise is well-developed in Shenzhen and especially under technical supports from MTK's turnkey solution, to launch a shanzhaiji phone to market, the entire developing time is only around 2 to 4 months that it is having the advantage comparing with regular developing process from Chinese domestic brand companies and multinational brand companies. Normally to develop a phone with full processes by Chinese domestic companies is around 6 to 8 months. Multinational brand companies take around 10 to 14 months. The following figure shows the TTM comparison among the shanzhaiji handset, Chinese domestic brand phone and multinational brand phone.

**Figure 4.3: TTM Comparison among the shanzhaiji handset, Chinese domestic brand handset and foreign brand handset**



Source: 杜舟 (2008) 山寨机疯狂内幕调查 and handset industry standard.

#### 4.4 Shanzhaiji handset cost effectiveness

The shanzhaiji developers can deliver a handset in a period of 2 to 4 months due to not only the shanzhaiji industry supply chain is highly-developed and fully technical supports from MTK's turnkey solution but also the shanzhaiji developers ignore some government regulations and some developing experiments. By reducing those items to save the cost, the sale price of the shanzhaiji handset can be attractive. Thus, the shanzhaiji developers can offer very low cost shanzhaiji handset to the market domestically and internationally. A ordinary shanzhaiji handset is around 150 to 200 RMB per phone due to the shanzhaiji handsets having the shorter developing time saved from experiment time of prototype which is around 4 to 6 months and time of Centre Testing International Corporation (CTI) or Type Approval (TA) which takes around 30 days to 45 days, avoiding 17% value-added tax, no experiment of prototype expenditures about 400 to 500 thousand RMB, no CTI certification fee of 200 to 300 thousand RMB, no sales tax cost and no after service cost.

**Table 4.1: Cost efficiency and TTM comparison**

	Shanzhaiji handset	Branded handset
17% value-added tax	No	Yes
Experiment fee of prototype	No	400 to 500 thousand RMB
Experiment Time of prototype	No	4 to 6 months
Cost of CTI / 入網認證費	No	200 to 300 thousand RMB
Time of CTI / 入網認證時間	No	30 days to 45 days
Sales tax	No	Yes
After service	No	Yes

Source: Lee Hong-tao (李宏韜), general manager of KONKA (康佳), made a speech in CCTV (央視)

Furthermore, there are more reasons why the price of the shanzhaiji handsets can be very low. The following table shows the summarized 10 major reasons of low cost on the Shanzhaiji handset in detail.

**Table 4.2: 10 major reasons of low cost on the Shanzhaiji handset**

1	By directly coping or duplicating from branded phone
2	By using none-brand or similar brand logo to confuse the end users
3	Manufacturing the product in bad production environments
4	By adopting low cost and quality components
5	No verification on prototype handsets
6	Phone is not sent to authorized department for TA
7	Shorter channel layers
8	Industry cluster density is high to lower transportation cost
9	Utilizing a variety of way legally or illegally to lower cost of after service
10	Underground production and trading leading to avoid tax burden

Source: 杜舟 (2008) 山寨机疯狂内幕调查

#### **4.5 The comparison of handset channel patterns in mainland china**

In the handset business competition, the channel is the most crucial element to gain the market share. A good channel strategy was the one of the reasons that the Chinese domestic branded companies succeeded during 1999 to 2003 when competing with foreign branded companies.<sup>28</sup> Actually, those Chinese domestic branded companies had experience in channel of white goods businesses rooted in tier-one cities to tier three cities for a long period of time assessing those markets easily.<sup>29</sup> On the contrary, the international branded handset companies did not have such kind of advantage during that time. Thus, Chinese domestic

<sup>28</sup> 程平芳 (2004) 渠道在國產手機成長中的作用

<sup>29</sup> 杨志伟 (2005) 我國手機市場營銷渠道模式比較研究



branded companies took the advantages on building up the channel into tier-two and tier-three cities gaining market share from 3% to 56%.<sup>30</sup>

Any handset companies who engages in channel campaigns have to consider three aspects at least which are building and managing channel cost, operation efficiency of channel and dominance of channel. In mainland china, the channels models are various. Thus, the following samples are taken as the examples due to they are running good business and they have brand recognition in mainland china. There are 4 kinds of model of market channel. First, the Motorola is adopting the distribution channel of multiple regional agents (區域多家總代理制). Second, Ningbo Bird Corporation (波導) is aiming at the distribution channel of direct sale (直銷為主的分銷模式). Third, TCL Corporation is applying the distribution channel of deeply sale involvement (深度營銷導入渠道模式). Fourth, the shanzhaiji handset developers are doing its special distribution ways. Finally, comparison of channel strategy of respective models is summarized.

The distribution channel of multiple regional agents is that it is the best way to get into a market when the international branded handset companies want to enter the market which they don't have good understanding on a particular region.<sup>31</sup> The structure of distribution channel of multiple regional agents is discussed as following. First, the phone producers sell the products to some regional agents. Second, the regional agents distribute the goods to province agents. Third, province agents allocate the handsets to local wholesale agents. Fourth, local wholesale agents deliver the handsets to the terminal retailers. Fifth, the terminal retailers sell the phone to the end users. Most of the international branded companies are adopting such distribution channel in mainland china due to they are not

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<sup>30</sup> 程平芳 (2004) 渠道在國產手機成長中的作用

<sup>31</sup> 曾昊 (2005) 國內手機市場分銷渠道模式探析

familiar with the Chinese handset market. Therefore, they need the Chinese local agents' channel expertise.

Nonetheless, the distribution channel of multiple regional agents was an excellent strategy for the international branded companies to dominate the entire Chinese handset market before 1998. The distribution channel of multiple regional agents offered the lowest cost of channel build up and the highest distribution speed in Chinese handset market assisting from Chinese channel distributors. In 2001, the distribution channel of multiple regional agents was transformed due to competition was becoming drastically from Chinese domestic branded companies. Thus, the international branded companies were losing competitive advantages. The following diagram shows the structure of the distribution channel of multiple regional agents before 2001.

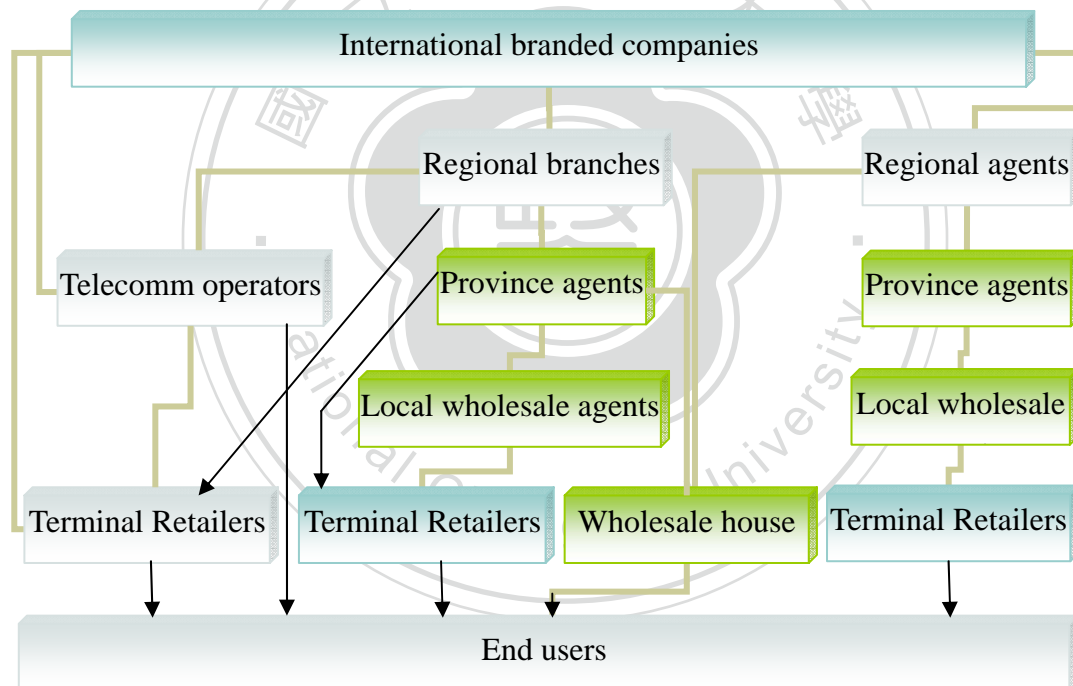
**Figure 4.4: The distribution channel of multiple regional agents before 2001**



Source: 杨志伟 (2005) 我國手機市場營銷渠道模式比較研究

The international branded companies have started to reform their distribution channel pattern by extending more channel functions to deal with fierce marketing competitions from Chinese domestic branded companies. They have established some branches and offices in the mainland china to promote the handset directly to regional agents, telecomm operators as well as terminal retailers. Those extending functions do not mean the self-established channel. Those international branded companies are still relying on the Chinese distribution channel they previously cooperate with. Thus, by adopting this pattern, the efficiency has increased. The following is the figure of the distribution channel of multiple regional agents after 2001.

**Figure 4.5: The distribution channel of multiple regional agents after 2001**



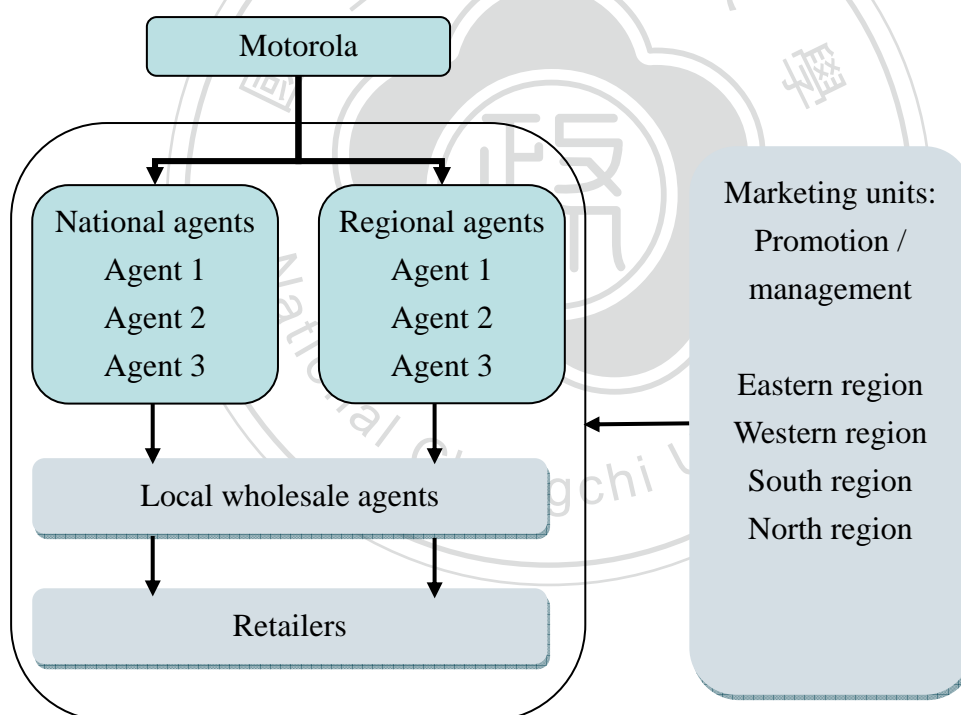
Source: 杨志伟 (2005) 我國手機市場營銷渠道模式比較研究

Motorola utilizes the distribution channel of multiple regional agents to penetrate into the Chinese handset market because of unaware of the Chinese handset market and Chinese local

agents' distribution channels and capital supports. This model provides the cost effectiveness of channel establishment and fast distribution of goods to take the majority of tier-one cities.

Nonetheless, auspicious days did not last long for Motorola on the model of the distribution channel of multiple regional agents that Chinese domestic branded companies started to take the market share. Motorola had lost the market share so it had reformed the channel strategy to reduce the layers of consignees and to broaden the handset channels. The following is the Motorola's transformed channel pattern as following.

**Figure 4.6: The pattern of distribution channel by Motorola**



Source: 杨志伟 (2005) 我國手機市場營銷渠道模式比較研究

Advantage:

The regional agents are familiar with the Chinese domestic handset market with professional channel expertise and practical experience. They normally have the regular clients so that

they can push the handsets into market with high covering rate. International branded handsets companies can leverage the capital risk to minimize due to the agents provide the capital support and channel distribution. Furthermore, with multiple agents, International branded handsets companies' negotiation capability can increase because those agents compete with each other.

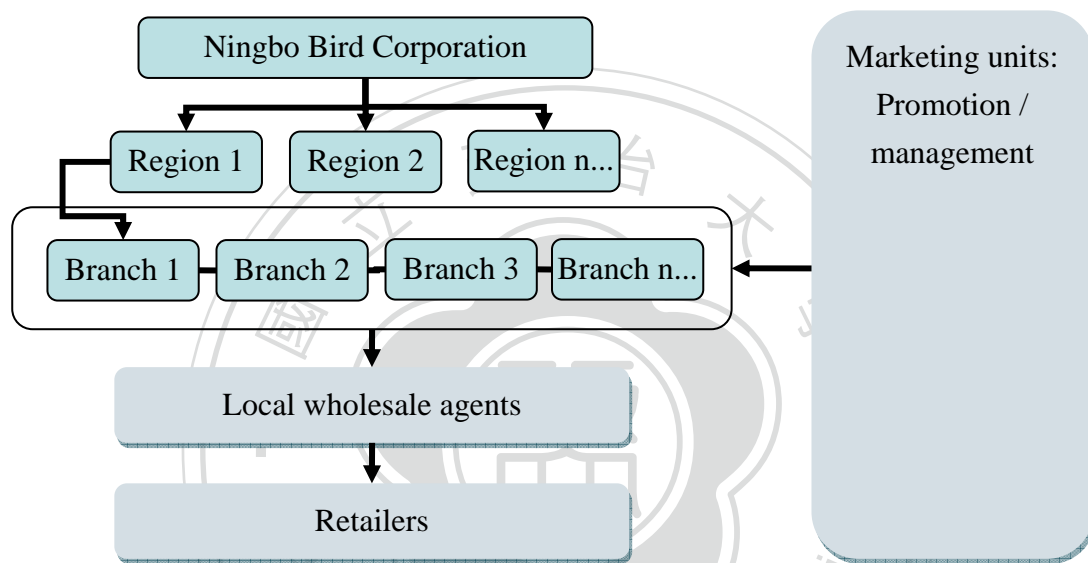
Disadvantage:

The competition among those agents increases gradually because of interests conflicting respectively. The cost war can occurs in the channel leading to disturbance of market price of handset. Such kind of chaos can results in brand recognition damaged. Those agents in order to gain the rewards do anything necessary to boost the sales volume forecast. It is highly possible to result in the tremendous stocks. Furthermore, if the handset price and goods distribution are not manipulated well, it may cause wholesale agents and terminal retailers losing their faith on a handset brand. In fact, the handset producers and regional agents often have asymmetry information on a target market. Handset producers usually aim at brand campaigns so they have less control powers on retailer and less knowledge on the end users' tastes comparing with local agents or telecom operators.

The distribution channel of direct sale is adopted by Ningbo Bird Corporation due to Ningbo Bird Corporation has the excellent understanding on Chinese domestic handset market. Ningbo Bird Corporation has created highly vertical pattern of direct sale. Adopting this pattern, Ningbo Bird Corporation can cooperate with terminal retailers closely as well as provide the goods to those terminal retailers by Ningbo Bird Corporation's established branches in the targeted regions. Ningbo Bird Corporation in order to build up the distribution channel of direct sale spent over one year and 400 million RMB to establish 28

provincial sale branches with over 300 offices. In the entire channel, there are over 4000 sales and service personnel, over 15000 local wholesale agents, over hundred of thousand terminal retailers from remote rural areas to tier-one cities as a net covering the entire mainland china.<sup>32</sup> Such pattern brings Ningbo Bird Corporation competitive advantage. The following is the Ningbo Bird Corporation's channel pattern.

**Figure 4.7: The distribution channel of direct sale by Ningbo Bird Corporation**



Source: 程平芳 (2004) 渠道在國產手機成長中的作用

Advantage:

Via the self-established distribution channel of direct sale covering entire handset market, the handset producers can promote the new products quickly. Thus, penetration power to market is high to establish the brand recognition and market share. Because of closing to market, the handset producers can gather the competitors' information and then to react agilely.

Furthermore, the handset producers can make the strategically marketing policy to ask the

<sup>32</sup> 程平芳 (2004) 渠道在國產手機成長中的作用

terminal retailers to follow suit effectively. The control powers of channel facilitate the handset producers to manipulate the market price and obtain efficient goods distribution.

Disadvantage:

The establishment of the channel leading to high maintenance cost. When in the low season or product line insufficient, it can result in wasting channel resources. Moreover, the cost of channel establishment is magnificent resulting in higher operation cost so the terminal retailers' margin decrease because of cost transfer. The risks such as goods distribution and after services are taken by the handset producers.

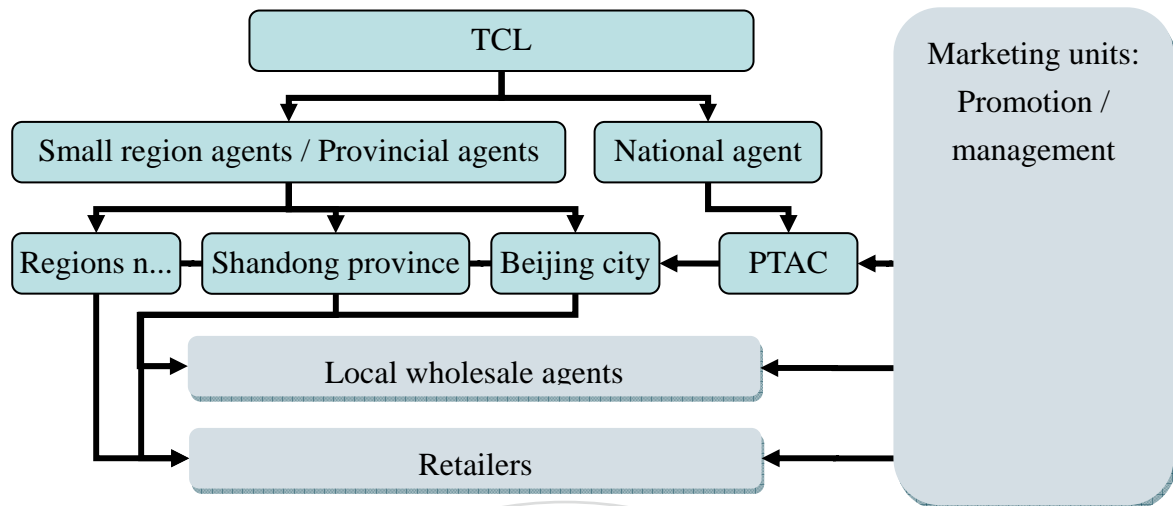
The distribution channel of deeply sale involvement is adopted by TCL Corporation. The idea of this channel pattern is to increase good relationship with goods distributors in order to get good supports. The channel structure of TCL is sophisticated that there are 23 branches, 7 sales offices, 156 local sales offices and 546 strategic business units in mainland china.<sup>33</sup> TCL Corporation cooperates with all agents such as supporting local wholesale agents to expand their retail nets, assisting local wholesale agents to engage in advertisement campaigns to promote the brand recognition and arranging sales representatives or promoters to terminal retailers to present TCL products face to face. Furthermore, TCL is acting as a coordinator among those provincial agents, wholesales agents, and terminal retailers to facilitate the channel efficiency.

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<sup>33</sup> 程平芳 (2004) 渠道在國產手機成長中的作用



**Figure 4.8: The distribution channel of deeply sale involvement by TCL Corporation**



Source: 程平芳 (2004) 渠道在國產手機成長中的作用

**Advantage:**

The handset producers can explore and manage a regional market deeply and allocate the resource to target market effectively. The regional agents, local wholesale agents and terminal retailers can get supports from the handset producers' marketing units. The handset producers establishing the mechanism of provincial distribution platform and utilizing the channel agents' capital can lower distribution cost, inventory cost, capital risk and operation cost. Due to the handset producer's branches or offices only focus on marketing promotion as well as channel establishment and maintenance, this increases the operation efficiency for all players.

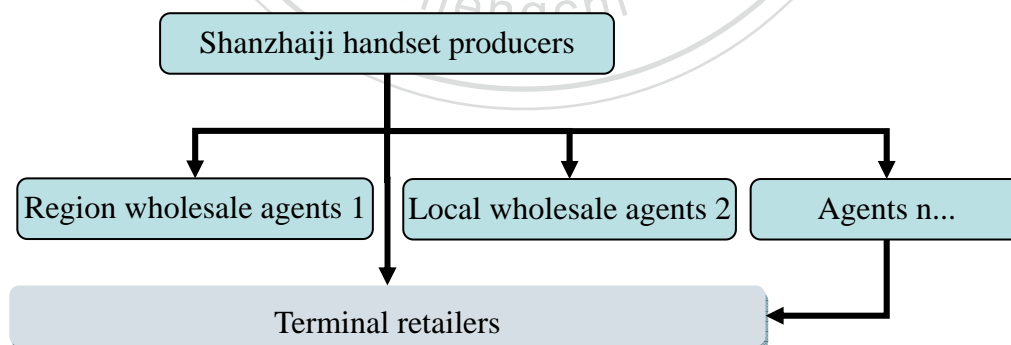
**Disadvantage:**

Due to TCL dispatching sales representatives or promoters to the regional agents, local wholesale agents and terminal retailers, the qualified professional talents are needed in order to present handset products that those talents are required sales, management and coordinating capabilities. In addition, adopting provincial or regional agents can decrease the

conflict among agents by allocating product line properly but when handset producer's product line is very few, unbalance among agents can be foreseen.

The channel pattern of Shanzhaiji handset is unique and simplified. Normally, the Shanzhaiji handset producers hold plenty of exhibitions as forums in the Hotels surrounding Huaqiangbei area in Shenzhen.<sup>34</sup> In the exhibition, it is the opportunity to get in touch with potential partners among the Shanzhaiji handset producers, regional wholesale agents, local wholesale agents and terminal retailers...etc. Those wholesale agents and retailers are mostly from tier-two and tier-three cities as well as rural areas who seek for cooperation opportunities with Shanzhaiji handset producers. Once they have connection, the partnership can be long-term for the sake of minimizing the risk from new players as well as securing long-term interests for the players in the loop. Furthermore, all business activities of Shanzhaiji handset are cash only so that there is no accounts receivable issue. There is no commercial advertisement for Shanzhaiji handset so that the cost is saved. The following is the channel structure of Shanzhaiji handset as followings:

**Figure 4.9: The channel pattern of Shanzhaiji handset**



Source: self compiling

<sup>34</sup> 夏勇峰 (2008) 山寨機產業鏈解析

Advantage:

Shanzhaiji handset producers adopt the distribution channel of directly selling to the regional wholesale agents, local wholesale agents and terminal retailers that the layer of consignees is minimized. Shanzhaiji handset producers do not have their own stores, sales staffs or logistics networks as well as promotions. Shanzhaiji handset producers leave enormous profit margins to the regional wholesale agents, local wholesale agents and terminal retailers as the incentives to sale harder on the Shanzhaiji handsets leading to the sales volume increased. Moreover, the regional wholesale agents, local wholesale agents and terminal retailers have very localized sales channels which are helping Shanzhaiji handsets into small towns and remote villages. Those retailers and agents are very familiar with the end users' demands in their respective local markets so that Shanzhaiji handsets can quickly penetrate into those markets especially in the low-end segment. There is little or no cost for building up the channel to Shanzhaiji handset producers. The risks to them are low because regional wholesale agents, local wholesale agents and terminal retailers have taken the majority risks such as inventory risk but with enormous profit margins.

Disadvantage:

Higher profits incentive takes higher risks. The majority risks are taken by the regional wholesale agents, local wholesale agents and terminal retailers as the Shanzhaiji handset producers sell the products without after service and leave inventory risk to those agents. Those agents have to rely on their own.

The Shanzhaiji handset producers have fewer the layers of consignees comparing with Chinese domestic branded and international branded companies. Thus, the Shanzhaiji handset producers have cost effectiveness on channel-wise. There are no competition issues

and cost war among those agents as Shanzhaiji handset producers have been securing long-term interests for the players in the loop. In addition, there are no cost issues on the channel establishment and channel maintenance that all of them rely on Shanzhaiji handset regional wholesale agents, local wholesale agents and terminal retailers. Shanzhaiji handset producers have no advertisement champions on their handsets so the cost saved is left to the regional wholesale agents, local wholesale agents and terminal retailers. Thus, the sales volume can increase under those aforementioned points.

As 4 kinds of patterns which are the distribution channel of multiple regional agents adopted by Motorola, Ningbo Bird Corporation adopting distribution channel of direct sale, TCL Corporation adopting distribution channel of deeply sale and the Shanzhaiji handset channel, the following is a comparison among 4 channel patterns as a comprehensive summary.

**Table 4.3: The comparison diagram of handset channels**

<b>Channel pattern</b>	<b>The distribution channel of multiple regional agents</b>	<b>The distribution channel of direct sale</b>	<b>The distribution channel of deeply sale involvement</b>	<b>The Shanzhaiji channel pattern</b>
<b>Representative company</b>	Motorola	Ningbo Bird Corporation	TCL Corporation	Shanzhaiji handset producers

<b>Phone producers' principal tasks</b>	Brand champions	Brand champion, channel establishment and retailer promotion	Brand champion, channel establishment and retailer promotion	No advertisement or promotion
<b>Distributors' principal tasks</b>	Providing the distribution network and capital support	Owner of distribution network and capital	Owner of distribution network and capital	Providing the distribution network and capital
<b>Retailers' main tasks</b>	Promotion	Promotion with the phone producer	Promotion with the phone producer	Promotion
<b>Layers of consignees</b>	at least 4 layers	2 to 4 layers	average 3 layers	1 to 3 layers
<b>Understanding of Regional end user's need</b>	Weak	Strong	Very strong	Very strong
<b>The control of channel from handset producers</b>	Weak	Strong	Very strong	Very weak or none

<b>Channel cost of consignees</b>	Very high	Very high	High	Low
<b>Phone producers' capital risk</b>	Low	High	High	Very low or none
<b>Handset producers' negotiation capability to retailers</b>	Weak	strong	strong	Very weak or none
<b>Handset producers' promotion capability to retailers</b>	Weak	strong	strong	None

Source: 程平芳 (2004) 渠道在國產手機成長中的作用 and self compiling

## 5. Future development of shanzhaiji handset

### 5.1 Competition increase in shanzhaiji handset market

The Shanzhaiji handset business was lucrative before middle of 2007. Since then, the competition among the Shanzhaiji handset developers has increased drastically due to license of handset production was phased out on Oct 2007 as a great incentive for new players that numerous players enter into the market. Furthermore, it is the MTK turkey solution leading to low threshold for new comers that the specifications of the Shanzhaiji handsets among the players' products are almost similar except product appearance. Under such circumstance, the chaos in the Shanzhaiji handsets business has been increasing. As a Shanzhaiji handset product is competing in the low cost segment and fast provision, it has been impacting some Chinese domestic branded companies such as Ningbo Bird Corporation and Amoi who have deficits on handset businesses.<sup>35</sup> Those Chinese domestic hand companies are losing profits due to emergency of the Shanzhaiji handset products. The entire Chinese handset market can be ruined if such competition continues. Lemon market effect could be seen that it refers to that good lemons are expelled out of market by bad lemons that in the end, the lemons in the market are all bad.<sup>36</sup> In order to mitigate such situation, the timely regulation and guidance from Chinese government are critical to lead the Shanzhaiji handset businesses to be normalized. The Chinese government's role can be significant in assisting those Shanzhaiji handset developers to the regular basis as they operate in a legitimate way to compete with Chinese domestic companies on the same basis. Otherwise, combining those factors all together, the future of Shanzhaiji handsets can be bumpy.

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<sup>35</sup> 余小勇 (2009) 山寨机生存有道

<sup>36</sup> 舒华英、北京邮电大学经济管理学院教授



## 5.2 Chinese Government policy to shanzhaiji handset market

The structure of shanzhaiji handset industry is complicated and complex that it is difficult to determine which business activity is licit or illicit. Currently, there is no official announcement in favor of shanzhaiji handset industry from Chinese government due to existence of shanzhaiji handset industry is a sensitive issue to Chinese government. Especially on intellectual property infringement, there are many shanzhaiji handsets looked like almost the same as some tier-one players' products. Thus, Shenzhen city government has carried out many strikes on the shanzhaiji handset products infringing intellectual property in the huaqiangbei road business district in Shenzhen, Guangdong but it has not succeeded since 2005.<sup>37</sup> On the other hand, the entire shanzhaiji handset industry does bring enormous economic effects contributing to the rapid regional development. Only striking the shanzhaiji handset business cannot solve the problems that it can lead to a significant impact on the entire shanzhaiji handset industry.

Even though this is no crystal clear official commitment from the Chinese government, in fact, the Chinese government has started to direct the transformation of the shanzhaiji handset industry to be regularized from some government policies. At first, in the Oct 2007, the license of handset production was phased out by Chinese government that all of the underground activities of the shanzhaiji handset can be rectified gradually under the policies.<sup>38</sup> In order to facilitate the shanzhaiji handset industry to be normalized, the China Academy of Telecommunication Research (CATR) / 工业和信息化部電信研究院 has established a lab named South Institute of CATR of MIIT / 工业和信息化部電信研究院南方分院 or China Shenzhen Institute of Telecommunications / 深圳電信研究院 in the Shenzhen operating on AUG 1, 2008 by Shenzhen city government and CATR.<sup>39</sup> The China

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<sup>37</sup> 杜舟 (2008) 山寨机疯狂内幕调查

<sup>38</sup> 孙晓菲 (2008) “破解” 山寨機

<sup>39</sup> 工信部電信研究院南方分院(深圳電信研究院) <http://cszit.com/About/index.aspx?ListID=020104>

Shenzhen Institute of Telecommunications is another window to the China Telecommunication Technology Labs (CTTL) / 中國泰爾實驗室 in Beijing that both of them are affiliates of CATR for Type Approval (TA).

As Type Approval is closer to the shanzhaiji handset developers, it can be part of incentives to them to submit their products to be verified. There are more preferential policies accompanying as followings. First, CATR increases the TA resources for handset developers. Second, the GSM handset test cases are reduced 10 items as well as CDMA test cases are reduced 11 items. Third, the cost of TA is discounted around 33 percent from 30 thousand RMB. Fourth, the TA process is improved to provide the report within 8 days.<sup>40</sup> Feb 2009, the Shenzhen city government announced to regulate and guide the “preliminary innovative product” (初级创新产品) which can be referred to the shanzhaiji handset products in order to pushing the shanzhaiji handset developers to transform and upgrade to develop brand recognition and capabilities of research and development.<sup>41</sup>

### **5.3 Transformation from OEM/ODM to OBM**

Even through the shanzhaiji handset developers has the capabilities to deliver products in to handset market, they are still not qualified as regular handset developers. The shanzhaiji handset developers have no guarantees or warranties to end users who use their products. If the shanzhaiji handset products have problems, the only thing that the end users can do is to take it. Any players who provide the product or service have to meet the customers’ needs. Otherwise, it may not last long for the shanzhaiji handset developers. To survive longer, the

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<sup>40</sup> 新華社，助力山寨機“轉正”，工信部促檢測費下調33%，2008/08/14，

[http://big5.xinhuanet.com/gate/big5/www.xj.xinhuanet.com/2008-08/14/content\\_14124501.htm](http://big5.xinhuanet.com/gate/big5/www.xj.xinhuanet.com/2008-08/14/content_14124501.htm)

<sup>41</sup> 深圳市人民政府工作报告(2009) [http://www.sz.gov.cn/zfgb/2009/gb644/200904/t20090402\\_953310.html](http://www.sz.gov.cn/zfgb/2009/gb644/200904/t20090402_953310.html)

shanzhaiji handset developers should transform to Original Equipment Manufacturing / Original Design Manufacturing (OEM/ODM) operation to provide their service for the branded companies due to advantages of lower cost, faster provision and unique product appearance. At the same time, the shanzhaiji handset developers can learn Own Brand Management (OBM) operation model from those branded companies. From OEM as the simple manufacturing and production to ODM as manufacturing, production and design, it is a common way for a beginner of an industry because most branded companies have gone through the same way as to increase the capabilities gradually from simply manufacturing for customers to self innovation. Without those steps from OEM/ODM to OBM, a company might not be able to develop OBM operation.



## 6. Conclusions

The emergence of shanzhaiji handset industry has been impacting the handset industry significantly in the mainland china with the turnkey solution from MTK since 2003. The shanzhaiji handset products with lower cost, faster provision and unique product appearance have been mushrooming and booming in the handset market. They are prosperous during the period of 2003 till today. However, competition has increased among the shanzhaiji handset developers since Oct 2007 as handset production license was phased out bringing new comers of the shanzhaiji handset developers into the handset market. The low margin among the shanzhaiji handset developers has been happening because of the low threshold to produce shanzhaiji handset leading to drastic competition. The shanzhaiji handset businesses have to be regulated by assistance from Chinese government. Otherwise, the competition of the shanzhaiji handset businesses may lead to chaos.

The structure of the shanzhaiji handset industry in Shenzhen is huge and complicated that there are over 10 thousand upstream and downstream participants that the chip vendors are around 3, the scheme design houses are around 200, the shanzhaiji handset developers are around 2000, the provincial as well as local channels are around 1000 and the components suppliers are around 3000. The entire shanzhaiji handset industry is fully developed that the shanzhaiji handset businesses do bring tremendous economic effects in Shenzhen leading to prosperous regional development. Nonetheless, the shanzhaiji handsets are illicit products which are infringing the intellectual property right, copying the trade mark and avoiding Chinese government' supervision as well as regulation.

It is a dilemma to Chinese government to act on shanzhaiji handset issues because if the government strikes the shanzhaiji handset businesses, there will be an impact on over 10 thousand upstream and downstream participants resulting in low economic growth. If the Chinese government does not strike, the government is blamed by not functioning. Only strike on shanzhaiji handset businesses is not a good way. To guide and support those shanzhaiji handset developers to upgrade are essential for further regional development by Chinese government. The Chinese government has to play a leading role to dominate the whole scope to regulate the entire shanzhaiji handset business and industry as the registration of shanzhaiji handset players and guide industry participants to be normalized gradually.

For those shanzhaiji handset developers who possess competitiveness should get strong supports and assistances from the government in order to prosper the handset market. The Chinese government should provide some preferential policies to shanzhaiji handset developers such as tax deductions, subsidies, technology supports and land provisions...etc in order to cultivate the shanzhaiji handset developers. If the entire shanzhaiji handset activities can be normalized and regulated, those players of shanzhaiji handset developers can compete on a fairly basis and then compete with Chinese domestic handset and international handset companies. Transformation of the shanzhaiji handset developers is desperately needed for future sustainable development.

## Reference

1. 林柏全，解讀聯發科的成長密碼，國立交通大學管理學院碩士在職專班經營管理組碩士論文，2008。
2. 王京莹，经济观察报-山寨机市场规模扩大 亟待政策引导良性发展，赛迪顾问通信产业研究中心 2009/03/31，[http://www.ccidconsulting.com/search/content.asp?Content\\_id=21108](http://www.ccidconsulting.com/search/content.asp?Content_id=21108)。
3. 林剑，准入门槛急速下降 国产手机面临“山寨机”挑战，2008/04/16。
4. 程平芳，渠道在國產手機成長中的作用，清华大学工商管理硕士，2004。
5. 周玲，深圳政府摸底山寨机：万余企业等待招安 2008/07/26。
6. 深圳商報，深圳年產山寨機 8000 萬部 成產業重要組成部分，2009/02/24，  
[http://big5.ce.cn/cysc/communications/yjdt/200902/24/t20090224\\_18301887.shtml](http://big5.ce.cn/cysc/communications/yjdt/200902/24/t20090224_18301887.shtml)。
7. 央视网，揭秘“山寨机”，2008/06/10，<http://www.cctv.com/program/jjbx/20080610/101183.shtml>。
8. 新華網，探訪深圳“山寨機”基地:山寨蔓延究竟爲何，2009/01/09，  
[http://big5.xinhuanet.com/gate/big5/news.xinhuanet.com/tech/2009-01/09/content\\_10628162.htm](http://big5.xinhuanet.com/gate/big5/news.xinhuanet.com/tech/2009-01/09/content_10628162.htm)。
9. 杨志伟，我國手機市場營銷渠道模式比較研究，天津大學管理學院，2005。
10. 王一春，山寨機與國產手機的發展，湖北经济学院学报人文社会科学版，2008/12 第五卷 第12期。
11. 汪小婷，山寨机的前世今生，中国电信业 2008/08 总第 92 期。
12. 孙晓菲，“破解”山寨機，中国三星经济研究院研究员，2008。
13. 赵浚宏，山寨机突出市场重围 正规军谋求创新求变—中国手机行业发展的思考，2008/09 总第 85 期 科技创业。
14. 杜舟，山寨机疯狂内幕调查，IT time weekly，2008。
15. 余小勇，山寨机生存有道，中国电信业 200903 总第 99 期。
16. 顾列铭，山寨机:手机业的搅局者？，2008。
17. 李忠全，山寨机启示录，中国电信业 200811 总第 95 期。
18. 夏勇峰，山寨机产业链解析，經理世界網，2008。
19. 中國金字招牌，山寨机 - Trends without Brands. Bandit Mobile Phones Big Buzz in China，2008/07，  
<http://goldenchinabrands.com/blog/?p=573>。



20. 經濟日報，專業分工 山寨機創新沃土，2009/04/23，  
[http://mag.udn.com/mag/world/storypage.jsp?f\\_ART\\_ID=191042](http://mag.udn.com/mag/world/storypage.jsp?f_ART_ID=191042)。
21. 曾昊，國內手機市場分銷渠道模式探析，2005。
22. 林劍，“两会”代表热议山寨机转正之后能否续写辉煌？，通信信息报，2009/03/11，  
<http://www.chinanews.com.cn/it/txxw/news/2009/03-11/1597845.shtml>。
23. 耿弘，崔勇，中国手机行业产业组织分析与国产品牌发展策略选择，南京航空航天大学经济与管理学院2006年 第7期。
24. 樊舰平，中國手機市場營銷渠道的發展特點及變革分析，湖北财经高等专科学校学报，2002/04 第2期。
25. 潘少钦，杨奕编 (2008), The Blue Ocean Strategy of Shanzhai Ji, HUAWEI TECHNOLOGY CO., LTD。
26. Special Economic Zones and Open Coastal Cities, <http://www.china.org.cn/e-china/openingup/sez.htm>。
27. Karl J. Weaver (2009), Shan Zhai Ji 山寨機，Newport Technologies。
28. James Schneider, Ph.D. et al (2009), Handset market share wars: Battle for chipset dominance. Goldman Sachs。
29. CENS，Despite Economic Woes, MediaTek Thrives in China's Shangzhai-Handset Market，  
2009/05/15，[http://news.cens.com/cens/html/en/news/news\\_inner\\_27645.html](http://news.cens.com/cens/html/en/news/news_inner_27645.html)。
30. China Youthology，Decoding Shan Zhai Ji (Bandit cell phone) - the opposite side of brand chasing，  
2009/09/21，<http://chinayouthology.com/blog/?p=369>。
31. Commonwealth Magazine，China's 'Bandit' Cell Phones The High-Tech Golden Egg with 'Taiwan Inside'，2008/12/03，<http://english.cw.com.tw/article.do?action=show&id=10656>。
32. Rajkumar S. Adukia, A handbook on Special Economic Zones。
33. 何涛，“山寨機”，生存法則調查，2008/7/10。
34. 杜舟，“山寨機”狡兔三窟應對嚴打 草根創新不示弱令正規品牌汗顏，IT time weekly，2008
35. 李学芳，赛迪顾问通信产业研究中心：“山寨”机走出“山寨”，2009/06/02，
36. [http://www.ccidconsulting.com/search/content.asp?Content\\_id=21186](http://www.ccidconsulting.com/search/content.asp?Content_id=21186)。

37. 人民网，探讨山寨现象 五成网友看好，2008/12/03，  
<http://av.people.com.cn/GB/14645/25059/8453406.html>。
38. Spreadtrum Communications (Shanghai) Co., Ltd.，[www.spreadtrum.com](http://www.spreadtrum.com)。
39. CTI 华测检测机构，<http://www.cti-cert.com/cn/>。
40. 工信部电信研究院南方分院(深圳电信研究院) <http://cszit.com/About/index.aspx?ListID=020104>。
41. 新華社，助力山寨機“轉正”工信部促檢測費下調 33%，2008/08/14，  
[http://big5.xinhuanet.com/gate/big5/www.xj.xinhuanet.com/2008-08/14/content\\_14124501.htm](http://big5.xinhuanet.com/gate/big5/www.xj.xinhuanet.com/2008-08/14/content_14124501.htm)。
42. 深圳市人民政府工作報告 (2009)  
[http://www.sz.gov.cn/zfgb/2009/gb644/200904/t20090402\\_953310.html](http://www.sz.gov.cn/zfgb/2009/gb644/200904/t20090402_953310.html)。
43. 山寨机网，<http://www.shanzhaiji.cn/>
44. CCTV-2 中國 "山寨機" Fake Mobile Phones
1. <http://www.youtube.com/watch?v=7qZdorGq2S8>
  2. <http://www.youtube.com/watch?v=Vmo7dfyNe-w&NR=1>
  3. [http://www.youtube.com/watch?v=wBnKcY\\_Iimg&feature=related](http://www.youtube.com/watch?v=wBnKcY_Iimg&feature=related)
  4. <http://www.youtube.com/watch?v=vdHUIKdj-Zo&NR=1>