

The Construction and Application of Dynamic Population Database Based on “Suishenma Code”

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The construction and application of dynamic population database based on “Suishenma code”, Based on the community, units, buildings, residential areas, residential buildings and public places existing “changsuo code”. It makes use of image recognition, wireless encryption, big data and cloud storage technology to make it become the terminal of mobile personnel data collection, recognition and processing analysis. Meanwhile, the real-time dynamic matching database of people and houses is recorded and generated to form the corresponding relationship between people and places of activity. The construction of the system mainly covers the interior of buildings such as residential areas, units and houses with intensive human activities, social cases and high incidence of livelihood cases, make up the “Xueliang, Tianyan, Anke Project” monitoring blind spots, and can be used for the prevention and control of the epidemic and other emergencies trace source and early warning. The construction of this program serves the following areas: Tianyan project, major emergencies, housing management, special crowd management, public publicity, residents services and government services.

Key Words: Suishenma Code; Changsuo Code; Dynamic Population Database.

October 16, 2022 The President Xi said “We should improve the social governance system of co construction, co governance and sharing Improve the effectiveness of social governance”. (The Fourteenth Five Year Plan for the National Economic and Social Development of the People's Republic of China (2021-2025) & the Outline of Vision Goals for 2035), (The Implementation Outline for the Construction of a Government under the Rule of Law (2021-2025)), (The Plan for the Construction of a Government under the Rule of Law in Shanghai (2021-2025)) and other documents provide a comprehensive, three-dimensional The intelligent social safety net puts forward clear task indicators.

Background of Scheme System Construction**Collection and Collation of Information Related to the Construction of “Pingan China”**

A. In 2021, the local people's courts and special people's courts will accept 33.615 million cases. Among them, 16.787 million were civil cases, 2.649 million were marriage and family violence cases, 4.24 million were successfully mediated before litigation, and 14.645 million were investigated online. 71.3% of the cases

occurred in the premises [1].

B. In 2021, Shanghai's people's courts at all levels and special people's courts will accept 880000 cases. Of these, 331000 were civil cases, 110000 were cases of marriage and family violence, 35000 were successfully mediated before litigation, and 728000 cases were investigated and prosecuted online, accounting for 81% [2].

C. According to (Shanghai Statistical Yearbook-2020/), Shanghai has 16 districts, 105 streets, 107 towns, 2 townships, 4253 neighborhood committees and 1590 village committees. The total population of the city is 24.879 million, of which 1047.9 are permanent residents from other provinces and cities, and 22.2094 million are urban residents, accounting for 89.3%; The rural population is 2.6615 million, accounting for 10.7%. The permanent floating population is about 154698000-person times, and the foreign permanent population is 187000.

D. Shanghai is one of the first batch of pilot cities for the “Xue Liang Project” in China. The coverage rate of video surveillance

in key public areas, key industries and fields in the city will reach 100%, and the coverage density of public security video surveillance will reach more than 15 per square kilometer (2019 data, from the network), so as to achieve "full coverage, full network sharing, full time availability, and full process control" of public security video surveillance networking applications.

Existing Problems

A. The national "Tianyan", "Anke" and "Xueliang" projects are mainly installed in central urban areas and rural main roads, and there are blind areas for monitoring the main activity places of people (such as communities, houses, units, etc.).

B. People's livelihood cases and family cases account for 9.72% of the national cases, and social security cases such as theft account for 15.5% of the national cases. These cases basically occur in the blind surveillance areas.

C. The online investigation and prosecution cases detected by population information and big data accounted for 47.54% of the national cases. The data of public security organs are still the main source of population information in the database construction. As the direct contacts and managers of the people, rural street communities have not played the role of data collection of floating population.

D. As the builder and manager of the "last kilometer" of a harmonious society, rural street communities are faced with the most difficult problems: the serious separation of people and households, the difficulty in contacting the floating population, the high incidence of community cases, and the lack of social care for the elderly living alone. These problems need to be resolved urgently.

As a Big Super city, flow city and port city in China, Shanghai has the largest floating population and person times in China. It is difficult to deal with social security and emergencies. We should implement the construction and management requirements of the central government and Shanghai Municipal Government for "safe and harmonious Shanghai" from a political perspective. According to the data released by Shanghai Big Data Center, as of January 2022, the number of real name users applying for registration of "Suishen Code" has exceeded 61.95 million, the number of place code applications has reached 466700, 6656 "digital sentries" have been deployed, and 294300 major places, streets and communities in the city, with a coverage rate of 100%.

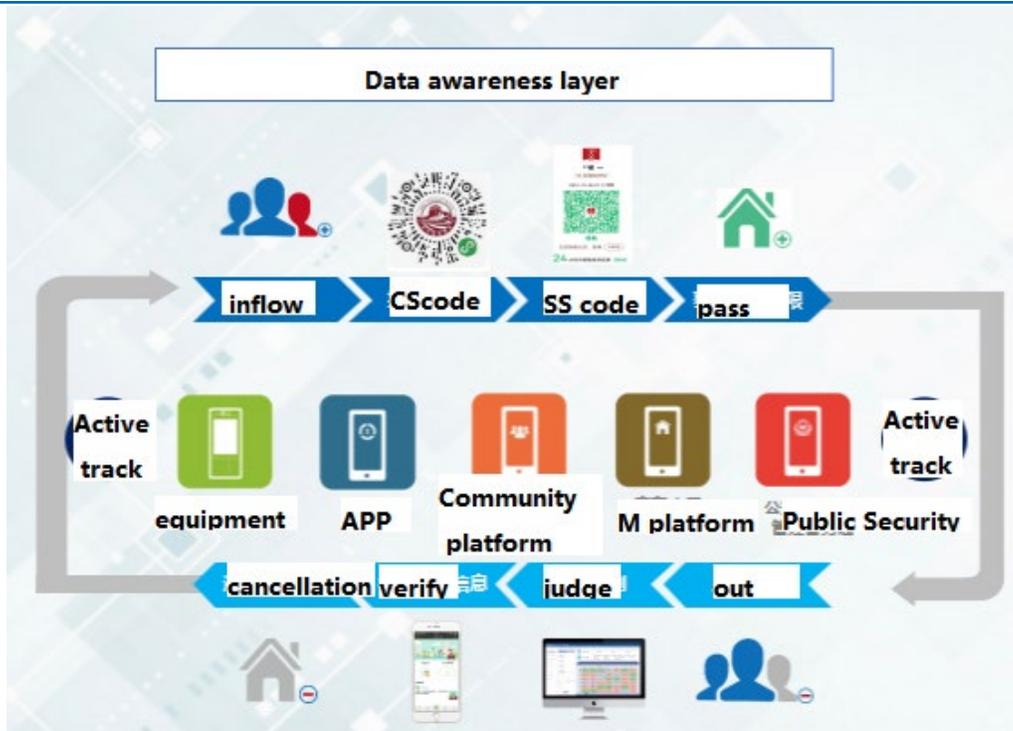
The year 2022 is the foundation year of the "Fourteenth Five Year Plan" for social security, such as theft. It is also a key year for building a moderately prosperous society in all respects and starting a new journey of building a socialist modern country in all respects. How to use the existing infrastructure conditions to transform it into the Internet of Things, and use cloud computing, cloud identification, cloud encryption, cloud storage and big data technology, We have developed a new, comprehensive, social, dynamic monitoring, and dynamically implemented social security network system that is unique to Shanghai, and built a dynamic population database in Shanghai, laying a solid data foundation for the construction of "Pingan China, Pingan Shanghai".

Scheme Construction Principle (Chart1)

This scheme is based on the "Suishen Code" and "Site Code", developed with the Internet of Things technology, big data and cloud storage technology, and connected with the public security, big data bureau, information office, social comprehensive governance, community and other systems to build a "Shanghai population mobility database based on the" Suishen Code ".

The basic idea of data collection and construction of the Shanghai population mobility database based on the "Suishen Code" is mainly through the Internet of Things transformation of the "Suishen Code" and the "site code", the collection of personnel, vehicles and housing information, and the standardization of relevant data, the calculation of personnel activity track, housing status (there are people or no people in the home, there are several people, how long has not been in and out) and vehicle status and other data, Generate the dynamic population database of Shanghai. The construction of this database serves the following fields: "Xueliang Project", major emergency events, housing management, special population management, public publicity, resident services and government services.

The Shanghai dynamic population database based on the "Suishen Code" consists of two parts: the data sensing collection layer and the system application layer, and is connected to the Internet, the government network and cloud storage. The data sensing acquisition layer is composed of "Suishen Code", "site Code", access control or road gate and related platforms.



Analysis of Scheme Application Fields (Scenarios)

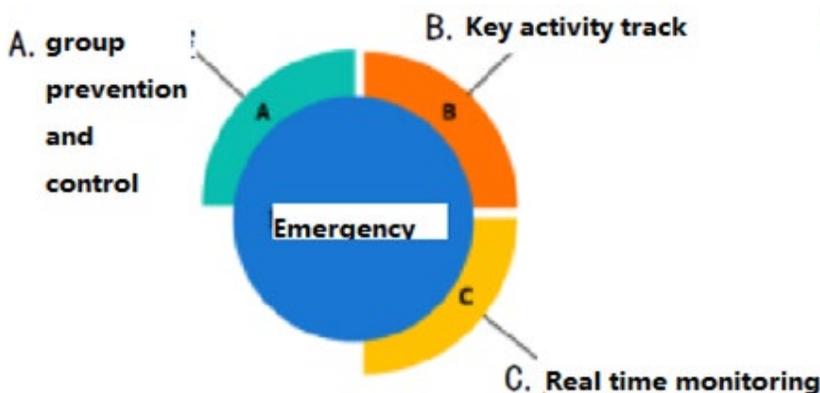
(1). Application of "Xueliang Project"

"Shanghai's dynamic population database based on the" Suishen Code "realizes 24-hour" no monitoring "monitoring by multi terminals and multi directions, extends the coverage of the" Xueliang Project "from public areas to communities, units and residents' homes, expands the application scope of the" Xueliang Project ", realizes the normalization of population information collection, and achieves: registration comes, track moves, cancellation goes, and people's room information is dynamically mastered, People

and rooms are interrelated and interdependent.

(2). Application in the Field of Major Emergency Events

For major emergency events, the system can achieve group prevention and control, and at the same time, it can carry out real-time tracking of the dynamic trajectory of key groups. In combination with big data analysis, it can carry out point-to-point real-time monitoring of high-risk personnel, and give early warning in time, providing basic support for timely handling of major emergency events.



(3). Application in the Field of Housing Management

The system can monitor the state of the house in real time. According to its nature, the house can be divided into self-owned house, low rent house, public rent house, rental house and vacant house.

At the same time, the system can control the house according to the four levels of general, reassurance, concern and high risk, so as to give early warning to the abnormal settlement and the access track of key people.



(4). Application of Special Population Management

The movement track of the floating population, key teenagers, released prisoners, suspected persons, drug addicts, mental patients, Xinjiang and Tibet related persons, community prisoners, petition-

ers and other special groups will be controlled, and real-time linkage with the relevant police and public opinion platforms will be carried out.



System Application Prospect

The construction of this system conforms to the requirements of the overall national security concept, and makes practical contributions to improving the social governance system, ensuring the safety of people's lives and economic development, and building a "Pingan China, Pingan Shanghai".

The construction and application of the Shanghai dynamic population database management platform based on the "Suishenma code" designed for the current construction of urban and rural communities in Shanghai can be connected with the comprehensive management big data system, smart city big data platform, emergency linkage command center, border border inspection platform, and realize the functions of dynamic population management, key population monitoring, vehicle information monitoring, housing information monitoring, community government affairs and convenient services.

The construction of this system has filled the blind spots and shortcomings of the "Tianyan, Anke, Xueliang" project; Provide technical means to deal with major emergencies; Real time monitoring of key groups and residences; Real time grasp of relevant public opinion and alarm; Build the "last mile" communication bridge between the government, community streets and residents; Resolve the contradictions among the people in a timely manner; To build a harmonious human settlement environment and embody humanistic care; Enhance people's sense of security, gain and happiness; Strengthen border people's joint defense and governance to secure the country; We will strengthen international exchanges and crack down on drug smuggling, anti-terrorist and anti-mafia forces [3-24].

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