Create a wealth of security CCTV cameras

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Abstract. The use of CCTV is so widespread today that it is widely used in almost every part of the city, public places, homes, shops, passages and even roads outside the city. These cameras are used for specific purposes, but most of them have in common the use of the camera as a tool for continuous surveillance and recording of surrounding events for future use. However, each of them is an independent network. It has been seen and there is no common point and no joint exploitation of this huge investment From a macro perspective, it seems that the existence of continuous networks of CCTVs in the long run will not be cost effective for the economy and the initial investment cost and maintenance costs will be significant. It turns out that field surveys indicate that most of the large networks of CCTV are in government-affiliated institutions, of which their funding is required from public spending. One of the country's major institutions, There are municipalities that have one of the largest CCTV networks in the country today The major use of this network is mainly for security purposes to secure and control public safety, as well as to monitor and control traffic and to commit possible offenses against offending drivers. Despite the large investment made on this network and a very good context Images are provided for transfer but no other operation.The purpose of this article is to create wealth and add value to the network of security CCTVs. It is clear, however, that surplus operations on the core task of the network should not disrupt the core mission of the network and, in addition, provide different access to the network. This network will also require compliance with network information security.

Keywords: CCTV, Entrepreneurship, Value Added.

1. Introduction

A CCTV is defined as a television system in which signals are monitored for monitoring and security. This popular security system may be one of the most comprehensive surveillance systems and enhance the level of security and control in different areas. According to CCTV history, this system was first used in Germany during the preparation and launch of the V2 rocket. In order to monitor the startup process, a camera engineer created a raw camera inside a box to transfer live startup images to a monitor that was at a reasonable distance from the camera.
At the end of World War II, Americans used similar technology to monitor their nuclear tests. A few years later, in the United States, a company called Vericon tried to market surveillance cameras to commercial games. Of course, this investment was unsuccessful, and very few people remember it today.

The history of CCTV indicates that the system was originally state-owned and was in fact used for police surveillance in the 1980s, though with the advent of late-stage technology, surveillance systems were slowly being introduced to the streets and even shops. They were also introduced.

The first home security system, which included a CCTV, was invented by Mary van Britten Brown in the year 9. The original version had four holes in the front door and one camera. The film had a camera that could be connected to the television and could be watched, as well as a two-way microphone for conversation. The system would open the door using a remote control if the person was familiar, otherwise the alarm would sound.

With this introduction it is clear that the first and foremost application of CCTV is its protective, security and security use, so that it is now mandatory to use them even in banks, gold shops and some public places. However, the capabilities of today's cameras, such as the ability to network and integrate them, as well as integrating them with artificial intelligence, require that other functions be conceived of alongside their main task. Manufacturing commercial and industrial cameras, powerful image processing software in addition to enhancement Srbkhshy CCTV necessary to create added value in using them is doubled.

Accordingly, as technology advances in the manufacture and delivery of CCTVs, their applications have become more diverse, extending their reach from the street, passageways and public places to various industries and even space satellites.

In developed countries such as the United States, Germany, Singapore, South Korea and Japan, CCTVs have entered a more serious phase, as one of the essential tools and elements in implementing smart cities. CCTVs are also a vital element in the Internet of Things world. [1]

In our country, the institutions that are widely recognized as one of the major users of CCTVs and that they purchase and use them at a very broad level, are the municipalities and the police. The inherent and lawful nature of police in our country, the main use of CCTVs is limited to protective applications as well as traffic control in cities and roads and possible offenses for driving violations, despite having many cameras owned by the above two entities. Surplus features and worth noting are no longer used and cause a large chunk of capital to be delayed Investment has been made to do so.

Given the huge cost of buying, installing and maintaining these cameras, and taking into account the costs of the country's public property, the need to use additional capabilities to generate income and wealth is doubled and necessary. In addition to meeting the basic demands of the municipality and the police, which is to protect and control traffic, they have also been optimized for entrepreneurship and monetization.

2. Study of literature

The most widely used surplus CCTV in developed countries today has been its use in smart cities. With the expansion of urbanization and increasing population in major cities around the world, the need for guidance and resources available to the majority of city dwellers is one It has become one of the most important challenges of urban management. On this basis, the rulers and governments of these communities have sought to find a comprehensive solution to this issue. Garbage disposal, municipal sewage systems ... and all that for pia developing a smart resource allocation system is a major concern for senior management in major cities.

The first studies and practical measures to achieve this goal began in the early 21st century with the establishment of a networked parking management system in Orlando, USA, and have since evolved elsewhere in the world and are now approaching the goals of smart city implementation. In implementing the smart city concept, it is essential that environmental information and everything needed for proper and timely decision-making is collected by sensors and transmitted to a centralized
management center in a secure transfer platform. Elements in collecting environmental information are CCTVs with the advent of CCTV equipped with powerful artificial intelligence software and enhanced image processing capability, NCDI has been added to CCTV capabilities and applications.

3. Wealth models from security surveillance cameras

3.1. Video Protection and Protection Applications:
As mentioned, the most important use of CCTVs is video protection and security, and many individuals and businesses are looking for a 24/7 permanent protection and protection tool for their property and assets. In addition to reducing personnel costs the hiring of multiple guards also reduces the human error caused by inadvertent or deliberate neglect of the workforce, including drowsiness, etc. In addition, in some places where it is impossible or difficult for humans to attend it is possible (such as industrial furnaces, mines, etc.) to use a CCTV is also essential. Many organizations spend a great deal of money on creating or renting transmission platforms, protecting and protecting video. In addition, theft of public property such as theft of power cables, theft of telecommunications stations, and so on can be costly annually. Imposes on service companies, and these companies sometimes buy and set up a CCTV network.

Now, given the sheer volume of cameras across cities and roads, the municipality and the police, as a provider of visual security services, can make money by providing images to applicants' institutions and individuals.

3.2. News coverage of events and occasions
It is very costly to set up a Microwave mobile station. Sometimes it is observed that the organization of news coverage of a ceremony (such as marches, mourning bands, etc.) a few days before the commencement ceremony. Logistics and setting up a mobile TV station. In addition to spending a considerable amount of time preparing a mobile station, costs such as the cost of electricity, the cost of renting a satellite transmission link, staffing costs, as well as the protection of the station itself holding the ceremony is one of the main challenges of Voice-of-Life.

In recent years, municipalities and police have provided a good platform for video coverage of the streets and streets. The public at large will also speed up work and make money for the municipality and the police.

3.3. Announcing traffic status to applicant companies such as Internet taxis
With the development of new information technologies and the growth and development of urbanization, we are seeing new Internet-based jobs. Many service companies that need to provide and analyze live images are ready to pay for these images.

In the meantime, security surveillance cameras are the best option for this purpose. Clearly, with the right contracts, it will be a good place for the municipality and the police.

3.4. Traffic control of personnel and contractors
Due to the country's large-scale policies to reduce the size of the government, we have seen a reduction in the number of human resources employed in government agencies in recent years. As a result, many government agencies have outsourced compensation services. They provide services through contractors. Organizations such as Electricity Company, Telecommunication Company, Water Company, Ministry of Roads and Urban Planning ... And outsourcing.

What is most important to these companies is the constant control of the contractor's traffic at work in the city or even on the roads. Some of these companies operate in different ways such as intrusive visits and ... Of course, this method has many limitations (holidays, etc.). Some companies purchase and operate cameras that even have face recognition capabilities. Imposes.

The immense visual coverage of security cameras makes it possible for applicants to have live images and an income from the site.
3.5. Providing services to the municipality

City-level construction violations are in addition to disrupting public order at the city level as one of the major challenges for municipalities. Generally, unauthorized construction is currently monitored by municipal officials, albeit with widespread violations. This method is ineffective.

A security surveillance camera network can be a good solution for 24-hour surveillance and recording of all city planning incidents and violations. In addition to improving the city's public image, it is also a good source of revenue and sustainability for the sale of surveillance cameras to municipalities.

3.6. Observation and reporting of urban facility failures

Many public and private sources of service companies such as regional water companies and electricity distribution companies are wasted every year due to disruptions in their facilities. Municipal water distribution has suffered a burst. At present, due to the lack of a smart alert system in regional water organizations, the maintenance company is usually unaware of the occurrence of breakdowns until local sources report pipe bursts. How much public property and income sources of the district's water company will be wasted.

There are cameras today that are equipped with artificial intelligence, meaning they can be sensitive to specific events and, in the event of a specific event, alert through the production of alarms and alert the maintenance company of the failure and timely action.

In this case, the extensive video coverage of the CCTV network is a good platform for achieving this, and in addition to creating social and proprietary benefits, it is also a source of revenue.

3.7. Providing Visual Services to the Road Transport and Crisis Management Agency:

Intelligent transportation systems are one of the achievements of ICT in transportation. And it has a great impact on all the cultural, political, economic affairs of the country. The transportation and transportation of goods is considered by travelers as one of the most important human needs in the planning of large countries. Today, information technology has been highly regarded by experts to solve transportation problems. The use of this system in the transportation industry is also obvious, as it reinforces and redefines the transport sector using new and intelligent methods, as well as the country's special importance due to its location in the Middle East and the Persian Gulf. Located on important international shipping routes and its breadth and geographical location, the necessity of using this system becomes apparent and will bring about a rapid and dramatic change in the economic growth and development of the country. Desirable and appropriate for achieving the goals and the use of resources, reducing injuries, increasing safety and security, reducing costs and adverse effects. Band lubrication is the flow of traffic. [2]

Intelligent transportation system is the application of information technology to improve the performance of the transportation system. The word intelligent transportation system refers to a set of tools and facilities and specialties such as concepts of traffic engineering, software technologies, hardware and telecommunications. It can be used in a coordinated and integrated manner to improve the efficiency and safety of the transportation system. [3]

Intelligent transportation system means the use of new technologies such as information processing, electronics, communications and control systems and other communication technologies and management strategies in a coordinated and integrated way to enhance the level of safety, efficiency and affordability in transportation. [4]

Intelligent transportation systems operate based on control and information technologies, which are at the core of the functions and functions of such systems. Communication [5]

Ministry of Roads and Urban Development, as the guardian of the development and maintenance of inter-urban and rural roads, along with the development of the country's roads, installed road cameras and established a monitoring center in the provincial centers and some important cities of each province. And in this way, it provides better services.
Some of these cameras, in addition to the above application in certain conditions, such as adverse weather conditions, are also an essential factor in the management of the crisis in the region. The launch and maintenance of this network has been expanded.

You must have seen a road that had two CCTV stations, one owned by the police and the other by the Roads Agency, a short distance from the road!

The basic question is, what is the need to create two parallel networks with the same user?

This dilemma is the need to find a viable solution to the opportunity for the CCTV network to make a surplus by offering and selling road images to the Ministry of Roads and Urban Development.

Preparing and submitting online images of environmental conditions:

Another organization that desperately needs remote protection tools is the Environmental Protection Agency. For example, in the Gandman Wetland of Shahrekord, spending a lot of money on setting up and expanding the CCTV network is an environmental video initiative. Has been.

How many road surfaces that are part of the EPA's territory, but also in the area of video surveillance of police road cameras. So a careful study can provide additional environmental protection, with additional revenue. For the police.

3.8. Electronic Tourism:

You must have seen websites offering offline images of tourist destinations to their visitors. In tourist towns that host a large number of tourists and travelers every year, there are plenty of city-wide security cameras and extensive coverage. This is for tourism companies to provide their customers with more satisfaction. This can also be a source of surplus revenue for the municipality and the police.

3.9. City Parking Management System:

Nowadays, with the development and expansion of cities and the increasing traffic level of cities, finding parking for vehicles for residents and even travelers and tourists has become a major challenge. Imagine an app installed on a smartphone that allows users to Allows you to select the right parking lot (similar to Orlando's parking management system in the US). Input data for this app should be up-to-date and updated at any time. The best option to source this information is CCTV. is.

In this case, there is also a good platform in the city for transferring images and it is nothing but a CCTV network!

Thus, city-level security cameras can be a source of revenue through the sale of surveillance cameras to private companies, in addition to helping to maintain public order and managing city parking lots.

3.10. Implementing Smart City

Smart City is a city that has six main criteria based on the latest evolved theories of urban management based on ICT.

A. Intelligent rule
B. Smart citizen
C. Living environment and smart living space
D. Smart Economy
E. Intelligent transportation And - smart energy

Smart City is a metropolitan area that uses various types of electronic sensors to collect and analyze information, which is effective for managing urban assets and resources. This process includes information collected from citizens, devices and urban resources that is processed and analyzed to monitor and manage traffic and transportation, power system, water, waste disposal networks, law management, information systems enforcement and Schools, libraries, hospitals, and other social services. The idea of the smart city is to integrate information and communication technology and various devices connected to the IoT or to optimize the efficiency of urban services and applications and connect it to citizens. Smart city technology allows city authorities to interact directly with community and urban infrastructure and monitor what is happening and what's evolving. [6]
Founded in Orlando, USA, in 2001, with the goal of integrating smart public transport, safety and crisis management operations, the introduction of smart cities has begun, with the world's smart cities ranking 2018 based on research dynamics of cities. US IESEs are: 1- New York 2- London 3- Paris 4- Tokyo 5- Reykjavik (Iceland) 6-Singapore 7- Seoul 8- Toronto 9- Hong Kong 10- Amsterdam. Other smart cities in the world include Berlin, Hamburg, Munich, San Francisco, Bolton, Seattle, Montreal and Toronto. Also Fuji Sava, built in 2007 by Panasonic and several Japanese companies, is another major smart city. Is the world. [7]

The most important issue in a smart city is the collection and analysis of various sensor information. CCTV is one of the most important elements and elements of city-wide information gathering. For example, some of the different uses of surveillance cameras. Packages in different cities around the world include:

- Optimizing resource allocation optimally with camera status updates: Denver USA
- Optimization of traffic lights timing: Shiraz
- Mechanized parking management system: New York, Tokyo, Melbourne
- Implementing Public Transportation Smart Operations: Orlando USA
- Crisis Safety and Management: Hollande, Berlin, London, Tokyo, Singapore
- Providing online traffic maps: Berlin, New York, Tokyo

With these interpretations, a suitable platform for CCTV cameras along with their transmission network is available as one of the basic presuppositions of smart city implementation and can be used to generate wealth and make the most of it.

### 3.11. Selling security surveillance camera pictures to insurance companies:

Traffic accidents are one of the most important causes of deaths and injuries, and their serious social, cultural and economic impacts have severely affected human societies. In our country too, this has become a problem as Iran has been identified as one of the countries with the highest number of accidents and deaths due to road accidents and traffic accidents. And the flawed laws and regulations and errors of the police officers in identifying the culprits of fraudsters and profiteers have made it possible for fraudulent insurance companies to exploit this flaw so the use of cameras to control violations and Cheating and Identifying Fraudulent Profits by Insurance Profiters D, can provide a great deal of help in defrauding the fraudsters. Also, according to the report of the Judicial Crime Prevention Deputy, given that the accidents are not organized and that the follow up of the accident and fatalities cases is a complicated process, Most fraudulent accidents have resulted in the payment of blood money or compensation, so preventing it from increasing, controlling camera fraud and fraud to help investigate how accidents have taken place can help eliminate this social dilemma. However, insurance companies can only By paying a portion of this amount, the movie crashes The experts cite judicial review and to consider the prevention of the spread of this social problem, it will save huge sums and consequently the center also will have unlimited income from insurance companies. [8]

### 4. Summary and Conclusion

CCTV is one of the major achievements of technology and is witnessing hardware and software advancements every day. Its many software capabilities as well as its technology equipped with artificial intelligence necessitate serious attention to its applications. Many government agencies have made separate purchases of CCTVs, some of which have been unprofessional and have created high-cost parallel networks. Therefore, it is necessary to monitor public entities to establish Prevent parallel networks.

The cost of CCTV networks is not limited to initial investment. A secure, high-bandwidth data transfer platform is also needed for the transfer of camera images, since public authorities generally lack such a transitional platform. In the first case, these institutions buy expensive transmission systems such as IP radio, mast, etc. at high costs, which in addition to the high initial investment costs, requires the conclusion of contracts with It also requires experienced companies. There is also the need to get regulatory approval.
In view of these issues, it is essential that regulatory and oversight bodies act in such a way as to prevent the creation and operation of parallel networks of CCTV by organizations funded by public resources in the country.

Meanwhile, municipalities and the police can take a significant step towards integrating CCTV networks and implementing new technologies capable of connecting to different users and their logical separation, with the participation of knowledge-based and private companies. Optimize the country's macro resources and benefit from the resulting material resources.

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