

APPLICATION OF CPTED THEORY TO A NEW MODUS OPERANDI OF FRAUD (FURIKOME)

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Over the last seven years Japan has successfully reduced crime overall, with the exception to this trend being crimes involving fraud. Fraud increased from 49,482 reported cases in 2002 to 67,787 in 2007. The reason for this was the rise of new modus operandi for fraud, namely furikome – a type of fraud involving bank transfers. Criminals who engage in furikome aim to cheat victims out of their money through telephone conversations. Con-artists, pretending to be family members, tax officials, or generous financial company executives call their targets and have them transfer money via ATM to bank accounts created by these criminals specifically for this purpose.

Exhaustive investigation conducted by the police showed that the number of furikome crimes dropped gradually from 25,667 in 2004 to 17,930 in 2007. However, furikome crimes increased sharply to 20,481 in 2008, primarily because it was difficult to control the ways in which items such as mobile phones and bank accounts were being used as tools in this type of crime. The massive number of ATM machines that need to be monitored posed a problem to conventional methods to combat this type of criminal activity. Therefore, the police and private sectors have cooperated to prevent criminals from using these ATMs for criminal purposes by applying CPTED (Crime Prevention through Environmental Design) theory. As a result of CPTED and police investigations, furikome crimes decreased dramatically, from 20,481 in 2008 to 7,340 in 2009.

In this paper, comprehensive measures related to furikome taken by the police and private sectors are reviewed, the details of surveys questioning victims and the public at large are presented, and possible further measures to combat furikome are explored.

CRIME IN JAPAN BETWEEN LATE THE 1990S AND 2002

From the 1960s to the early 1990s, the crime rate in Japan remained low and at a stable level. The number of recorded penal code crimes remained near, or even below, 1.5 million cases per year.

In 1991, however, this all changed. The number of recorded penal code crimes rose above the 1.7 million mark for the first time in 1991 and proceeded to increase to above two million in 1998, as the financial crisis during



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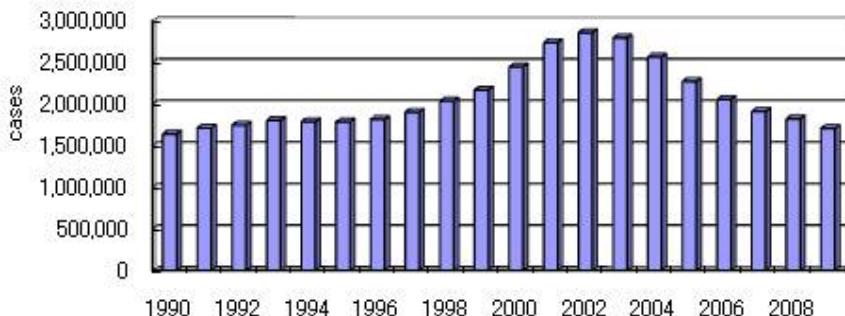


Figure1. The number of recorded penal code crimes in Japan (1990-2009).

Source: NPA

this period was followed by another increase in crime. This trend of increasing penal code crimes peaked at 2.85 million in 2002, the highest number ever recorded. Overall, the increase in the crime rate during this five-year period (1998-2002) was a startling 40.3 %. The latter figure is especially sobering when it is compared with the 5.5% rate of increase observed during the preceding 5 years (1993-1997) (Figure 1).

**THE NATIONAL INITIATIVE, "ACTION PLAN TO CREATE A
CRIME-RESISTANT SOCIETY"**

Ministerial Meeting Against Crime

While promoting a campaign aimed at preventing the increasing number of penal code crimes, the NPA was also conducting a national governmental consensus on crime reduction. During same period, the public's sense of fear regarding the increase in crime had reached lawmakers. This led legislators in the majority Liberal Democratic Party to create a party policy aimed at crime reduction "The urgent motion on public safety." In addition, the major opposition party, the Democratic Party, also incorporated policies targeting crime in their "Manifesto 2003."

In response to these moves, the Japanese cabinet initiated "The ministerial meeting against Crime" in September 2003. The ministerial meeting comprised all ministers of government and was chaired by the Prime Minister. In December of 2003, this meeting adopted "The Action Plan to Create a Crime-resistant Society (APCCS)."

APCCS emphasized the following three points: The first point emphasized

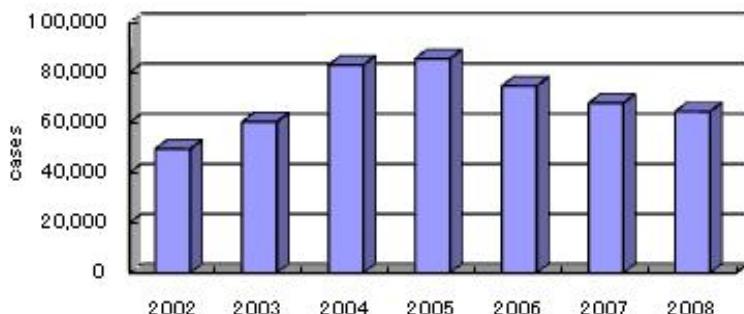


Figure2. The number of cases of fraud (2002-2008).

Source: NPA

promotion of public initiatives to fight crime. The second point endorsed the development of a social environment that is crime-resistant. The third point stressed the need to overcome bureaucratic sectionalism in the course of promoting actions aimed at fighting crime.

In accordance with these three concepts, APCCS required participating authorities to take 148 individual actions aimed at the realization of this plan. These included activities such as support for volunteers in crime fighting efforts, strengthening of police activities at kobans koban¹⁾, promotion of crime prevention through environmental design, increasing systems capable of reading and recording automobile license plates, promotion of juvenile education in communities, and enforcement of immigration laws as well as efforts to reduce the number of illegal residents. After the adoption of APCCS, the ministerial meeting also created a plans entitled "Measures to defend children from crimes" in 2005 and "Guideline for defending business sectors from organized criminal groups."

By 2008, the final year of the APCCS's term, the number of recorded penal code crime crimes had dropped to the 1.8 million mark. This change represented a decrease of more than one million recorded penal code crimes in 5 years.

Furikome – A New Threat to Society

During the five-year period between 2002 and 2007, the number of reported crimes decreased in every area except fraud. Fraud increased from 49,482 in

1) A police box is a base for police officers in a community.

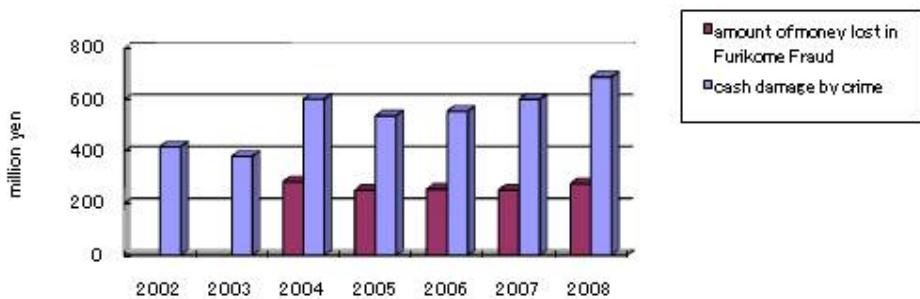


Figure3. The amount of money lost in furikome fraud and cash damage by crime (2002-2008)

Source: NPA

2002 to 67,787 in 2007. The reason for this was the rise of a new modus operandi for fraud; namely furikome— a type of fraud involving bank transfers. Criminals who engage in furikome primarily aim to cheat elderly victims out of their money over the telephone. Con-artists, pretending to be family members, call elderly residents and have them transfer money via ATM to a bank account created especially for this purpose.

Furikome is a general term for so-called "ore-ore fraud"²⁾, "billing fraud", "loan guarantee fraud" and "refund fraud".

The seriousness of furikome is evident in the large amount of monetary loss that has been attributed to these crimes. The average amount of money lost in this type of fraud was more than one million yen, about ten thousand US dollars. Furthermore, most furikome crimes were committed by groups involved in organized crime. Because the perpetrators usually use mobile phones and bank accounts registered under false names, finding these criminals is rather difficult. And also, as it is logically complicated to protect a massive number of ATMs, prevention against furikome has left room for improvement. (Figures 2 and 3)

Due to the seriousness of furikome, the Japanese police and other public and private sector groups have become gravely concerned and have begun to

2) "Ore-ore (it's me) fraud "is a type of crime in which a person impersonates a son or daughter (or other relative) in trouble over the telephone and tries to convince the victim to transfer money in response to a supposed emergency.

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introduce various preventive measures. For example, an anti-furikome campaign has reduced the limit on the amount of money that can be transferred via ATM and has instituted a warning signal at ATM windows that illuminates when people use the ATM to transfer money. Additionally, stricter regulations have been implemented aimed at preventing people from opening accounts and/or purchasing mobile phones under false names.

A STRATEGY FOR DEALING WITH FURIKOME: THE ACTION PLAN FOR ERADICATION OF FURIKOME (APEF)

Outline of the APEF

As a strategy aimed at preventing furikome on the basis of the then current situation, the National Police Agency and Ministry of Justice decided on the "Action Plan for Eradication of Furikome" (APEF) in July of 2008.

APEF consists of following four points. The first point emphasizes exhaustive investigation of furikome crimes. The second point stresses the need of strong crime prevention measures around ATMs. The third point endorses intercepting the circulation of anonymous mobile phones and bank accounts. And the fourth point emphasizes thorough publicity activities aimed at crime prevention.

Regarding the second point pertaining to strong crime prevention measures around ATMs, the APEF specifically states that in order to prevent furikome the police and private sector institutions have to corporate to do such things as:

- Call the attention of customers using ATMs to the threat of furikome.
- Create an environment to discourage customers from using mobile phones while transferring money via an ATM, as these customers are more likely to be victims of fraud.
- Create an environment aimed at preventing customers from wearing accessories designed to conceal facial features, such as hats or dark glasses when using ATMs, as criminals often do this to avoid being caught on camera.

REVIEW OF SOME INDIVIDUAL MEASURES OF APEF FROM THE PERSPECTIVE OF CPTED

Monitoring of ATMs by Police Officials and Bank Employees

Several years ago, the first cases in which bank clerks halted a potential furikome victim from transferring money at an ATM were reported. This was at a time when this type of crime was still in its infancy, yet police had already begun to recognize that having bank employees monitor ATMs was an effective method of preventing fraud. Therefore, the police advised banks that they should have employees check activity around their ATMs. However, because furikome increased dramatically in 2008, police officers in all prefectural police departments have been on the lookout for victims/criminals around ATMs since October of last year, following a directive from the National Police Agency. If a police officer or bank clerk sees a person engaged in suspicious activity, for example using an ATM when on a mobile phone or withdrawing money at an ATM while wearing a surgical mask and dark glasses, the officer or clerk will question the person to try to ascertain whether he/she is either a victim or perpetrator of fraud. The location of ATMs monitored by police and the timing of these operations depend on the amount of criminal activity in each area.

This countermeasure is very effective in preventing furikome crimes. Take for example the day of October 15th 2008; on this day 59,000 police officers were monitoring 94,000 ATMs simultaneously throughout Japan. And during this twenty-four hour period 23 cases of attempted fraud at ATMs were blocked. Furthermore, during the month of October, a total of 336 cases were prevented.

Currently, some prefectural police departments are independently monitoring ATM use. For instance, the Tochigi prefectural police department found that in many cases victims transfer funds at unattended ATMs³⁾, as they are directed to do this the criminals. As a result of police monitoring of these ATMs, 15 attempts at furikome were prevented during one month in Tochigi prefecture.

On the other hand, although police monitoring of ATMs is a very effective method for the prevention of this type of fraud, we must recognize that this requires a huge amount of police manpower. Therefore, it is not feasible for departments to do this on a daily basis. For now, depending on the current situation in each area, the prefectural police will determine when and where to do this type of monitoring.

During 2009, a total of 1,229 cases of attempted furikome fraud have been blocked by monitoring of ATMs in Japan; 90 of these cases involved police operations.

Surveillance Cameras for Policing ATMs

In Japan, there are about 140,000 ATMs, and surveillance cameras are set to monitor the area surrounding these ATMs in case a crime occurs. In

3) unattended ATM: Unattended ATMs are in places such as stations, streets other locations except banks. Generally, these ATMs are not monitored by bank employees.

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regards to furikome countermeasures, these surveillance cameras are useful not only in the investigations conducted by police, but also in crime prevention. For instance, when a certain bank adopts a centralized control of images by surveillance cameras ("webvisor system"), bank employees can monitor the video for suspicious activity. If they feel that there is a possibility of criminal activity, the employees can issue a warning through a speakerphone system around the ATM. Banks using this system have reported that this is an effective measure in the prevention of furikome.

However, as a countermeasure against furikome, the current locations of surveillance cameras still leave something to be desired. Specifically, the police have advised banks to aim some of their surveillance cameras at areas outside the ATM corners in order to monitor the approach of potential criminals. This means we must create an environment in which a criminal who uses an ATM for furikome will feel pressure from the presence of surveillance before he/she reaches the ATM.

Disclosure of Images of Criminals Taken by Surveillance Cameras

When a criminal has his/her picture taken while withdrawing money at an ATM during a fraudulent transaction, this may be the only chance for the police to identify the criminal, and the public can help out greatly in this task.

So far, the police have disclosed 28 images of criminal suspects taken by surveillance cameras to the homepages of police departments and various media outlets, and this has resulted in the arrest of 5 perpetrators. Certainly, the disclosure of these images is primarily helpful to police investigations. But this disclosure to the public is also expected to put psychological pressure on criminals, leading to them fearing recognition and arrest. As a secondary result, this disclosure is anticipated to lead to the wider use of surveillance cameras, which have been shown to give pause to criminals committing fraud at ATMs.

Devices Designed to Prevent Victimization of Customers at ATMs

In cooperation with police, banks have begun to use environmental design to prevent furikome crimes. For instance, a number of devices have been put to practical use in order to prevent this type of crime from occurring at ATMs. These devices can be divided into three categories: devices that emit a signal blocking mobile phone reception, filters that block mobile phone reception around ATMs, and systems that automatically warn customers who are using mobile phones. The first type of device emits a weak signal about two meters in circumference, and this blocks mobile phone reception. Because the area is limited and the signal is weak, customers are only prevented from using mobile

phones while at the ATM. According Japanese law, when equipment broadcasting a signal (including this type of weak signal) is operated it is necessary to obtain a license from Ministry of Public Management, Home Affairs, Post and Telecommunication. As for the second category, walls in restricted areas around ATMs are covered with a film that blocks mobile phone reception. Therefore, it is difficult for someone to use a mobile phone within this area. The third category puts the operation of transferring funds at an ATM on hold if a mobile phone signal lasting 30 seconds or longer is perceived during ATM use. The system then warns the customer about the dangers of furikome and also alerts bank employees, who may then approach the customer to discuss the transaction. During this time, the customer is prevented from completing the transfer of funds.

Although banks must take both the high cost of installing these devices and the possible inconvenience to customers into consideration, these devices have proven durable and reliable once they have been set in place. Therefore, the police have strongly advised banks to install these systems and have given private sector institutions that have introduced the above-mentioned devices awards such as financial incentives.

Transfer Restrictions at Unattended ATMs

In some furikome cases, the perpetrator has directed the victim to transfer money at an unattended ATM where there is less surveillance than at attended ATM (for example, those at banks). Therefore, some banks have halted electronic transfers at unattended ATMs.

RESULTS OF COUNTERMEASURES: A MAJOR DECREASE IN THE NUMBER OF FURIKOME CRIMES

As a result of these countermeasures, methods for transferring money used in fraud are changing. For example, the rate of monetary transfers at ATMs decreased from 77.4% in 2007 to 50.7% in 2009. At the same time, the rate of sending money by regular mail increased from 5.7% in 2007 to 20.9% in 2009. However, in 2007, there were hardly any cases of fraud reported in which money was delivered by hand; yet this rate was 12.8% in 2009. Especially, in "ore-ore" fraud, this rate was about 40%. That implies that the environment constructed around ATMs following the above mentioned APEF guidelines made it difficult to use ATMs to transfer funds in furikome fraud.

Consequently, many criminals are now selecting other methods for the transfer of money, ones that carry a greater possibility of exposure to

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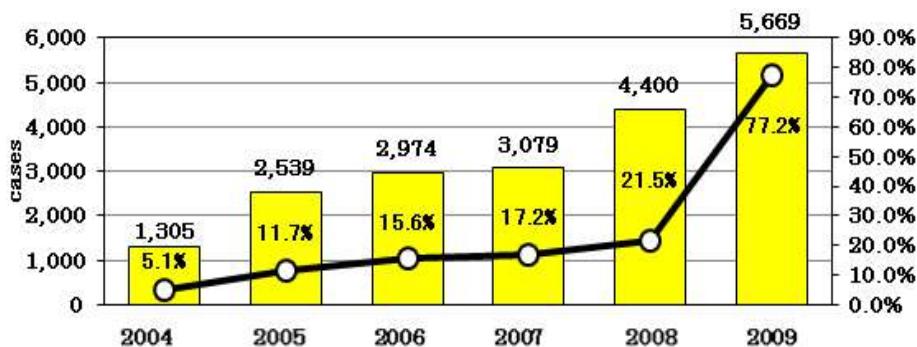


Figure4. The number of cleared furikome fraud cases and the arrest rate (2004-2009)

Source: NPA

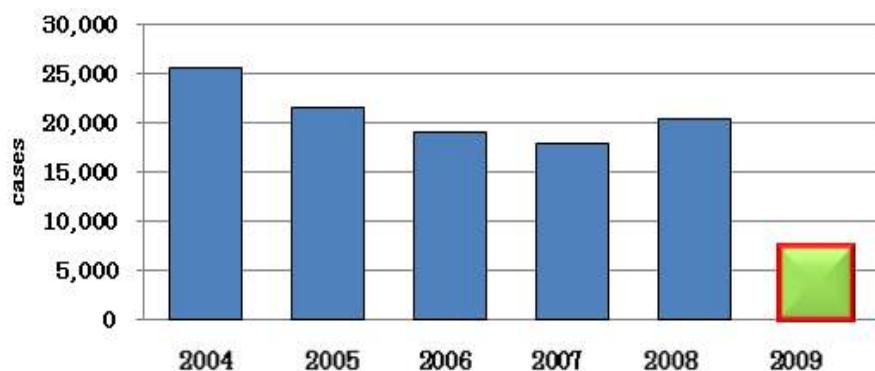


Figure5. The number of reported furikome fraud (2004-2009)

Source: NPA

authorities.

On the other hand, exhaustive investigations conducted by the police, had the number of cleared furikome fraud cases increase from 4,400 in 2008 to 5,669 in 2009 and had the arrest rate for furikome rise dramatically from 21.5% in 2008 to 77.2% in 2009.

As a result of the above-mentioned CPTED measures and thorough police investigations, the number of reported furikome fraud dropped dramatically from 20,481 in 2008 to 7,340 in 2009. (Figure 4 and 5)

DISCUSSION: POSSIBILITY OF FUTHER CPTED MEASURES TO COMBAT FURIKOME

Concept of Enhanced Crime Prevention Around ATMs

The modus operandi of furikome is divided into two stages: in the first stage a victim is deceived by the perpetrator, almost always by telephone, and in the second stage the victim is convinced to transfer money via an ATM.

In the first stage, as the perpetrators of these crimes use a variety of excuses and deceptions on the phone, victims are often baffled and in their haste are not capable of making rational judgments. Generally, once the victim has been deceived(or hooked), in the second stage, it becomes very difficult for the victim to reconsider his or her decisions, although the situation may appear to be quite strange to a third party. This means that a victim is actually not expected to be able to return to his/her normal frame of thought during this stage. Therefore, the victim needs the help of some type of outside force in order to reconsider his or her actions. During the second stage, there is usually only one way to prevent the crime from being carried out in full. This is to stop the victim from transferring his/her money at an ATM. In effect, to help the victim see the situation clearly and to dissuade him or her sending money at an ATM is the 'last chance'for stopping a furikome scheme.

Regarding this point, National Police Agency of Japan distributed a questionnaire examining the public perception of fraud to 362 fraud victims and 1,000 citizens (who had not been victims of fraud) in January 2009. The aim of this survey is to compare differences in the recognition of this type of crime between victims and citizens. The results of the questionnaire show that:

- 70.7% of the victims and 89.6% of citizens are (well) aware of the modus operandi of furikome.
- 30.1% of the victims suspected that the phone call they received was part of a furikome scam when they were initially contacted by the perpetrators.

That indicates that, compared with citizens who have not been victimized, victims of furikome fraud have a superficial knowledge of this type of crime, and furthermore that about 30% of the victims have transferred money to con-artists via ATM without rethinking their decision, even though they were initially suspicious of furikome.

On the other hand, the criminals must withdraw the fraudulently obtained money at an ATM. The second stage of furikome itself consists of two parts: the transfer of funds by the victim, and the withdrawal of money by the perpetrator. Both of these traditionally take place at ATMs. Therefore, building an environment that makes it difficult to use ATMs for this type of transfer

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will hopefully lead to the eradication of furikome fraud.

However, one major problem exists with regard to this situation. During the second stage, the victim typically goes to an ATM in order to transfer money. After this transaction, the perpetrator then must also visit an ATM. Yet ATMs are not located in strictly private spaces, but in semi-public areas, such as banks, post offices etc. Therefore, it is difficult for police officers and bank clerks to distinguish criminals/victims from other customers and patrons. Therefore, the police and private sector institutions have cooperated in efforts to identify criminals/victims, and to prevent criminals from using ATMs and as tools for fraud. This can be seen as an application of CPTED theory.

Application of CPTED Theory in Countermeasures Aimed at Furikome

In planning environmental design based on the characteristics of certain types of crime, the issue of what applications of CPTED would work best in the future needs to be examined. Research into criminal behavior has shown which factors have an influence on a person's decision on whether to commit an offense. Hereby, the CPTED crime prevention theories may be used against a wide variety of criminal activity. As of now, based on CPTED theory, areas surrounding ATMs have been monitored by police and bank employees and surveillance cameras have been installed in these places.

However, in terms of countermeasures against furikome, these actions have left something to be desired. In most furikome cases the perpetrator and the victim do not meet directly, and the only connection between them are via mobile phone and ATM, where a victim transfers and criminal withdraws. And also, as mentioned above, generally it is very difficult for the victims themselves to reconsider the situation after they have been initially deceived by the perpetrators. Taking this situation into consideration, environmental design around ATMs has been enhanced. As stated before, it has been confirmed that strong crime prevention around ATMs based on CPTED theory is an effective way to prevent criminals and victims from using ATMs for fraud. Certainly, there are other factors in the decrease of this type of crime, including exhaustive investigations conducted by the police, but it must be noted that one of primary factors in the drastic decrease in the number of furikome crimes was the implementation of countermeasures around ATMs in light of CPTED theory.

CONCLUSION

CPTED is an approach to crime prevention that takes into account the

relationship between the physical environment and the offenders before they engaged in criminal acts in that environment. The basic concept of CPTED states that the design of a physical environment can produce behavioral effects that will reduce both the incidence of crime and the fear of criminal activity. Therefore, conventional CPTED emphasizes the relationship between environmental design and criminal activity.

In this paper, there are two categories of countermeasures aimed at preventing furikome that are related to CPTED. The first of these is installation of surveillance cameras and the monitoring of areas around ATMs, which is intended to prevent criminals withdrawing money obtained by fraud. The second is installation of various types of equipment and monitoring of areas around ATMs, which is aimed at preventing victims transferring money. The former is in line with conventional theories of CPTED. On the other hand, the latter is expected to have an indirect influence on the decisions of offenders before they engage in criminal acts, on the premise that they would take into account the relationship between the environment and the victim.

Because of recent advances in communication technology, the modus operandi of crime has diversified, and there is not always a direct relationship between the crime scene and the environment. APEF took into account situations pertaining to both the environment and the victims of fraud and developed measures aimed at preventing crime. I am pleased to state that our approach to eliminating furikome fraud could be seen as a helpful case study of CPTED.

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