

= Octopus card =

The Octopus card is a reusable contactless stored value smart card for making electronic payments in online or offline systems in Hong Kong . Launched in September 1997 to collect fares for the territory 's mass transit system , the Octopus card system is the second contactless smart card system in the world , after the Korean Upass , and has since grown into a widely used payment system for all public transport in Hong Kong , leading to the development of Oyster Card in London .

The Octopus card has also grown to be used for payment in many retail shops in Hong Kong , from convenience stores , supermarkets , fast @-@ food restaurants , on @-@ street parking meters , car parks , to other point @-@ of @-@ sale applications such as service stations and vending machines .

The Octopus card won the Chairman 's Award of the World Information Technology and Services Alliance 's 2006 Global IT Excellence Award for , among other things , being the world 's leading complex automatic fare collection and contactless smartcard payment system . According to Octopus Cards Limited , operator of the Octopus card system , there are more than 20 million cards in circulation , nearly three times the population of Hong Kong . The cards are used by 95 % of the population of Hong Kong aged 16 to 65 , generating over 12 million daily transactions worth a total over HK \$ 130 million .

Octopus Card Limited 's and the cards ' slogan is Making Everyday Life Easier , which is also part of the corporation 's mission statement .

= = History = =

Previously , Hong Kong 's Mass Transit Railway (MTR) adopted a system to recirculate magnetic plastic cards as fare tickets when it started operations in 1979 . Another of the territory 's railway networks , the Kowloon @-@ Canton Railway (KCR) , adopted the same magnetic cards in 1984 , and the stored value version was renamed Common Stored Value Ticket . In 1989 , the Common Stored Value Ticket system was extended to Kowloon Motor Bus (KMB) buses providing a feeder service to MTR and KCR stations and to Citybus , and was also extended to a limited number of non @-@ transport applications , such as payments at photobooths and for fast food vouchers .

The MTR Corporation eventually decided to adopt more advanced technologies , and in 1993 announced that it would move towards using contactless smartcards . To gain wider acceptance , it partnered with four other major transit companies in Hong Kong to create a joint @-@ venture business to operate the Octopus system in 1994 , then known as Creative Star Limited .

The Octopus system was launched after three years of trials on 1 September 1997 . Three million cards were issued within the first three months of the system 's launch . The quick success of the system was compelled by the fact that MTR and KCR required all holders of Common Stored Value Tickets to replace their tickets with Octopus cards in three months or have their tickets made obsolete , which drove commuters to switch quickly . Another reason was the coin shortage in Hong Kong in 1997 . With the transfer of Hong Kong away from British rule , there was a belief that the older Queen 's Head coins in Hong Kong would rise in value , so many people hoarded these older coins and waited for their value to increase .

The Octopus system was quickly adopted by other Creative Star joint venture partners , and KMB reported that by 2000 , most bus journeys were completed using an Octopus card , with few coins used . Boarding a bus in Hong Kong without using the Octopus card requires giving exact change , making it cumbersome compared to using the Octopus card . By November 1998 , 4 @.@ 6 million cards were issued , and this rose to 9 million by January 2002 .

In 2000 , the Hong Kong Monetary Authority granted a deposit @-@ taking company license to the operator , removing previous restrictions that prohibited Octopus from generating more than 15 percent of its turnover from non @-@ transit @-@ related functions . This allowed the Octopus card to be widely adopted for non @-@ transit @-@ related sales transactions . On 29 June 2003 , the Octopus card found another application when the Hong Kong Government started to replace all its

18 @, @ 000 parking meters with a new Octopus card @-@ operated system . The replacement was completed on 21 November 2004 .

= = Etymologies and logo = =

The Cantonese name for the Octopus card , Baat Daaht Tùng (Chinese : 八達通) , translates literally as " eight @-@ arrived pass " (though in Chinese it was accepted as " go @-@ everywhere pass ") , where Baat Daaht may translate as " reaching everywhere " . It was selected by the head of the MTR Corporation , the parent company of Octopus Cards Limited , in a naming competition held in 1996 . The number eight refers to the cardinal and ordinal directions , and the four @-@ character idiom sei tùng baat daaht (Chinese : 四通八達) , a common expression loosely translated as " reachable in all directions " . It is also considered a lucky number in Chinese culture , and the phrase baat daaht can possibly be associated with the similar @-@ sounding faat daaht , which means " getting wealthy " (Chinese : 發) in Cantonese .

The English name Octopus card was also selected from the naming competition . Coincidentally , the English name coincides with the number eight in the Chinese name , since an octopus has eight tentacles . The logo used on the card features a Möbius strip in the shape of an infinity symbol .

The slogan of Octopus Card Limited and its products (the cards) is Making Everyday Life Easier , which is part of the mission statement of the corporation .

= = Card usage = =

The Octopus card was originally introduced for fare payment on the MTR ; however , the use of the card quickly expanded to other retail businesses in Hong Kong . The card is now commonly used in most major public transport , fast food restaurants , supermarkets , vending machines , convenience stores , photo booths , parking meters , car parks and many other retails business where small payments are frequently made by customers . With over 20 million Octopus cards in circulation in 2010 , the card has become very popular among Hong Kongers .

Notable businesses that started accepting Octopus cards at a very early stage include PARKnSHOP , Wellcome , Watsons , 7 @-@ Eleven , Starbucks , McDonald 's , and Circle K. As of 21 November 2004 , all parking meters in Hong Kong were converted . They no longer accept coins and Octopus became the only form of payment accepted .

Octopus cards also double as access control cards in buildings and for school administrative functions . At certain office buildings , residential buildings , and schools , use of an Octopus card is required for entry .

= = Payments = = =

Making or recording a payment using the card for public transport or purchases at Octopus @-@ enabled retailers can be done by holding the card against or waving it over an Octopus card reader from up to a few centimetres away . The reader will acknowledge payment by emitting a beep , and displaying the amount deducted and the remaining balance of the card . Standard transaction time for readers used for public transport is 0 @. @ 3 seconds , while that of readers used for retailers is 1 second . When using the MTR system , the entry point of commuters is noted when a passenger enters , and the appropriate amount based on distance traveled will be deducted when the users validate their cards again at the exit point .

The MTR usually charges less for journeys made using an Octopus card instead of conventional single @-@ journey tickets . For example , the adult fare of a single journey from Chai Wan to Tung Chung is HK \$ 25 @. @ 20 with an Octopus card , and HK \$ 28 with a single journey ticket . Other public transport operators also offer intermittent discounts for using Octopus cards on higher fares and round @-@ trip transits on select routes .

On 6 November 2005 , Octopus Cards Limited launched Octopus Rewards , a program that allows cardholders to earn rewards at merchants that are partners in the program . Participating merchants

provide consumers with tailor @-@ made offers and privileges . The rewards that the program offers are in the form of points , or reward dollars , stored on the card . Once a card is registered for the program , the cardholder may accumulate reward points by making purchases at participating merchants , and payments may be made in the form of cash , credit cards , or Octopus cards themselves . The rate at which reward points are earned per dollar @-@ amount purchase differs by the merchant at which that the purchases are made . At Wellcome , for example , one point is earned for every purchase of HK \$ 200 ; and at Watsons , points are earned at a rate of 0 @.@ 5 percent per dollar amount of a purchase . Once these reward dollars are accumulated , they may be redeemed as payment for purchases at partner merchants for at least HK \$ 1 per reward dollar . To redeem the accumulated reward dollars , cardholders must use the entire value amount in whole , and may not elect to use it partially . If the purchase price is lower than the amount of reward dollars available , the amount difference remains stored on the card . Founding partners for the Octopus Rewards program include HSBC , UA Cinemas and Wellcome .

= = = Balance enquiries , reloading and refunds = = =

In MTR stations , enquiry machines can be found where cardholders can place their Octopus cards on the machines and the machines will display the balance along with a history of last ten usages .

Money can be credited to the card through a number of ways . " Add Value Machines " , located at MTR stations , can be used to top up the balance of the cards . The machines accept cash , and selected machines are also able to accept the electronic transfer of funds . Alternatively , cards may be topped up with cash at authorised service providers such as PARKnSHOP , Wellcome , Watsons , 7 @-@ Eleven , Circle K , and Café de Coral , and also at customer service centres and ticketing offices at other transport stations .

An Octopus card may store a maximum value of HK \$ 1 @.@ 000 , with an On @-@ Loan card having an initial deposit value of HK \$ 50 and a Sold card having no initial deposit value . Negative value is incurred on a card if it is used with insufficient funds ? both types of cards may carry a maximum negative value of HK \$ 35 before value needs to be added to them again for use . At the time , the maximum cost of a trip on any of the rail networks except the Airport Express and first class of the MTR East Rail line was HK \$ 34 @.@ 8 , the cost of travelling between East Tsim Sha Tsui Station and Lo Wu Station ; the current maximum cost is HK \$ 55 @.@ 3 , the cost of travelling between Disneyland Resort Station and either Lo Wu Station or Lok Ma Chau Station .

The Octopus " Automatic Add Value Service " (AAVS) is another method by which cardholders may reload their cards . This service allows for money to be automatically deducted from a credit card and credited to an Octopus card when the value of the Octopus card is less than zero dollars . The credit card used must be one offered by one of 22 financial institutions that participate in AAVS . Participating banks include HSBC , Bank of China , and Hang Seng Bank . HK \$ 150 / 250 / 500 is added to the card each time value is automatically added .

An Octopus card may be returned to any MTR Customer Service Centre for a refund of the remaining credit stored on it . A handling fee may be charged for the refund ? HK \$ 7 for an anonymous On @-@ Loan card that had been in use for fewer than three months , and HK \$ 10 for a Personalised On @-@ Loan card that was issued on or after 1 November 2004 . A refund is immediately provided at the time an anonymous On Loan card is returned , unless it has more than HK \$ 500 stored on it . A Personalised On @-@ Loan card or an anonymous On @-@ Loan card with more than HK \$ 500 stored on it needs to be sent back to Octopus Cards Limited for refund processing , in which case , the refund for a Personalised On @-@ Loan card would be available in eight days , and that of an anonymous On @-@ Loan card would be available in five days . If a damaged card is returned for refund , a HK \$ 30 levy would be charged to the cardholder .

= = = Outside Hong Kong = = =

Usage of the Octopus card was extended to the Chinese city of Shenzhen and Macau in 2006 . In collaboration with China UnionPay , Octopus Cards Limited introduced Octopus card usage to two

Fairwood restaurants in Shenzhen in August 2006 . In 2008 , five Café de Coral locations in Shenzhen also started accepting Octopus . Value cannot be reloaded to Octopus cards in Shenzhen , but the Automatic Add Value Service is available to automatically deduct money value from a customer 's credit card to reload an Octopus card . The two Fairwood restaurants in Shenzhen that were enabled for Octopus card payments are located at Luohu Commercial City and Shenzhen Railway Station . Shenzhen became the first city outside Hong Kong in which Octopus cards may be accepted as payment . In Macau , the Octopus card was introduced in December 2006 when two Kentucky Fried Chicken restaurants in the territory adopted its usage as payment . Similar to its usage in Shenzhen , an Octopus card may not be reloaded in Macau , and the currency exchange rate between the Macanese pataca and the Hong Kong dollar when using an Octopus card is MOP1 : HKD1 . The two Kentucky Fried Chicken restaurants in Macau that adopted the Octopus card for payment are located at the Rua Do Campo and the Sands Casino .

= = Types of cards = =

There are two main types of Octopus card (On @-@ Loan and Sold) , and two less common types (the Airport Express Tourist and the MTR Airport Staff) .

= = = Main types of cards = = =

= = = = On @-@ Loan cards = = = =

On @-@ Loan cards are issued for usage in day @-@ to @-@ day functions , primarily for fare payment in transport systems . They are further classified into Child , Adult , Elder , and Personalised categories , with the first three based on age and different amounts of fare concession . With the exception of the Personalised cards , On @-@ Loan cards are anonymous ; no personal information , bank account , or credit card details are stored on the card , and no identification is required for the purchase of these cards . If an owner loses a card , only the stored value and the deposit of the card are lost . On @-@ Loan Octopus cards may be purchased at all MTR stations , the KMB Customer Service Centre , New World First Ferry (NWFF) Octopus Service Centres , and the New World First Bus (NWFB) Customer Service Centre . A student on @-@ loan Octopus Card was initially issued , but was discontinued in 2005 .

= = = = Personalised cards = = = =

The multi @-@ coloured Personalised card is available on registration . The name and , if opted , a photo of the holder are imprinted on the cards . They can function automatically as a Child , Adult , or Elder card by recognising the cardholder 's age stored on the card , hence accounting for different concessionary fares . As of 2003 , there were 380 @,@ 000 holders of Personalised Octopus cards . In addition to all the functions of an ordinary card , this card can be used as a key card for access to residential and office buildings . If a Personalised card is lost , the holder may report the loss by phone to prevent unauthorised use of the card . A refund would then be issued to the holder of the card for the deposit and the value that remained on the card six hours after the loss is reported , minus a HK \$ 30 card cost and a HK \$ 20 handling fee .

A Personalised card with " student status " is available for students in Hong Kong . To be eligible for this card , the applicant must be a full @-@ time Hong Kong student aged between 12 and 25 . This type of Personalised card is automatically issued to a student who applies for student concessionary privileges . Additionally , they can be used for school administrative tasks such as the recording of student attendance and the management of library loans .

= = = = Sold cards = = = =

In contrast to On @-@ Loan cards , Sold cards are sponsored and branded cards . They are souvenir cards that are frequently released by Octopus Cards Limited . The designs for these cards usually come from fictional characters in popular culture , or they are inspired by Chinese cultural events such as Chinese New Year . These cards are sold at a premium , have limited or no initial stored value , and cannot be refunded , but they can otherwise be used as ordinary cards . An example of the Sold card is the Mcmug and Mcdull collection . It was launched at the end of January 2007 to coincide with the beginning of the Year of the Pig , it features two differently designed versions of the card and is sold for HK \$ 138 per set . Each set comes with an Adult Octopus card , with a pouch for the card , a matching strap and a Mcmug or Mcdull ornament . Octopus Cards Limited has launched new collections of these cards for such occasions as the Mid @-@ Autumn Festival , the passing of the year 2004 , and the release of the movie DragonBlade . Sold Octopus cards may be purchased at selected MTR stations , and all 7 @-@ Eleven stores .

= = = Special @-@ purpose cards = = =

The special @-@ purpose card , Airport Express Tourist Octopus , was introduced by Octopus Cards Limited to target tourists in Hong Kong . Two versions of this card are offered , a HK \$ 220 card with a free single ride on the Airport Express , the Mass Transit Railway (MTR) train line that runs between the Hong Kong International Airport and the urban areas of Hong Kong , and a HK \$ 300 card with two free single rides included . The airport journeys are valid for 180 days from the date of purchase . Both versions allow three days of unlimited rides on the MTR and include a HK \$ 50 refundable deposit . Usable value on these cards may be added if necessary . These tourist Octopus cards may be used only by tourists staying in Hong Kong for 14 or fewer days ; users may be required to produce a passport showing their arrival date in Hong Kong . Airport Express Tourist Octopus is available for purchase at all MTR stations .

The other special @-@ purpose card , the MTR Airport Staff Octopus , is available for the staff of Hong Kong International Airport and AsiaWorld @-@ Expo , a convention centre close to the airport , for commuting at a reduced fare between the airport and MTR stations via the Airport Express . Staff who apply for the card may use it for a discount of up to 64 percent for Airport Express single journey fares . The MTR Airport Staff Octopus is available upon application via the company for which that a staff member works .

= = = Alternative designs = = =

Other than the Octopus card itself , operator Octopus Cards Limited also sells watches and mobile phone covers that function as anonymous Octopus cards . The types of watches available include wrist watches , pocket watches , and watch key chains . The mobile phone covers were specifically designed for Nokia models 3310 and 3330 , and iPhone 4 and 4S . As with the card itself , these products are used by waving them over a card reader . They may be reloaded with money value the same way as the card itself , including automatic reloading via the Automatic Add Value Service , with the exception that they cannot be reloaded at Add Value Machines due to their shapes . An Octopus watch or mobile phone cover may be stored with a maximum of HK \$ 1 @, @ 000 , but do not have any initial stored value at the time of its purchase . It may have a maximum negative value of HK \$ 35 as with an Octopus card . These products are not refundable for their costs , but the remaining value stored on them may be refunded if they are damaged , with the damaged product itself also returned to the customer .

In June 2007 , a new set of limited edition products was announced , featuring Mini Octopus cards and Child Octopus Wristbands . The Mini Octopus cards , available in Adult and Elder editions , measure 4 @. @ 7 cm by 3 cm (1 @. @ 85 in by 1 @. @ 18 in) and work as regular (anonymous) Adult and Elder , respectively , Octopus cards . The Child Octopus Wristbands are plastic wristbands with a watch @-@ like round face and work as regular Child Octopus cards . The same value @-@ adding abilities and limitations as the aforementioned watches and mobile phone apply .

They also would cooperate with different companies . Octopus can be tailored to promotional needs with companies logo or special design . In 2008 , Octopus has cooperated with Commercial Radio Hong Kong , launched a collection of " 903 20 Plus Octopus " .

= = Technology = =

The Octopus system was designed by Australia @-@ based company ERG Group (now Vix Technology) . The company was selected in 1994 to lead the development of the Octopus project and was responsible for the building and installation of the components of the Octopus system . Operations , maintenance and development was undertaken by Octopus Cards Limited , and in 2005 , it replaced the central transaction clearing house with its own system .

The Octopus card uses the Sony 13 @.@ 56 MHz FeliCa radio frequency identification (RFID) chip , with Hong Kong being the world 's first major public transport system using this technology . It is a " touch and go " system , so users need only hold the card in close proximity of the reader , and thus physical contact is not required . Data is transmitted at up to 212 kbit / s (the maximum speed for Sony FeliCa chips) , compared to 9 @.@ 6 kbit / s for other smart card systems like Mondex and Visa Cash . The card has a storage capacity of 1 KB to 64 KB compared to the 125 bytes provided by traditional magnetic stripe card .

Octopus uses a nonstandard system for RFID instead of the more popular ISO / IEC 14443 standards , since there were no standards in the nascent industry during its development in 1997 . The operating range of the reader / writer is between 30 and 100 mm (1 @.@ 18 and 3 @.@ 94 in) depending on the type of model being used .

Octopus is specifically designed so that card transactions are relayed for clearing on a store and forward basis , without any requirement for reader units to have realtime round @-@ trip communications with a central database or computer . The stored data about the transaction may be transmitted by network after hours , or in the case of offline mobile readers may be retrieved by a hand held device , for example a Pocket PC .

In practice , different data collection mechanisms are used by different transport operators , depending on the nature of their business . The MTR equips its stations with local area networks that connect the components that deal with Octopus cards ? turnstiles , Add Value Machines , value @-@ checking machines and customer service terminals . Transactions from these stations are relayed to the MTR 's Kowloon Bay headquarters through a frame relay wide area network , and hence onwards to the central clearing house system (CCHS) for clearing . Similar arrangements are in place for retailers such as 7 @-@ Eleven . Handheld devices are used to scan offline mobile readers , including those installed on minibuses . Buses either use handheld devices or a wireless system , depending on operator .

= = = Security = = =

The Octopus card uses encryption for all airborne communication and performs mutual authentication between the card and reader based on the ISO 9798 @-@ 2 three @-@ pass mutual authentication protocol . In other words , data communications are only established when the card and reader have mutually authenticated based on a shared secret access key . This means that the security of the Octopus card system would be jeopardized should the access key be exposed . A stolen Octopus card reader could be used with stolen Octopus software , for example , to add value (up to HK \$ 1 @, @ 000) to any Octopus card without authorization . Nevertheless , as of 2003 , the Octopus card and system have never been successfully hacked .

Octopus card reader includes a fail @-@ safe that prevents reader from initiating transaction when more than one card is being detected at the same time . On 11 February 2009 , Sing Tao Daily reported that the fail @-@ safe has been abused for fare evasion through the railway station turnstile . A large amount of dishonest passengers at Sheung Shui Station and Lo Wu Station were stacking up 4 or more cards before breaking through the turnstile , pretending their cards have been touched with the reader correctly but triggering the fail @-@ safe deliberately to avoid card value

deduction . Because of this , if they get caught by the station staff , they can make an excuse of a hardware malfunction and offer the Octopus card with an unsuccessful transaction .

= = Operator = =

The Octopus card system is owned and operated by Octopus Cards Limited , a wholly owned subsidiary of Octopus Holdings Limited . The company was founded as Creative Star Limited in 1994 to oversee the development and implementation of the Octopus card system , and was renamed as its current name of Octopus Cards Limited in 2002 . Creative Star was formed as a joint @-@ venture company by five major transit companies in Hong Kong ? MTR Corporation , Kowloon @-@ Canton Railway Corporation , Kowloon Motor Bus , Citybus , and Hongkong and Yaumati Ferry . In January 2001 , the shares of Hongkong and Yaumati Ferry in the company was transferred to New World First Bus and New World First Ferry . In the same year , together with MTR Corporation , the company was transformed from its previous non @-@ profit making status to a profit making enterprise .

Due to the expansion of the company 's businesses , Octopus Holdings Limited was established in 2005 and Octopus Cards Limited was restructured as its subsidiary . The business of Octopus Cards Limited , being a payment business , is regulated by the Hong Kong Monetary Authority , while Octopus ' non @-@ payment businesses are not subjected to such regulation and are operated by other subsidiaries of Octopus Holdings Limited that are independent of Octopus Cards Limited . As of 2007 , Octopus Holdings Limited was a joint @-@ venture business owned by five transport companies in Hong Kong ; 54 @.@ 4 % by the MTR Corporation , 22 @.@ 1 % by the Kowloon @-@ Canton Railway Corporation , 12 @.@ 4 % by Kowloon Motor Bus , 5 % by Citybus , and 3 @.@ 1 % by New World First Bus . Since the Government of Hong Kong owns 76 @.@ 54 % of the MTR Corporation (as of 31 December 2005) and wholly owns the Kowloon @-@ Canton Railway Corporation , it is the biggest effective shareholder of Octopus Holdings Limited , and thus also the biggest effective shareholder of Octopus Cards Limited .

Initially , Octopus Cards Limited , then known as Creative Star Limited , was restricted to having at most 15 percent of Octopus card transactions for non @-@ transport transactions , as it operated under the Hong Kong government 's Banking Ordinance . On 20 April 2000 , the Hong Kong Monetary Authority authorised the company for deposit @-@ taking , which allowed for 50 percent of Octopus card transactions to be unrelated to transport . HK \$ 416 million (US \$ 53 @.@ 3 million) is deposited in the Octopus system at any given time as of 2000 .

= = In taxis = =

Although a popular form of transport , taxis in Hong Kong do not accept the Octopus card . On 27 June 2006 , after 10 years of negotiations between Octopus Cards Limited and the taxi industry , the first trial of taxis equipped with Octopus card readers was launched in the New Territories with taxis operated by the Yellow Taxi Group . But it was reported on 30 October that of the 20 taxis that participated in the trial , eight had dropped out . Part of the reason was technical ? drivers must return to the office every day for accounting . The Octopus card company said it would be upgrading the system to allow automatic account updating in the future . Wong Yu @-@ ting , managing director of the Yellow Taxi Group , also noted that they had been " trying to convince restaurants and retailers " to offer discounts to Octopus taxi passengers , but the Transport Department had been a major obstacle . The Transport Department is against this approach for legal reasons .

= = Awards = =

The Octopus card is recognised internationally , winning the Chairman 's Award of the World Information Technology and Services Alliance 's 2006 Global IT Excellence Award for being the world 's leading complex automatic fare collection and contactless smartcard payment system , and for its innovative use of technologies .

= = Issues = =

= = = EPS add @-@ value glitch = = =

In February 2007 it was found that when customers added value to their cards at self @-@ service add @-@ value points located in MTR and Light rail stations , their bank accounts were debited even if the transactions had been cancelled . Octopus Cards Limited claimed that the fault was due to an upgrade of communication systems . Initially , two cases were reported . The company then announced that the use of the payment system , Electronic Payment Services (EPS) , at add @-@ value service points would be suspended until further notice , and that it had started an investigation into the reasons for the problem .

On 27 July 2007 it was announced that the faulty transactions could be traced back to 2000 , and that a total of 3 @. @ 7 million Hong Kong dollars had been wrongly deducted in 15 @, @ 270 cases . The company reported that there might be cases dating to before 2000 , but that only transactions from the past seven years were kept . The company stated that it would co @-@ operate with EPS Company Limited , operator of Electronic Payment Services , and banks , to contact customers involved and arrange a refund within ten weeks ' time .

On 21 December 2007 the company announced that it would permanently cease all transactions using EPS because it could not guarantee that such problems would not occur again .

= = = Privacy abuse = = =

On 15 July 2010 , despite Octopus ' claims to have never sold data , a former employee of the CIGNA insurance company claimed CIGNA purchased records for 2 @. @ 4 million Octopus users . On 20 July , Octopus acknowledged selling customers ' personal details to Cigna and CPP , and started an internal review of their data practices . Octopus Holdings made 44 million Hong Kong dollars (\$ 5.7M USD) over 4 @. @ 5 years . Roderick Woo Bun , Hong Kong 's Privacy Commissioner for Personal Data , gave radio interviews and called for transparent investigation , but his term expired at the end of July 2010 . Allan Chiang Yam @-@ wang was announced as the incoming Privacy Commissioner . This news was met with protests and international outrage , due to his prior history of privacy invasions involving cameras used to spy on his employees at the Post Office , and disclosing hundreds of job applicants ' personal data to corporations . Outgoing Privacy Commissioner Woo pledged to finish a preliminary report on the Octopus privacy abuse before his term ends , and called for a new law making it a criminal offence for companies to sell personal data .