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**OFTA's consultation on "Licensing of mobile services on expiry of existing licenses for second generation mobile services"**

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The GSM Association (GSMA) is the global trade association that exists to promote, protect and enhance the interests of more than 640 GSM mobile operators from more than 200 countries and territories. The Association's members provide mobile services to more than 1 Billion customers throughout the world today.

The GSMA would like to comment on some of the points made by OFTA in its consultation on "Licensing of mobile services on expiry of existing licenses for 2G mobile services". The GSMA considers that some of the assumptions made within the consultation paper and OFTA's approach with regard to the renewal of 2G licenses in Hong Kong could set a precedent and impact some of the current worldwide debates on spectrum policy.

Specifically, the GSMA would like to emphasise certain principles that it believes OFTA should take into account when considering the renewal of 2G licenses:

## **1. NEED TO RESPECT THE PRINCIPLE OF TECHNOLOGY NEUTRALITY**

The GSMA considers that OFTA's well-known policy on technology neutrality should be also respected in this case.

The assumption contained within the consultation (paragraph 37), namely the "Telecommunications Authority (TA) doubts about the feasibility of implementing GSM 850 standard in Hong Kong given the uncertainties on whether the technology can meet the requirement of providing quality mobile data services..." and the condition applicable to the new license, which makes explicit reference to minimum network capacity and the requirement to cover certain percentage of the population with a peak data rate of at least 2 Mbps, contradict the principle of technology neutrality.

By specifying a certain speed, market access would be restricted to certain technologies.

OFTA's assumptions regarding mobile data penetration in other jurisdictions (Japan and Korea) do not take into account the cultural and economic differences and the market structure of each country, all of which have a direct impact on the level of penetration of mobile services in a market.

OFTA also overstates the impact of CDMA 2000 1EV-DO. The analysis of subscriber figures from KDDI in Japan suggests that only around half a million of the operator's 17.5 million customers have access to EV-DO. In Japan CDMA 200 accounts for only 17% of Japanese mobile users, and the overwhelming majority of these are not currently using the EV-DO variant.

The data services of NTT DoCoMo, Japan's leading operator, were founded on PDC and are now being migrated to GSM. The operator does not use

CDMA. About a third of Korea's 36 million users appear to have access to EV-DO.

EV-DO does not therefore appear to have been a critical factor in the development of the advanced data services in these markets.

Laptop connectivity services based on 3GSM data cards are rapidly gaining momentum following international launches by operators such as Vodafone, TIM and Telefonica. Similar CDMA EV-DO based services are only available in a handful of cities.

Technology is not a key factor that influences consumer's purchasing decisions. Rather it is the ability of a service to meet particular needs, at a reasonable price with a high quality of service.

Currently, there are four 3G licensees in Hong Kong that have opted for 3GSM technology. Hutchison has recently launched its 3G services and the other three will follow in the near future. Consumers have started to benefit from the introduction of 3G high-speed mobile data services in Hong Kong.

Finally, a license allocation process that explicitly favours one technology over others would also represent a challenge to accepted free-trade principles established by the World Trade Organisation.

## **2.REGULATORY INTERVENTION IN A COMPETITIVE MARKET**

The GSMA believes that any Government intervention in an already highly competitive market should be considered carefully.

We would like to emphasize the need for the Hong Kong Government to be patient, and wait and see how 3GSM will evolve. There will be 70 operators

worldwide launching commercial and testing 3GSM services by the end of the year. In addition, the GSMA is actively promoting the interoperability of 2G and 3G multimedia services that will contribute to the take up of advanced services around the world.

The global telecommunications industry is still recovering from the financial impact of the 3G licensing process, which demonstrated how decisions by Governments on spectrum matters can and do have a direct impact on the rate of investment, innovation and growth in an industry. The recent 3GSM World Congress demonstrated that signs of optimism are only just starting to return to the market, after three years of restructuring and cost cutting.

The many similarities between the deployment of 3GSM and the transition from analogue to GSM give the GSMA every confidence that 3GSM will ultimately be a global success.

Regulatory intervention is only legitimate where there is no effective competition in a relevant market and where market forces are insufficient. The Hong Kong market is one of the most competitive markets in the world, with eleven 2G licensees, four 3G licensees, currently 6 mobile virtual network operators (MVNO), more than 7 million mobile customers and over 100% penetration. With regard to OFTA's comment that the *"TA envisages that introduction of the new license may change consumer's usage pattern of and enhance demand for mobile data services"*, it should be highlighted that the Hong Kong market has still to benefit from the full launch of services from the existing 3G players and as a consequence OFTA's open network access policy, which the GSMA understands requires the existing 3G players to provide access to MVNOs and content providers to at least 30% of their network capacity.

There is no direct link between issuing a new license and the promotion/success of a certain service (e.g. data) in an already competitive

market. Ofta's proposal to issue a 5th 3G license will result in a structural change in the market. This is a very heavy-handed approach to deal with a "perceived data" problem.

If the Government wants to promote data penetration in Hong Kong then it should consider more closely the reasons why data penetration is lower than elsewhere, and perhaps consider less intrusive measures to promote the take-up of data. There is certainly plenty of competition in Hong Kong and spectrum availability, so why is data penetration relatively low compared to other places? This is the more relevant question.

The GSMA considers there should be a regulatory environment in Hong Kong, which provides for the necessary degree of certainty, on which operators can build their business cases.

Therefore, the GSMA feels that a balanced assessment of certain factors should be made before intervening on the mobile market.

Criteria to be considered being, amongst others:

- the number of competitors
- the dynamic, rapidly changing nature of a market;
- the number and scale of innovative services and networks;
- customer satisfaction (which itself induces churn);
- quality of service
- the exercise of independent choice by customers
- the impact of existing or forthcoming regulatory obligations;
- open technical standards and interfaces.

### **3.NEED FOR LONG TERM POLICY ON SPECTRUM**

Several jurisdictions are looking at spectrum management from a strategic point of view as:

- The value of access to spectrum to different sectors of the economy needs to be assessed.
- The boundaries for spectrum categorisation/usage are blurring.
- Some Regulators have already introduced or are currently considering the introduction of concepts such as spectrum trading and refarming.
- New spectrum needs and usages are changing rapidly.

OFTA has not yet launched a general debate on spectrum policy. OFTA has chosen to introduce the key concept of refarming in its consultation, but has done so on an isolated basis and only with relation to the vacated frequency spectrum from the current CDMA and TDMA licenses.

The importance of long term planning is critical for the mobile industry where large capital investments are required. The GSMA considers that a clear spectrum policy framework is essential to creating an attractive investment climate. The issue of the renewal of 2G licenses cannot be looked at in isolation as it forms part of the long-term spectrum policy of a country or region.

Under the new regulatory framework in Europe, all Member States have the option of introducing trading of spectrum usage rights. Europe is currently consulting on spectrum policy in general and within the broader context on spectrum trading and the renewal of 2G rights of use.

The debate generated by this consultation is a good starting point but there is a need for a holistic debate on spectrum policy in Hong Kong. Therefore, we

recommend that a Strategic Spectrum Review project be carried out in Hong Kong, in consultation with the industry, in order to guarantee a transparent, long-term regulatory framework.

## SPECIFIC COMMENTS ON CURRENT OFTA'S ASSUMPTIONS ON TECHNOLOGIES

OFTA's suggestion that licensing CDMA 2000 in the 850 MHz band in Hong Kong would enhance the SAR's position as a mobile services hub in the region is not supported by evidence from elsewhere in the world.

In its consultation document, OFTA makes a number of statements that demonstrate an incomplete understanding of global trends in the mobile telecommunications sector.

*1. OFTA suggests that CDMA 2000 is inherently better for the delivery of data services than other technologies.*

If this were the case, it is unlikely that of the 123 operators worldwide who have been allocated spectrum in the 2GHz band identified by ITU for 3G, 98.4% - including Hong Kong's four 2GHz licensees - have chosen 3GSM based on Wideband CDMA.

*2. OFTA suggests that no other technology is available for 3G deployment in the 850 MHz band.*

3GSM based on Wideband CDMA is expected to start entering commercial service in the 850MHz band in Japan during 2004 - well before the completion of OFTA's proposed licensing process. Alternatively, EDGE, also recognised by ITU as a 3G technology, is being deployed in the Americas in the 850 MHz band. There are also 46 GSM operators with 850MHz licenses.

By the time the proposed 850 MHz license is allocated, it is possible that HSDPA, member of the 3GSM family of technologies that delivers further

improvements in performance for high bandwidth data applications, could be entering service in the 850 MHz band, again initially in Japan.

*3. In supporting the deployment of CDMA 2000, OFTA stresses the importance of co-ordinating spectrum allocations with mainland China.*

The implied preference for CDMA 2000 appears to disregard the likely deployment of TD SCDMA, the 3G technology being promoted by China. TD SCDMA can potentially be deployed as a complement to 3GSM.

It is also interesting to note that within the current MII-sponsored 3G field trials, there is significantly greater interest in 3GSM than CDMA. For example, five out of six Chinese operators involved in the programme are trialling 3GSM. Base station deployments in the 3GSM trial are two-and-a-half times greater than CDMA 2000. This weight of interest could be significant if China were to review its spectrum policy at 850 MHz.

*4. OFTA implies that existing Hong Kong operators (including the four 3GSM operators) have failed in offering data services and that other markets, especially Japan, Korea and the United States have performed better*

Japan's leadership in the data services market was driven by the success of NTT DoCoMo and its I-mode service. Although this service was pioneered on Japan's indigenous PDC technology, DoCoMo is now migrating to 3GSM to take advantage of its improved spectral efficiency and speed.

While DoCoMo and Vodafone KK, another Japanese PDC operator migrating to 3GSM, have confronted and resolved many of the challenges that accompany the deployment of a new advanced technology, KDDI has enjoyed some success over the past 18 months as it has migrated from CDMAone to CDMA 2000 1x RTT.

However, CDMA 2000 1x RTT does not deliver the data speeds envisaged in the OFTA consultation. KDDI is beginning to deploy the faster CDMA 2000 1x EV-DO, however this is currently only available in three cities. KDDI's performance cannot therefore be cited as evidence of any superiority for CDMA compared with other technologies.

Two of Korea's three CDMA operators are overlaying 3GSM on their CDMA 2000 1x EV-DO networks in order to allow their customers to take advantage of the global 3G standard.

The US record in delivering high-speed data services is very patchy. The country's largest operator (and the world's largest CDMA operator) generates only 3.1% of its revenues from non-voice services, according to the most recent published quarterly results from its 40% owner Vodafone. By comparison, Vodafone generates 22.4% of its revenues from non-voice services in Japan and 14.9% from its other Asian properties.

Also in the US, Monet Mobile, the first CDMA 2000 EV-DO operator in the world to focus on delivering the type of data services envisaged in the OFTA consultation document, has just filed for Chapter 11 bankruptcy protection.

The global market place therefore provides little compelling evidence that CDMA 2000 is a better platform for mobile data services

*5. OFTA mentions that since "CDMA 2000 services have been gaining popularity in North America and some places in Asia, cost effective roaming services should be provided for visitors coming from these regions".*

While roaming was a central objective in the development of the GSM and 3GSM standards, it is not an intrinsic feature of CDMA. This factor,

combined with variations in CDMA deployed across different markets has contributed to the fragmentation of CDMA and undermined its roaming capabilities. IFAST, the International Forum on ANSI-41 Standards Technology, has had to be created in order to retrospectively resolve CDMA's interoperability issues. See [www.ifast.org](http://www.ifast.org) for more information.

The promotion of competing CDMA 2000 3G evolution technologies - EV-DO and EV-DV - does nothing to reduce CDMA fragmentation.

CDMA roaming services are not as well developed as in GSM. The limited deployment of CDMA on a global basis is equally reflected in the number of roaming agreements signed by China's operators.

About 50% of Hong Kong's visitors are from Mainland China and according to the latest China Unicom annual report, (April 04). Unicom has CDMA roaming agreements with 15 operators in ten countries/territories

By comparison, Unicom has GSM roaming agreements with 165 operators in 80 countries/territories. Unicom's support for the hybrid GSM 1X concept is a further reflection of CDMA's intrinsic roaming weakness.

Verizon Wireless in the USA - the world's biggest CDMA operator - does not promote a CDMA-based roaming service at all. Instead it recommends that customers make use of a GSM rental service.

Currently the number of CDMA EVDO worldwide users is less than 5 million and the majority of them are in Korea. According to CDG there are only 9 EVDO networks in the world (North America, Asia and Europe). There would be also no benefit for CDMA users in Japan due to the different characteristics of the technology, which highlights the fragmented character of CDMA.

Therefore the roaming capabilities of CDMA are mainly related to voice and not data services which is in contradiction with OFTA's main objective to introduce a fifth new competitor in the Hong Kong market.

## **ABOUT THE GSM ASSOCIATION**

The GSM Association (GSMA) is the global trade association that exists to promote, protect and enhance the interests of 640 GSM mobile operators from more than 200 countries and territories. The Association's members provide mobile services to more than 1 Billion customers throughout the world today. The GSMA aims to accelerate the implementation of collectively identified, commercially prioritized operator requirements and to take leadership in representing the global GSM mobile operator community with one voice on a wide variety of issues nationally, regionally and globally.

The GSM family of wireless communications platforms, including GSM, GPRS (General Packet Radio Services) and EDGE (Enhanced Data for GSM Evolution) and 3GSM (W CDMA) account for 73 percent of the total digital wireless market today. The GSM Association is a unique organization, with truly global reach, offering a full range of business, technical and public policy services to its members. For more information, visit the website at [www.gsmworld.com](http://www.gsmworld.com).

The GSM Association's Board comprises the following operator companies and multinational groups: AT&T Wireless Group; China Mobile; China Unicom; Hutchison Group; KT ICOM; Maxis Mobile; mmO2 Group; NTT DoCoMo, Inc.; Orange Group; Orascom Telecom Group; SFR Cegetel; SingTel Group; SUNDAY Communications Ltd; Taiwan Cellular; Telefónica Móviles Group; Telenor Mobile Group; TeliaSonera Group; TIM (Telecom Italia Mobile) Group; T-Mobile Group; Turkcell and the Vodafone Group. The Board also includes the GSMA's CEO and Chairman of the Executive Management Committee.