

## Telecommunications Regulatory Affairs Advisory Committee

### Review of the Billing and Metering Integrity Scheme

#### PURPOSE

This paper seeks Members' views and comments on a review of the Billing and Metering Integrity Scheme ("BMIS") with a proposal to abolish BMIS starting from January 2021.

#### BACKGROUND

2. BMIS was introduced by the then Telecommunications Authority ("TA") in 2003 in light of the growing number of complaints on billing disputes at the material time<sup>1</sup>. The main objective of the scheme is to enhance consumer confidence in the billing and metering accuracy of the public telecommunications services that are charged on the basis of time of usage, including mobile voice services, international direct dialling ("IDD") services and dial-up Internet services.

3. BMIS is a set of integrity standards, testing criteria as well as self-appraisal, auditing and monitoring procedures to ensure accuracy in measuring call duration and billing the calls made. The criteria of BMIS specify that the number of inaccurately metered calls shall not exceed 0.01% of total calls and the error of billed amount shall not exceed 0.01% of the total billed amount in a single bill. Operators joining the scheme have to follow the prescribed quality assurance procedures<sup>2</sup> to check their internal process and to ensure that the accuracy criteria are met.

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<sup>1</sup> See the statement issued by the then TA in August 2000:  
[https://tel\\_archives.ofca.gov.hk/en/tas/others/ta000804.pdf](https://tel_archives.ofca.gov.hk/en/tas/others/ta000804.pdf).

<sup>2</sup> See HKCA 3104 – Quality Assurance Manual for Billing and Metering Integrity Scheme  
[https://www.ofca.gov.hk/filemanager/ofca/en/content\\_405/hkca3104.pdf](https://www.ofca.gov.hk/filemanager/ofca/en/content_405/hkca3104.pdf); and

HKCA 3105 – Requirements on the Assurance, Reporting and Monitoring Procedures for the Billing and Metering Integrity Scheme  
[https://www.ofca.gov.hk/filemanager/ofca/en/content\\_405/hkca3105.pdf](https://www.ofca.gov.hk/filemanager/ofca/en/content_405/hkca3105.pdf).

The compliance status of the participating operators are published at OFCA's website and updated on a semi-annual basis.

4. A mixed participation approach was adopted in the initial implementation of BMIS, under which fixed network operators ("FNOs"), mobile network operators ("MNOs") and mobile virtual network operators ("MVNOs") were required to participate in the scheme on a mandatory basis, while other services-based operators<sup>3</sup> might participate on a voluntary basis. The then TA subsequently conducted a review in June 2005 and lifted the mandatory requirement imposed on FNOs, MNOs and MVNOs<sup>4</sup>. Since 1 January 2006, all telecommunications services operators can elect to participate in BMIS on a voluntary basis.

5. In April 2011, the then Office of the Telecommunications Authority ("OFTA") consulted Members of the then Regulatory Affairs Advisory Committee ("RAAC"), the predecessor of TRAAC on a number of billing and metering related issues, including a review of the scope of BMIS (namely on the possible expansion of scope to cover non-voice services) and the introduction of a voluntary Code of Practice in Relation to Billing Information and Payment Collection for Telecommunications Services ("CoP")<sup>5</sup>. Having considered the submissions received from the then RAAC Members, it was decided that the scope of BMIS remained unchanged, while the voluntary CoP was issued in 2011 and became effective from 1 July 2012<sup>6</sup>.

6. Since the last review of BMIS in 2011, the number of complaints received by the Office of the Communications Authority ("OFCA") in relation to billing disputes has been declining with a number of measures introduced to deal with billing and metering related issues.

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<sup>3</sup> Including Internet access services providers, international value-added network services providers and external telecommunications services providers.

<sup>4</sup> See the statement issued by the then TA in November 2005:  
[https://tel\\_archives.ofca.gov.hk/en/tas/others/ta20051123.pdf](https://tel_archives.ofca.gov.hk/en/tas/others/ta20051123.pdf).

<sup>5</sup> The relevant RAAC Paper is available at:  
[https://tel\\_archives.ofca.gov.hk/en/ad-comm/raac/paper/raac02\\_2011.pdf](https://tel_archives.ofca.gov.hk/en/ad-comm/raac/paper/raac02_2011.pdf).

<sup>6</sup> The CoP is available at:  
<https://www.coms-auth.hk/filemanager/statement/en/upload/33/cop20111011e.pdf>.

Furthermore, the telecommunications services markets have changed substantially over the years, moving from focus on voice-based services in the past to data-based services nowadays. In light of these developments, OFCA considers that it is high time to conduct another review of BMIS.

## **CONSIDERATIONS**

### **The number of complaints on billing disputes has been declining**

7. BMIS was introduced in early 2000s to address the rapidly increasing number of complaints on billing disputes at the material time. Since then, the number of complaints on billing disputes has been declining. As shown in the following table, the number of such complaints has exhibited a declining trend over the past decade, from 1,171 cases in 2011 to 234 cases in 2019 (reduced by 80%), and further reduced to 128 cases for the first three quarters in 2020.

Number of complaints received by OFCA on billing disputes

|                          | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020<br>(to Sep) |
|--------------------------|------|------|------|------|------|------|------|------|------|------------------|
| <b>No. of complaints</b> | 1171 | 1121 | 954  | 1049 | 548  | 335  | 322  | 276  | 234  | 128              |

8. Among the 128 complaints received in the first three quarters in 2020, 126 complaints (98%) were related to issues other than billing and metering inaccuracy, such as the complainants' misunderstanding of contract details and/or how service charges were calculated, and their unintentional usage of telecommunications services. Only two cases might be related to billing and metering accuracy, and they appeared to be individual incidents with no evidence indicating any systematic issues in billing and metering accuracy of the operators concerned. The two cases were subsequently settled between the complainants and their operators.

9. The aforementioned complaint figures indicate that billing and metering accuracy does not appear to be a key concern for telecommunications services users nowadays.

## **Telecommunications services markets have changed substantially**

10. During the past decade, the telecommunications services markets have undergone substantial changes. BMIS covers predominantly voice-based services (namely mobile voice services, IDD services and dial-up Internet services) which either are no longer time-based charged or have become less important nowadays, thus undermining the relevancy and effectiveness of BMIS as a consumer protection tool.

- (a) Nowadays, mobile voice services are generally no longer per-minute charged or become less important than non-voice services. Mobile service packages usually include mobile voice with unlimited usage or thousands of minutes of usage per month, which should be sufficient for general users. Due to popularity of various online communications tools and social media platforms, mobile traffic are now predominantly due to data rather than voice communications. According to OFCA's statistics, the monthly usage volume per mobile data subscription has increased by more than seven-fold in less than a decade from 490.8 megabyte ("MB") in December 2011 to 3,586.5 MB in July 2020;
- (b) For IDD services, substitutes which are not charged based on usage time (such as voice over Internet Protocol services and calls made over mobile messaging applications such as WhatsApp and WeChat) have emerged and are commonly used nowadays. According to OFCA's statistics, the external telecommunications traffic based on circuit-switched networks has dropped from 10.3 billion minutes in 2011 to 2.3 billion minutes in 2019, representing a reduction of 78% in eight years.
- (c) Dial-up Internet services have gradually been phased out and replaced by broadband services, which are not charged based on usage time. According to OFCA's statistics, the estimated number of registered dial-up access lines has dropped by more than 96%, from 788,835 in December 2011

to 28,226 in July 2020. On the other hand, there were over 2.8 million broadband Internet access lines and the household broadband penetration rate has exceeded 95% in July 2020.

**No systematic problem is found concerning billing and metering accuracy for services and operators not covered by BMIS**

11. Against the reducing importance of voice-based services covered by BMIS, we note that fixed broadband and mobile data services have become more and more prevalent nowadays. In July 2020, household fixed broadband penetration rate has exceeded 95% whereas mobile data subscription<sup>7</sup> penetration rate has reached 277.5%. Fixed broadband and data services have never been subject to BMIS since their introduction in the telecommunications services markets, and OFCA did not see many complaints concerning billing and metering accuracy coming from these services. As mentioned in paragraph 8 above, there were only two cases in 2020 (up to September) which might be related to billing and metering accuracy, with one case related to mobile voice service and the other related to mobile data service.

12. As BMIS is implemented on a voluntary basis, some participating operators have opted out of the scheme in the course of market development over the years based on their commercial decisions<sup>8</sup>. Nevertheless, OFCA notes that there was no surge in billing disputes after these operators opted out of the scheme. It is believed that as billing and metering accuracy is an important component of service provision, operators albeit no longer subject to BMIS are keen to maintain accurate and reliable billing and metering systems under the competitive market environment.

13. Based on the above, it is noted that for telecommunications services and operators not covered by BMIS, there is no evidence

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<sup>7</sup> “Mobile data subscription” refer to mobile subscriptions riding on 2.5G/3G/4G/5G mobile data services, excluding machine-to-machine type connections.

<sup>8</sup> The number of operators participating in BMIS has reduced from 21 operators at the end of 2005 to six operators as of November 2020.

indicating any systematic problem concerning billing and metering accuracy. As a matter of fact, technological change has better equipped users of telecommunications services in monitoring their service usage. For example, smartphones usually come with metering function which enable users to keep track of their service usage. Where disputes on billing and metering should occur between customers and operators, the customers will also be protected through other measures as explained in the following paragraphs.

### **Other measures dealing with billing and metering issues**

#### Licence condition on billing and metering accuracy

14. Under Special Condition 9 of Unified Carrier Licence and Special Condition 5 of Services-Based Operator Licence (“Licence Condition”), the licensee shall take all reasonable steps to ensure that any metering equipment and billing system used in connection with the service is accurate and reliable. Moreover, at the written request of the Communications Authority (“CA”), the licensee shall conduct tests on its metering equipment and billing system to assess its accuracy, reliability and conformity to the technical standards if any specified by the CA (see Annex for the full version of the Licence Condition).

15. As compared to BMIS, the Licence Condition has a much wider scope as it covers not only time-based charged services, but also services based on other charging regimes, e.g. broadband and data services. Furthermore, as compared to BMIS which is voluntary in nature, the Licence Condition is a mandatory requirement which the licensee is required to observe and comply at all times. In the event that a licensee is found to have breached the Licence Condition, the CA would take appropriate enforcement actions against the licensee concerned.

#### The CoP

16. The CoP provides guidance to licensees on (a) the general requirements of billing information which shall be provided in the bills to their customers and (b) the general requirements of payment collection. Under the CoP, the operators shall take all reasonable, necessary and

practical steps to ensure that their billing information provided to customers are accurate and error-free in respect of all forms of bills and means of payment. The CoP also sets out a mechanism for the operators to report systematic errors in billing information and payment collection to OFCA when the pre-defined reporting criteria are met<sup>9</sup>. The operators concerned are required to provide OFCA with timely progress update of the remedial action(s) taken or to be taken.

17. Similar to the aforementioned licence condition, the CoP has a wider scope than BMIS encompassing not only time-based charged services but also services based on other charging regimes. Furthermore, the CoP covers not only billing and metering accuracy, but also the type of information that shall be provided in the bills as well as the requirement to report systematic errors in billing information and payment collection. As of November 2020, eleven operators (including seven FNOs and four MNOs) have pledged to comply with the CoP<sup>10</sup>.

18. Based on the above, it is considered that the Licence Condition and the CoP are more effective regulatory tools than BMIS, and offer more comprehensive consumer protection in respect of billing and metering issues. OFCA will look into complaints on billing and metering matters in regard to any non-compliance by the concerned operators. Moreover, customers may also seek the assistance of OFCA to help resolve the billing related disputes with the operators.

### Customer Complaint Settlement Scheme (“CCSS”)

19. Other than the above regulatory measures, the telecommunications industry has set up the CCSS in November 2012 as a voluntary mediation scheme to help resolve billing disputes in deadlock between telecommunications services providers and their customers. The mediation service is provided by an agency established under the

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<sup>9</sup> Irrespective of the erroneous amount in question, the incident affects at least 2,000 or 5% of customers, whichever is smaller; or irrespective of the number of customers being affected, the error causes an erroneous amount of at least HK\$ 100,000 in total.

<sup>10</sup> The list of participants is available at:  
[https://www.ofca.gov.hk/filemanager/ofca/en/content\\_763/status\\_e.pdf](https://www.ofca.gov.hk/filemanager/ofca/en/content_763/status_e.pdf).

Communications Association of Hong Kong, an industry association representing the communications sector in Hong Kong. OFCA supports the operation of the CCSS by contributing the necessary funding, screening the CCSS applications against prescribed criteria, and monitoring the performance and the governance of the scheme.

20. Again, the scope of CCSS is wider than that of BMIS, encompassing all kinds of telecommunications services including those not covered by BMIS. Furthermore, all major telecommunications services providers in Hong Kong have participated in the scheme<sup>11</sup>. CCSS is well received by the public and the telecommunications industry. Up to October 2020, 880 cases of billing disputes in deadlock were handled through CCSS and over 98% of the cases were successfully resolved thus demonstrating the effectiveness of this industry measure in helping resolve billing related disputes.

### **Abolishing BMIS will reduce compliance cost of the industry**

21. Under BMIS, participating operators need to conduct monthly tests on their metering equipment and billing systems in accordance with the prescribed quality assurance procedures to ensure its compliance with the required metering and billing integrity standards. Participating operators also have to submit monthly test results and annual assurance report to OFCA in order to satisfy their compliance status. As such, the proposal to abolish BMIS will undoubtedly reduce the compliance cost of the participating operators and thereby fostering a more business-friendly environment.

## **THE PROPOSAL**

22. Given the analysis in paragraphs 7 to 21 above, the existing BMIS may no longer be an effective regulatory tool under the current market situation, and given the availability of other effective measures to safeguard consumer interests in relation to billing and metering related

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<sup>11</sup> The list of CCSS members is available at:  
<http://ccss.cahk.hk/en/ccss-members.html>.

matters, it would be appropriate to consider abolishing the scheme so as to reduce the compliance cost of the industry and the administrative cost of OFCA. Based on the above considerations, it is proposed to abolish BMIS starting from January 2021.

23. While BMIS is planned to be abolished, for the avoidance of doubt, the existing measures (namely the Licence Condition, the CoP and the CCSS) which have wider scope and are more effective than BMIS as discussed in paragraphs 14 to 20 above, would remain in force and continue to provide protection for consumers in respect of billing and metering issues.

### **WAY FORWARD**

24. OFCA will consider the views and comments received from Members before finalising a decision on the subject. If it is decided to abolish BMIS, OFCA will issue circular letters to the industry informing them of the decision and the relevant arrangement.

### **VIEWS SOUGHT**

25. Members are invited to give their views and comments on the proposal given in this paper.

**Office of the Communications Authority  
December 2020**

**Annex**

**Licence Condition in respect of Billing and Metering Accuracy**

**Special Condition 9 of Unified Carrier Licence – Billing and Metering Accuracy**

- 9.1 The licensee shall take all reasonable steps to ensure that any metering equipment and billing system used in connection with the service is accurate and reliable.
- 9.2 At the written request of the Authority or at regular intervals to be specified by the Authority, the licensee shall conduct tests on its metering equipment and billing system to assess its accuracy, reliability and conformity to the technical standards, if any, specified by the Authority. The licensee shall submit the test result to the Authority within 14 days after the date of the relevant test or such other longer period as the Authority may determine.
- 9.3 The licensee shall keep such records of any metering equipment and billing system in such form as may be specified by the Authority and shall supply such records to the Authority as soon as reasonably practical following a written request from the Authority.

**Special Condition 5 of Services-Based Operator Licence – Billing and Metering Accuracy**

- 5.1 The licensee shall take all reasonable steps to ensure that any metering equipment and billing system used in connection with the service is accurate and reliable.
- 5.2 Upon the written request of the Authority, the licensee shall conduct tests on metering equipment and billing system to assess its accuracy, reliability and conformity to the technical standards, if any, specified by the Authority. The licensee shall submit the test result to the Authority within 14 days after the date of the test or such other longer period as the Authority may determine.

- 5.3 The licensee shall keep such records of any metering equipment and billing system in such form as may be specified by the Authority and shall supply such records to the Authority on the written request of the Authority.