

**FINAL DECISION OF THE  
COMMUNICATIONS AUTHORITY**

**ALLEGED MISLEADING OR DECEPTIVE REPRESENTATIONS  
BY CSL LIMITED  
IN RELATION TO THE PROMOTION OF  
ITS MOBILE BROADBAND SERVICES**

<b>Licensee concerned:</b>	CSL Limited (“CSL”)
<b>Issue:</b>	The representations made by CSL in relation to the speed of its mobile broadband services in its promotional materials were alleged to be misleading or deceptive
<b>Relevant Instruments:</b>	Section 7M of the Telecommunications Ordinance (“TO”) (Cap. 106)
<b>Decision:</b>	Breach of section 7M of the TO
<b>Sanction:</b>	Financial penalty
<b>Case Reference:</b>	7M/2/7-12

**THE COMPLAINT**

On 27 June 2011, the former Office of the Telecommunications Authority (“OFTA”) received a complaint from an industry participant, which followed up with a further complaint letter dated 5 August 2011, alleging that various speed representations made by CSL in its newspaper and online advertisements, a poster mounted on a wall (“poster on a wall”) inside the Tsuen Wan MTR station, glass walls at retail outlets, customer bills and

promotional inserts targeting specific credit cardholders (collectively referred to as “Promotional Materials”) between April and July 2011 promoting CSL’s mobile broadband service were misleading or deceptive in breach of section 7M of the TO. A set of the Promotional Materials provided by the complainant is at **Appendix A**.

### **Speed Representations in the Promotional Materials**

2. The various speed representations made by CSL in the Promotional Materials are set out in paragraphs 3 to 11 below.

#### *Newspaper advertisements*

3. In a Chinese newspaper advertisement promoting its “Pocket Wi-Fi” service (**Appendix A(1)**, first page), CSL made the following claims in the headline and the first bullet point appearing at the lower part of the advertisement regarding the speed of its mobile broadband network:

(headline)

... *one2free*

全港最快流動寬頻

(first bullet point)

*one2free* 流動寬頻網絡，全港最快

Collectively, the claims above are referred to as “the Fastest Claim”.

4. In another Chinese newspaper advertisement promoting its “Tablet Data” service (**Appendix A(1)**, second page), CSL made the Fastest Claim in the headline with a slight variation in wording:

... one2free

全港最快流動寬頻網絡

Further, the second bullet point appearing at the lower part of the advertisement stated that:

one2free 流動寬頻網絡，全港最快

5. The Fastest Claim appearing in the two advertisements was qualified by the following small print appearing at the bottom of both advertisements:

根據 Speedtest.net 於 2011 年 2 月發佈的測試結果。該項測試對全球每個無線營運商的測試數據進行分析，由超過 100 位用戶使用同一款智能手機進行速度測試。

(“Disclaimer 1”)

6. In both advertisements in **Appendix A(1)**, CSL also made a claim in a bullet point appearing at the lower part of the advertisements that the speed of its network or service was 1.7 times faster than those of the other operators (the “1.7 Times Faster Claim”):

快人 1.7 倍

The 1.7 Times Faster Claim was qualified by the following small print appearing at the bottom of both advertisements:

根據 Speedtest.net 測試結果。該項測試採用 2011 年 1 月 30 日至 2011 年 2 月 28 日期間所得的測試數據進行分析(由香港 739,733 個網絡通訊位址進行測試，測試次數合共 4,554,650 次，當中採用了 121,816 個測試結果)。

(“Disclaimer 2”)

### *Online advertisements*

7. CSL also made the Fastest Claim in the online advertisements for its “one2free” and “1010” brands, with some variations in wording in the “1010” case (at **Appendix A(2)**):

(on Yahoo! and ePrice websites)

... *one2free*

全港最快流動寬頻

(on Apple Daily and Yahoo! websites)

*1010*

亞太區最快流動寬頻

The Fastest Claim appearing in the online advertisements was qualified by the following small print:

根據 *Speedtest.net* 於 2011 年 2 月發佈的測試結果。  
 (“Disclaimer 3”)

### *Poster on a wall inside the Tsuen Wan MTR station*

8. The Fastest Claim and the 1.7 Times Faster Claim also appeared in a poster on a wall inside the Tsuen Wan MTR station (photo at **Appendix A(3)**). The two claims were qualified by Disclaimer 1 and Disclaimer 2 respectively.

### *Retail outlets*

9. The 1.7 Times Faster Claim was displayed on the glass walls of, or inside, CSL’s retail outlets in Kwun Tong, Mongkok, Tseung Kwan O, Sham Shui Po, and Tsuen Wan (photos at **Appendix A(4)**).

### *CSL's customer bills*

10. A copy of a bill CSL issued to its customer was provided by the complainant. The last page of the bill (at **Appendix A(5)**) contained in English the Fastest Claim and the 1.7 Times Faster Claim in the following wording:

*Go online with the fastest mobile broadband in HK...*

*... you can enjoy the fastest mobile broadband with speed 1.7 times faster than other operators in HK...*

### *Promotional inserts*

11. A promotional insert targeting specific credit cardholders (“promotional insert”) (at **Appendix A(6)**) was also provided by the complainant. The promotional insert promoted the offers of CSL's 1010 brand. The opening line of the first paragraph and the bottom of the promotional insert contained the Fastest Claim, that 1010 was “*the fastest mobile broadband in Asia Pacific*”.

### **The Complainant's Allegations**

12. The complainant alleged that the Fastest Claim and the 1.7 Times Faster Claim were false statements and were not substantiated. The complainant considered that, although CSL tried to substantiate its claims by reference to Speedtest.net<sup>1</sup> test results referred to in the disclaimers in some of the Promotional Materials, the test results were not sufficient or robust enough for substantiation purpose. The complainant also considered that the test results for the month of February 2011 referred to by CSL were out of date for the promotional period (i.e. April to July 2011). The complainant submitted the

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<sup>1</sup> Speedtest.net at [www.speedtest.net](http://www.speedtest.net) is a broadband testing and analysis tool provided by a third party test agency for users around the world to test the performance of their Internet connection. The data collected by Speedtest.net are used for compiling the global broadband statistics Net Index, which is published at [www.netindex.com](http://www.netindex.com).

test results from Speedtest.net for May to June 2011 to show that CSL was not even the fastest mobile network in Hong Kong at that time, let alone 1.7 times faster than others. Further, the complainant claimed that CSL had not qualified its claims in some of the Promotional Materials, such as those claims appearing in the retail outlets (**Appendix A(4)**), customer bill (**Appendix A(5)**), and promotional insert (**Appendix A(6)**).

## THE INITIAL ENQUIRY

13. The former OFTA reviewed the complainant's allegations and the Promotional Materials and noted that in addition to the Fastest Claim and the 1.7 Times Faster Claim, CSL had also made claims in the following cases that its speed was the fastest in specified districts ("District Speed Claims"):

- (a) A phrase appearing prominently on a poster on a wall inside the Tsuen Wan MTR station (**Appendix A(3)**):

荃灣  
one2free 最快!

- (b) A phrase appearing prominently on each of the glass walls of, or inside, CSL's retail outlets in Kwun Tong, Mongkok, Tseung Kwan O, Sham Shui Po, and Tsuen Wan<sup>2</sup> (**Appendix A(4)**):

觀塘[油尖旺/將軍澳/深水埗/荃灣]上網我最快

14. On 11 July, 10 August and 17 October 2011, CSL was invited to comment on the complainant's allegations and our observations set out in the preceding paragraph.

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<sup>2</sup> According to the photos provided by the complainant, the former OFTA was not able to observe at the time that the District Speed Claim was displayed on the glass wall of CSL's retail outlet in Tsuen Wan. CSL's submissions of 24 August 2011 revealed that CSL's retail outlet in Tsuen Wan in fact had displayed the District Speed Claim.

### **Information Provided by CSL**

15. CSL provided comments on the complaint with supporting documents vide its letters of 24 August and 15 November 2011.

#### *Test results from a Third Party Test Agency*

16. CSL submitted that the claims it made in the Promotional Materials were fully supported by the tests conducted by a third party test agency (“test agency”). According to CSL, the test agency provided broadband speed testing application for both fixed and mobile broadband users at Speedtest.net ([www.speedtest.net](http://www.speedtest.net)). Based on the tests done by the broadband users at Speedtest.net, the test agency created Net Index ([www.netindex.com](http://www.netindex.com)) to compare both the download and upload speeds of different broadband service providers in different countries. CSL asserted that the tests results from the test agency were robust enough for making comparative claims. CSL claimed that the test agency was the global leader in broadband connection testing and web-based network diagnostic applications, and that the test agency’s solutions had been widely recognised by governments, universities and private enterprises worldwide. CSL claimed that broadband users in Hong Kong were generally aware of Speedtest.net as a platform for testing the performance of broadband connections. Speedtest.net in fact was commonly used by local media as an independent testing platform for making speed comparisons of Internet service providers.

#### *The Fastest Claim*

17. In relation to the Fastest Claim, CSL provided some media clippings reporting on the test results published by the test agency in February 2011.<sup>3</sup> The results included “*every wireless carrier in the world where more*

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<sup>3</sup> The media clippings are available at :  
<http://betanews.com/2011/02/18/look-no-further-the-world-s-fastest-iphones-are-in-israel/>  
<http://www.inewstimes.com/israel-has-the-worlds-fastest-iphones-ookla-results-show/1032/>  
<http://www.scivista.com/content/israel%E2%80%99s-pelephone-offers-fastest-iphone-7812404.html>  
<http://technology.ezinemark.com/israels-pelephone-offers-fastest-iphone-7d2d658d51ea.html>

*than 100 users tested their iPhone speeds*". According to the test results, CSL offered the third fastest average speed among all wireless carriers in the world, after Israel's Pelephone and Austria's A1. CSL therefore considered that it had the fastest average iPhone connection speed in the Asia Pacific region. The Fastest Claim made in various promotional materials was qualified by the disclaimers which referred to the results of the tests.

18. CSL mentioned that it launched the LTE/DC-HSPA+ network on 25 November 2010. LTE is the next generation of mobile broadband networks and dramatically increases capacity and speed, providing peak downlink speeds of 100 Mbps with low latency. At the relevant time, no operator other than CSL was offering 4G or LTE services in Hong Kong. CSL had conducted drive tests in all major roads in Hong Kong in July and August 2011. The results showed that CSL's LTE network provided the fastest download speed and was at least 1.7 times faster than those of other mobile operators' networks in Hong Kong. Hence, CSL argued that from a technology perspective and as a matter of fact, the speed of CSL's LTE network was faster than those of the other mobile operators in Hong Kong.

#### *The 1.7 Times Faster Claim*

19. CSL submitted that the 1.7 Times Faster Claim was supported by the Net Index for Hong Kong for the period between 30 January 2011 and 28 February 2011. CSL provided information obtained from Net Index showing that, among the four 3G operators in Hong Kong,<sup>4</sup> CSL's download speed was 1.63 times faster, and its upload speed was 1.84 times faster, than that of the second fastest operator in the respective categories during the period. By averaging the download and upload ratios (i.e. 1.63 and 1.84 times), CSL claimed that its speed was 1.74 times faster than those of the other 3G operators in Hong Kong. CSL did not mention in the Promotional Materials that the 1.7 Times Faster Claim referred to the average of the download and upload speeds because CSL considered that it should be generally understood that speed

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<sup>4</sup> Namely CSL Limited, Hutchison Telephone Company Limited, SmarTone Mobile Communications Limited and Hong Kong Telecommunications (HKT) Limited.



should refer to both download and upload speeds.

20. The information provided by CSL included the Download Index obtained from Net Index for the category “Hong Kong, Hong Kong” covering the period between 30 January 2011 and 28 February 2011, which showed the test results of the download speeds of local fixed and mobile operators during the period. For upload speed, CSL did not provide the equivalent Upload Index from Net Index’s website covering the same period. Instead, CSL obtained the upload speed comparison results for the period from the test agency’s source data.<sup>5</sup>

21. The former OFTA noted from Net Index’s website that for both Download Index and Upload Index, there were two sets of indices which were attributed to Hong Kong, one was “Hong Kong, Hong Kong” and the other was “Kowloon, Hong Kong”. In response to our query, CSL explained that the name of the index did not represent the location of the mobile user conducting the speed test, but rather the registered location of the mobile operator’s IP address assigned to the mobile user. CSL stated that the source data retrieved from Net Index’s website for “Kowloon, Hong Kong” for the period between 30 January 2011 and 28 February 2011 showed that among the four 3G mobile operators in Hong Kong, only Operator A was listed in the Net Index for “Kowloon, Hong Kong”.<sup>6</sup>

22. CSL compared its speed performance under “Hong Kong, Hong Kong” with Operator A’s speed performance under “Kowloon, Hong Kong” during the period between 30 January 2011 and 28 February 2011. The results showed that CSL’s download speed was at least 1.72 times faster, and upload

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<sup>5</sup> CSL explained that the Net Index graph was updated daily on [www.netindex.com](http://www.netindex.com) on a rolling basis. At the time, CSL only captured the Download Index for the period of 30 January 2011 to 28 February 2011, but not the Upload Index. Nevertheless, the test agency allowed users to download the Net Index (including both the Download and Upload Index) back to January 2008 from its website at <http://www.netindex.com/source-data/>. The figures of the upload speed of the mobile operators for the same period as provided by CSL were directly extracted and quoted from the test agency’s source data. CSL claimed that it had not altered or manipulated the source data.

<sup>6</sup> According to CSL, the Net Index only showed the top 25 ISPs (including both fixed and mobile operators) and the ISP ranking required at least 100 unique IP addresses for a given ISP. The test results which failed to meet these criteria would not be included in the Net Index.

speed was at least 2.26 times faster than that of Operator A. CSL claimed that “[a]s most of the test results for all 3G operators came from the Net Index for “Hong Kong, Hong Kong”, it was a good representative of the speed test results for the whole territory of Hong Kong”.<sup>7</sup>

23. CSL considered that the number of tests conducted between 30 January 2011 and 28 February 2011 was of a very large size, namely 121,816 test results from a total of 4,554,650 tests with 739,733 IP addresses as stated in Disclaimer 2, and was therefore sufficient to make the comparative claims.

24. CSL also commented that the period of tests (i.e. February 2011) had been clearly stated in the Disclaimers. CSL considered that the test results conducted in February 2011 were not outdated during the promotion period of April to July 2011. CSL also claimed that based on the raw data purchased from the test agency for the test results for March and April 2011, CSL’s download speed remained at least 1.7 times faster than that of any of the other 3G operators in Hong Kong. CSL had also purchased the raw data from the test agency for the test results for May to July 2011, and observed that there were some irregularities and/or manipulations of the test results of certain 3G operators during that period. After excluding the irregularities and/or manipulations during the period of concern as identified by CSL, CSL claimed that its download speed between May and July 2011 was still at least 1.7 times faster than those of the other mobile operators.

#### *District Speed Claims*

25. CSL submitted that the District Speed Claims were substantiated by the following evidence which should be considered as a whole and should not be treated in isolation:

- (a) The test agency’s test results for the period between 30 January 2011 and 28 February 2011 proved that CSL’s speed was 1.7 times faster than those of the other 3G operators in Hong Kong;

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<sup>7</sup> Operator A’s speed performance also featured in the Net Index under “Hong Kong, Hong Kong”.

- (b) The speed tests conducted by PC Market magazine (Issue 955, 15 November 2011, at **Appendix B**) using iPhone 4S at nine different locations (Kwun Tong, Mongkok, Tsimshatsui, Central, Causeway Bay, Tai Koo, Shatin, Yuen Long and the airport) demonstrated that, among the three mobile operators whose networks were tested,<sup>8</sup> CSL attained the fastest average download speed at all the nine locations, and the fastest average upload speed at eight out of the nine locations (except Tsimshatsui); and
- (c) CSL launched the LTE/DC-HSPA+ network on 25 November 2010. At the relevant time, no operator other than CSL was offering 4G or LTE services in Hong Kong. From a technology perspective and according to the speed tests conducted by the media and CSL, the speed of CSL was faster than that of any other 3G operators in Hong Kong.

*Omission of disclaimer*

26. Regarding the complainant's allegation that there was no disclaimer to qualify the claims displayed at the retail outlets, customer bill and the promotional insert, CSL advised that the following disclaimer was displayed at the bottom of the glass walls of all the retail outlets in question (namely Kwun Tong, Mongkok, Tseung Kwan O, Sham Shui Po, and Tsuen Wan):

*根據Speedtest.net於2011年1月30日至2011年2月28日期間所進行的香港流動寬頻網絡速度測試的結果。*  
(“Disclaimer 4”)

CSL provided photos showing the speed claim and the disclaimer displayed at the glass walls of the retail outlets in question, except for the Mongkok outlet, which was closed in mid-June 2011 and had since been relocated to a new location in Mongkok (at **Appendix C**).

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<sup>8</sup> 3HK (i.e. Hutchison Telephone Company Limited), one2free (CSL) and SmarTone.

27. Regarding the omission of any disclaimer in CSL's customer bill, CSL considered that there was little likelihood that customers would make purchase decisions based on a small piece of information provided in a customer bill. If they were interested in the product, they could check the capabilities of the product by visiting CSL's retail outlets. In any case, CSL claimed that the 1.7 Times Faster Claim contained in the customer bill was based on the test results of Speedtest.net in February 2011.

28. Regarding the promotional insert, CSL claimed that although the products and services referred to in the insert were partially provided by CSL, the insert belonged to and was sent to the cardholders by the credit card company concerned. CSL further explained that the main message of the insert was that the relevant cardholders could enjoy a wide range of iPhone bundle offers and handset specials from 1010. The claims "*acclaimed as the fastest mobile broadband in Asia Pacific*" and "*stay connected with 1010, the fastest mobile broadband in Asia Pacific*" were only designed to build brand awareness for 1010. A reasonable person would not treat the claims, that CSL was the fastest in Asia Pacific, seriously but would only treat them as puffery. In any case, CSL claimed that as a matter of fact, the speed of an LTE or 4G network was faster than that of a 3G network, and at the relevant time, no operator other than CSL was offering 4G or LTE services in Hong Kong.

## THE INVESTIGATION

29. The former OFTA examined the Promotional Materials taking into account the comments and information provided by CSL, and identified the following issues:

- (a) in relation to the 1.7 Times Faster Claim, CSL relied on the test results from Net Index for Hong Kong for the period between 30 January 2011 and 28 February 2011 to work out that CSL's download speed was 1.63 times faster than that of the second fastest operator. If the figure was to be rounded to the nearest tenth, the speed of CSL should be 1.6 times faster, rather than 1.7 times;

- (b) CSL had averaged the download speed of 1.63 and the upload speed of 1.84 times to reach a result of 1.7 times faster than that of the second fastest operator, without explaining what “1.7 times faster” meant in the 1.7 Times Faster Claim;
- (c) CSL only relied on the test results from “Hong Kong, Hong Kong” from Net Index without taking into account the test results from “Kowloon, Hong Kong”, which were also available from Net Index;
- (d) the lack of substantiation from CSL of the District Speed Claims; and
- (e) the lack of disclaimers by CSL qualifying the speed claims in customer bill and the promotional insert.

30. Taking into account these issues, the former Telecommunications Authority (“TA”) considered that there were reasonable grounds for him to suspect that there might be a breach of section 7M of the TO by CSL. Section 7M of the TO provides that:

*A licensee shall not engage in conduct which, in the opinion of the Authority, is misleading or deceptive in providing or acquiring telecommunications networks, systems, installations, customer equipment or services including (but not limited to) promoting, marketing or advertising the network, system, installation, customer equipment or service.*

31. On 21 February 2012, CSL was advised that an investigation into the complaint had commenced. CSL was requested to provide further information in relation to the complaint and to make representations that it wished the former TA to take into account in deciding on the matter.

## **CSL's Representations on 3 April 2012 and 5 December 2012**

32. CSL submitted its representations on 3 April 2012 and 5 December 2012. Key issues raised in CSL's representations are summarised in paragraphs 33 to 44.

### *Rounding of the figure "1.63"*

33. With regard to whether it was appropriate for CSL to round up the figure of 1.63 times to 1.7 times, CSL argued that there were different interpretations of rounding and no single definition was superior to the others. Rounding up 1.63 to the nearest tenth is 1.7 and rounding down 1.63 to the nearest tenth is 1.6. It was neither right nor wrong to round the figure to 1.6 or 1.7. It was merely a matter of adopting different rounding methods. CSL drew references to the charging method adopted for local and IDD calls, the method adopted by the Communications Authority ("CA") for calculating licence fee,<sup>9</sup> as well as Wikipedia<sup>10</sup> to show that different methods were adopted for rounding. CSL was of the view that it was correct and reasonable for it to round up the download speed of 1.63 times faster to the nearest tenth to 1.7.

### *Averaging the upload and download speeds*

34. CSL claimed that, from a customer experience's perspective, access speed should be a combination of both the upload and download speeds. Further, there was hardly any noticeable difference between "1.6 times faster" and "1.7 times faster" when customers enjoyed mobile broadband services.

35. CSL also argued that, given that the download speed was 1.7 (after rounding up) and the upload speed was 1.9 (after rounding up) times faster, it

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<sup>9</sup> CSL submitted that the concept of rounding up was common in the telecommunications industry. For example, local or IDD calls were commonly charged based on 1-minute incremental basis, i.e. rounding up to the nearest minute. If a customer made a local call with duration of 16 minutes and 3 seconds, it would be rounded up to 17 minutes. On the other hand, the CA adopted the method of rounding down for calculation of the licence fee payable for the frequency assigned to licensees. The spectrum in the 1.8GHz frequency band assigned to licensees was rounded down to 1GHz for the purpose of licence fee calculation.

<sup>10</sup> <http://en.wikipedia.org/wiki/Rounding>.

was not necessary to specify whether the 1.7 Times Faster Claim referred to the upload speed, download speed, or the average of the upload and download speeds. The 1.7 Times Faster Claim was valid in all three scenarios and was accurately qualified by Disclaimer 2.

*The Test Agency's Index*

36. On CSL's reliance on the test results from "Hong Kong, Hong Kong" from Net Index only without taking into account the test results from "Kowloon, Hong Kong", CSL claimed it was wrong to interpret that the test results from "Hong Kong, Hong Kong" index were confined to tests conducted in Hong Kong Island only. The test results in fact could represent the whole territory of Hong Kong. CSL reiterated that the name of the index (i.e. "Hong Kong, Hong Kong" and "Kowloon, Hong Kong") did not represent the location of the mobile users conducting the speed tests, but rather the registered location of the mobile operators' IP addresses. According to the test agency's source data, the number of tests conducted for CSL, Operator B and Operator C was zero for "Kowloon, Hong Kong" for the period between 30 January 2011 and 28 February 2011. If the "Hong Kong, Hong Kong" Index was confined to tests conducted in Hong Kong Island, it would mean that no single test was conducted for three out of four 3G operators in Kowloon during the period. CSL said that this could not be logically possible.

37. CSL reiterated that even if the test results for Operator A for "Kowloon, Hong Kong" were taken into account, the speed of CSL's service was still at least 1.7 times faster. Further, the number of tests conducted for Operator A for "Kowloon, Hong Kong" was only 402. It was a relatively small and insignificant number. CSL therefore claimed that although the index for "Kowloon, Hong Kong" was not mentioned in Disclaimer 2, the index for "Hong Kong, Hong Kong" accounted for the majority of tests conducted and was therefore representative of the entire territory of Hong Kong.

38. CSL advised that before launching the Promotional Materials, CSL had obtained from Net Index's website both the Download Index and Upload Index for "Hong Kong, Hong Kong" for the period between 30 January 2011

and 28 February 2011. However, CSL subsequently found that it only had a copy of the Download Index for the period, but not the Upload Index. As the index on the test agency's website was updated on a rolling basis showing the speed test results for the past 30 days, CSL could not retrospectively retrieve the Upload Index similar to the Download Index for the period from the website. However, CSL had purchased source data from the test agency, from which CSL extracted the upload speed test results for "Hong Kong, Hong Kong" for the period between 30 January 2011 and 28 February 2011, as well as the upload and download speed test results for "Kowloon, Hong Kong" for the same period.

39. CSL claimed that the representations made in the Promotional Materials were accurately qualified by the disclaimers appearing in the Promotional Materials for the following reasons:

- (a) The 1.7 times faster speed was calculated based on the index for "Hong Kong, Hong Kong" as stated in Disclaimer 2. As long as Disclaimer 2 was factually correct, there was no regulatory obligation requiring a licensee to expand the disclaimer to include all evidence or references supporting the claim; and
- (b) With reference to paragraph 3.16 of the "*Guidelines on Misleading or Deceptive Conduct in Hong Kong Telecommunications Markets*" issued on 21 May 2003 (the "Section 7M Guidelines"),<sup>11</sup> the requirement was that a disclaimer should not alter the principal message. In the present case, the speed of CSL's service was 1.7 times faster than those of the other 3G network operators regardless of whether only the data for "Hong Kong, Hong Kong" were used or the data for both "Hong Kong, Hong Kong" and "Kowloon, Hong Kong" were taken into consideration. The

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<sup>11</sup> [http://tel\\_archives.ofca.gov.hk/en/report-paper-guide/guidance-notes/gn\\_20030521.pdf](http://tel_archives.ofca.gov.hk/en/report-paper-guide/guidance-notes/gn_20030521.pdf). OFCA believes that CSL was specifically referring to the following statements in paragraph 3.16, "... whether fine print is misleading will depend on all the circumstances. Any terms and conditions in fine print should not significantly alter the principal message in the main text".



inclusion of the tests for “Kowloon, Hong Kong” would not disqualify or discredit the claim.

### *District Speed Claims*

40. With regard to the District Speed Claims, CSL reiterated that given that the speed of CSL’s service was 1.7 times faster than those of the other 3G operators for the whole of Hong Kong during the period between 30 January 2011 and 28 February 2011, it was reasonable for CSL to make the District Speed Claims. CSL referred to paragraph 3.3 of the Section 7M Guidelines which required licensees to have documentary evidence to substantiate a claim rather than to list out all the substantiations in the disclaimer.<sup>12</sup> CSL emphasised that the disclaimers in the Promotional Materials should not be treated in isolation, and a holistic approach should be taken by considering all the facts and documentary evidence provided by CSL, notably the fact that CSL launched the LTE/DC-HSPA + network on 25 November 2010. At the relevant time, no other operators had launched the 4G/LTE network in Hong Kong.

### *Omission of disclaimers in the customer bill and promotional insert*

41. As regards the omission of any disclaimer in CSL’s customer bill and the promotional insert, CSL claimed that the issue was whether the speed claims could be substantiated by documentary evidence, which CSL had produced for consideration, not whether there was a disclaimer in these materials.

42. With regard to the speed claim in the promotional insert, the former OFTA had specifically asked CSL whether it was CSL which provided the speed claim to the credit card company, or whether CSL had given consent to incorporate the speed claim into the promotional insert. CSL was unable to

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<sup>12</sup> Paragraph 3.3 of the Section 7M Guidelines provides that, “[w]hen promoting, marketing or advertising telecommunications products or services, licensee should always: be able to substantiate any claims made – licensees should hold documentary evidence to prove claims, whether direct or implied, that are capable of objective substantiation...”.

ascertain whether CSL had provided consent to incorporate the speed claim into the promotional insert as the employee who was responsible for this programme had already left the company's employ. However, CSL presumed that it had discussed with the credit card company about the promotional programme.

#### *CSL's representations on 5 December 2012*

43. As the Office of the Communications Authority ("OFCA") was reviewing this case, including the representations of CSL made in its letter of 3 April 2012, it noted from the Download Index provided by CSL for "Hong Kong, Hong Kong" between the period 30 January 2011 and 28 February 2011 that the reported download speed of Operator D was significantly faster than the reported download speeds of each of the four 3G operators, including CSL. As CSL alleged that the 1.7 Times Faster Claim was substantiated by the Net Index for "Hong Kong, Hong Kong" between the period 30 January 2011 and 28 February 2011, there was a question as to whether the claim was valid in the light of the reported download speed of Operator D. On 16 November 2012, OFCA requested CSL to clarify the matter.

44. CSL replied to OFCA's query on 5 December 2012, explaining that at the time, it was widely known in the market that Operator D did not provide any 3G services, but only offered 2.75G or EDGE data services, the network speed of which was significantly slower than that of 3G services. Operator D only launched its 3G services and 4G services in December 2011 and April 2012 respectively. Hence CSL considered it logical and reasonable not to include the speeds of Operator D in the comparison of download and upload speeds for the period between 30 January 2011 and 28 February 2011.

#### **CSL's Further Representations on 19 July 2013 and 26 July 2013**

45. In June 2013, OFCA sent a copy of the CA's Provisional Decision to CSL and invited it to submit its further representations by 24 June 2013. The CA's provisional view was that CSL was in breach of section 7M of the TO in respect of the 1.7 Times Faster Claim and the District Speed Claims. Having sought extension of deadline to prepare its submission, on 19 July 2013, CSL

submitted its further representations. On 26 July 2013, CSL clarified certain points in relation to its representations as requested by OFCA, as well as supplied further information as part of its representations.

### *Keeping records of test results*

46. With reference to the comment made in the Provisional Decision, that CSL had not kept proper records of the speed test results on which it relied to make the 1.7 Times Faster Claim,<sup>13</sup> CSL submitted that the CA and OFCA appeared to have a wrong perception that CSL purchased source data from the test agency only after the former OFTA had requested CSL to provide substantiation of its 1.7 Times Faster Claim. CSL further submitted that whether the evidence was in the form of source data and/or Net Index was not important so long as the relevant evidence had been kept to substantiate its claim. In its clarification of 26 July 2013, CSL confirmed that it used the Upload and Download Indices of Net Index to arrive at the 1.7 Times Faster Claim. CSL also clarified that it purchased the source data of the Upload and Download Indices from the test agency in March 2011, a few months prior to receiving the enquiry letter from the former OFTA on 11 July 2011.

### *The 1.7 Times Faster Claim*

47. CSL did not agree with the CA's provisional view that it had engaged in misleading or deceptive conduct in making the 1.7 Times Faster Claim. CSL submitted that the figure of 1.7 was calculated based on the test results released by Speedtest.net in respect of the four mobile broadband network operators in Hong Kong at the relevant time, and that the speed ratio of

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<sup>13</sup> The comment of OFCA in the Provisional Decision was made on the basis of CSL's submission that the 1.7 Times Faster Claim was supported by the Upload and Download Indices of Net Index for "Hong Kong, Hong Kong" for the period between 30 January 2011 and 28 February 2011, yet CSL had only kept a copy of the Download Index from Net Index's website but not a copy of the Upload Index. Upon reviewing the submissions made by CSL, OFCA was given the impression that CSL had to purchase the upload source data from Net Index and work out from there the test results for various mobile networks' upload performance when it was requested by the former OFTA to provide substantiation of its 1.7 Times Faster Claim.

1.7 was obtained simply by dividing CSL's network speed by the next highest network speed. CSL considered that this was simple and basic mathematics which did not warrant any further explanation in the disclaimers. Given that it did not alter or tamper with the test results nor did it include test results other than those of Speedtest.net in reaching the 1.7 times conclusion, CSL submitted that the figure of 1.7 was obtained *directly* based on Speedtest.net.

48. Regarding the assessment in the Provisional Decision that the non-disclosure of its processing of data and exercising of discretion were misleading or deceptive to a reasonable person, CSL considered that such non-disclosure was not material to such an extent that would affect the purchase decision of a reasonable person. CSL further pointed out that:

- (a) Regarding the discretion of taking into account only the test results for "Hong Kong, Hong Kong" but excluding those of "Kowloon, Hong Kong", CSL considered that the disclosure or non-disclosure in Disclaimers 2 and 4 of the speed performance of Operator A obtained from the "Kowloon, Hong Kong" Index did not alter the fact that CSL's speed was 1.7 times faster. CSL submitted that the essence was whether it could substantiate the 1.7 Times Faster Claim based on Disclaimers 2 and 4, but not whether it could include all evidence to substantiate its claim in the disclaimers. Otherwise, [the burden] would be onerous and unreasonable;
- (b) On the calculation of the figure 1.7, CSL submitted that it failed to understand and the CA failed to explain how the non-disclosure of adopting a certain calculation methodology in reaching the figure would make any material difference and affect potential customers' purchase decision;
- (c) On applying a rounding method, CSL claimed that the 1.7 Faster Times Claim was initially calculated based on the average of the respective download and upload speed ratios of 1.63 and 1.74. That CSL raised the concept of rounding subsequently was to provide an alternative explanation as to how the figure of 1.7 could

also be deduced in the event that the averaging approach was not accepted by OFCA. CSL considered that it was unfair for the CA to count twice on the discretions used in the calculation of the figure of 1.7, i.e. averaging the speed and applying a rounding up method; and

- (d) On excluding Operator D's test results, CSL argued that the Promotional Materials referred to "mobile broadband networks". With the prevalence of 3G services and the launch of 4G services at the time, a reasonable person would expect that mobile broadband networks referred to networks capable of supporting 3G or 4G services, and as such it was reasonable and logical to exclude the test results of Operator D because it was only capable of offering 2.75G services at the time. CSL further submitted that a reasonable person would not expect a reasonable mobile broadband operator to take into account irrelevant considerations and list such irrelevant considerations in the disclaimer.

### *District Speed Claims*

49. CSL did not agree that the District Speed Claims were in breach of section 7M of the TO, and reiterated that it was the only mobile operator who had launched a 4G/LTE network in Hong Kong at the relevant time. CSL further submitted that its 4G/LTE coverage was over [X] % of the Hong Kong population, and provided an LTE coverage report in substantiation. The report provided by CSL presented the calculated LTE network coverage of CSL as of 31 August 2011 by simulation. Relying on this report, CSL claimed that its 4G/LTE coverage was over [X] % of the population, basically covering all districts in Hong Kong. The areas that were not covered were mainly in remote locations. Based on the coverage information and some related technical specifications, CSL further calculated the minimum download speed that its 4G/LTE network could attain in the areas with 4G/LTE coverage was 5.7388 Mbps, which was faster than the download speeds of the other local mobile operators (namely Operators A, B and C) as presented in the Download Index of

Net Index for the period between 30 January 2011 and 28 February 2011. CSL argued that the District Speed Claims were therefore substantiated.

## **OFCA'S ASSESSMENT**

50. Having considered the available evidence and taken into account the representations made by CSL, OFCA's assessment is set out in paragraphs 51 to 86 below.

### **The Test Agency's Test Results**

51. In the present case, CSL made reference to the test results of the test agency in support of its speed claims. As OFCA understands it, the test agency operates the website Speedtest.net, which is widely used by fixed and mobile users around the world to test the speed of their fixed or mobile broadband services. In the course of operating the website, the test agency acquires a huge amount of speed test data. The test agency analyses these data and publishes the results in Net Index, which is updated daily on a rolling basis. The test agency may also announce any test results as and when it sees fit. While OFCA has no view on the test results published by the test agency in Net Index or released by it from time to time, OFCA is concerned with how the test results were interpreted and applied by CSL, in support of the specific representations it made with regard to the speed of its services, which were under complaint.

### **The Fastest Claim**

52. The Fastest Claim, in different variations appearing in different media platforms (namely newspaper advertisements, online advertisements, poster on a wall inside the Tsuen Wan MTR station, CSL's customer bill and promotional insert) between March and July 2011,<sup>14</sup> conveyed the message that

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<sup>14</sup> According to CSL's representations dated 3 April 2012, the newspapers advertisements first appeared in mid-March 2011 and the whole publicity campaign ended in July 2011.

CSL was the fastest mobile broadband network in Hong Kong and/or Asia Pacific. The Fastest Claim appearing in newspapers advertisements and poster on a wall inside the Tsuen Wan MTR station was qualified by Disclaimer 1, and that appearing in online advertisements was qualified by Disclaimer 3, which was a shorter version of Disclaimer 1. Both disclaimers referred to the test results released by Speedtest.net in February 2011. The Fastest Claim appearing in the customer bill and promotional insert was not subject to any qualification.

53. CSL did not have the original speed test results from Speedtest.net. CSL could only provide media reports on the speed test results. According to these media reports, which were published between 18 and 22 February 2011, the Speedtest.net test results listed all the 104 wireless carriers in the world, each of which had more than 100 users having tested their iPhone's connection speeds. Among them, CSL was ranked third in terms of speed, coming after Pelephone of Israel and A1 of Austria. Relying on these media reports, CSL argued that it was entitled to claim that it had the fastest mobile broadband network in Hong Kong and in Asia Pacific.

54. The Section 7M Guidelines provide that *“when promoting, marketing or advertising telecommunications products or services, licensees should always be able to substantiate any claims made – licensees should hold documentary evidence to prove claims, where direct or implied, that are capable of objective substantiation”*.<sup>15</sup> In respect of comparative advertising, which applies to this case as CSL claimed to have the “fastest” mobile broadband network, the Section 7M Guidelines specifically provide that it is misleading or deceptive to make comparative performance claims that cannot be substantiated.<sup>16</sup> Whilst the Section 7M Guidelines do not specify that the substantiation would need to be disclosed together with the claim, the

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<sup>15</sup> Paragraph 3.3.

<sup>16</sup> Paragraph 3.25 of the Section 7M Guidelines reads: *“It is also misleading or deceptive to make comparative performance claims that cannot be substantiated; or if there is no reasonable basis for differentiating between products or services in the way claimed. For example, where mobile phone coverage is ubiquitous, it would be misleading to claim one licensee’s products or services performed better in coverage terms than another licensee. The claim should only be made when such differences can be verified with reference to independent studies or surveys”*.

information published should nonetheless be current, and the basis for comparison should be provided, with relevant restrictions disclosed.<sup>17</sup>

55. Having regard to the guidance provided in the Section 7M Guidelines, it is regrettable that CSL did not have in its possession a copy of the Speedtest.net tests results released in February 2011 to provide substantiation to its claim. Since CSL relied on the test results of Speedtest.net, OFCA would expect that an experienced operator like CSL would keep copies of the test results handy as substantiation if called upon to do so. That said, OFCA notes that all four media reports published in February 2011 and supplied by CSL gave an identical account in substance that, according to results released by Speedtest.net, CSL was ranked third in the speed tests conducted by users of iPhone worldwide. On that basis, OFCA considers it acceptable for CSL to claim that by relying on the Speedtest.net results released in February 2011, it had the fastest mobile broadband network in Hong Kong and Asia Pacific.

56. The Fastest Claim appearing in newspapers advertisements and poster on a wall inside the Tsuen Wan MTR station was qualified by Disclaimer 1, and the claim in online advertisements was qualified by Disclaimer 3. As both disclaimers referred to the test results released by Speedtest.net in February 2011, OFCA considers that CSL had provided reference to the basis for comparison, and the information was sufficiently current, with the date of the results disclosed. Adopting the reasonable person test, OFCA considers that those who noticed the advertisements would likely have an impression that CSL was claiming to have the fastest mobile broadband network in Hong Kong and Asia Pacific by reference to the Speedtest.net results released in February 2011 only, and such claim would be constrained by any limitations that the results themselves might be subject to. It was unlikely that those who noticed the advertisements would consider that CSL was claiming to have the fastest mobile broadband network at all times or in an absolute sense. On this basis, **OFCA does not consider that the Fastest Claim appearing in newspapers**

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<sup>17</sup> Paragraph 3.26 of the Section 7M Guidelines reads: “Comparative advertising should typically only refer to special offers if the period and any applicable conditions are clearly expressed. Information in comparative advertising published by licensees should be current, the basis for comparative price claims should be provided and any time or geographic restrictions should be disclosed”.



**advertisements, poster on a wall inside the Tsuen Wan MTR station and online advertisements was misleading or deceptive in breach of section 7M of the TO.**

57. The Fastest Claim appearing in CSL's customer bill and the promotional insert, unlike that appearing in other media platforms, were not qualified by any disclaimers. This is a subject of complaint. OFCA considers that the Fastest Claim in CSL's customer bill and the promotional insert should be viewed in a different context from that appearing in other media platforms.

58. In respect of the Fastest Claim appearing in those media platforms like newspaper advertisements, poster on a wall inside the Tsuen Wan MTR station and online advertisements, the claim was the prominent message promoting specific mobile data service plans ("Pocket Wi-Fi" service, "Tablet Data" service) of CSL. The overall impression that one would get from seeing these advertisements was that "speed", or CSL's speed being the fastest among mobile operators in Hong Kong, was the most important feature in these advertisements in promoting the specific service plans. Those who noticed the advertisements would likely attach importance to the speed claim in making their purchase decisions. As such, it is important that CSL should provide reference to the basis for comparison in these advertisements.

59. In respect of CSL's customer bill, the Fastest Claim appeared on the last page of the bill, after the billing information presented on the preceding three pages. It is doubtful if an average customer would in general notice promotional messages appearing at the very end of a customer bill, let alone read them in detail. Also, the Fastest Claim was not displayed as a prominent message. A customer who noticed the claim printed in the statement would likely attach much less importance to it than a customer who saw the claim in the newspaper advertisement. Given that Fastest Claim was able to be substantiated by the Speedtest.net results released in February 2011, and the context in which the Fastest Claim appeared in the customer bill, **OFCA does not consider that the lack of a disclaimer in the customer bill providing reference to the basis for the speed comparison was misleading or**

**deceptive in breach of section 7M of the TO.**

60. As for the promotional insert, the most prominent message was “*The most desiderated gadgets now available at 1010*”. The insert informed the recipients of various “*iPhone Bundle Offers*”, “*Handset Specials*” and “*Exceptional Savings*” available to them. The speed of the service of the 1010 was not specifically highlighted. **Viewing the promotional insert as a whole, OFCA does not consider that the lack of a disclaimer in the promotional insert providing reference to the basis for the speed comparison was misleading or deceptive in breach of section 7M of the TO.**

61. Notwithstanding the above, OFCA considers that it would have been a much better marketing practice if CSL were to include also the disclaimer in the customer bill and promotional insert, in order to provide as much relevant information to consumers as possible in relation to its speed claim.

62. In support of the Fastest Claim, CSL submitted that it was the only network that launched the LTE/DC-HSPA+ network at the time providing 4G services. OFCA does not consider that such information was relevant. Indeed, CSL specifically referred to the Speedtest.net test results released in February 2011 in the advertisements in question to support the Fastest Claim. OFCA further notes that the tests were conducted by iPhone users. At the time, none of the iPhone models supported LTE/DC-HSPA+ and hence the Speedtest.net test results at the relevant time (which was made reference to by CSL) had really nothing to do with the LTE/DC-HSPA+ services then provided by CSL.

**The 1.7 Times Faster Claim**

63. The 1.7 Times Faster Claim appeared in newspaper advertisements, poster on a wall inside the Tsuen Wan MTR station, on the glass walls of, or inside CSL’s retail outlets in Kwun Tong, Mongkok, Tseung Kwan O, Sham Shui Po, Tsuen Wan, and CSL’s customer bill between March and July 2011. The 1.7 Times Faster Claim appearing in newspaper advertisements and poster

on a wall inside the Tsuen Wan MTR station was qualified by Disclaimer 2, and that appearing on the glass walls of, or inside CSL's retail shops was qualified by Disclaimer 4, which was a shorter version of Disclaimer 2. The 1.7 Times Faster Claim appearing in the customer bill was not subject to any qualification.

64. The 1.7 Times Faster Claim appeared together with the Fastest Claim in the newspaper advertisements. The 1.7 Times Faster Claim effectively elaborated on what CSL meant by providing the fastest mobile broadband services in Hong Kong. As for the poster on a wall inside the Tsuen Wan MTR station, the 1.7 Times Faster Claim appeared together with both the Fastest Claim and the District Speed Claim. In respect of the 1.7 Times Faster Claim appearing on the glass walls of, or inside CSL's retail shops, it appeared together with the District Speed Claim only. In the customer bill, the 1.7 Times Faster Claim appeared together with the Fastest Claim only.

#### *Keeping records of test results*

65. CSL submitted that the 1.7 Times Faster Claim was calculated based on the Upload and Download Indices of Net Index for "Hong Kong, Hong Kong" for the period between 30 January 2011 and 28 February 2011. However, it had only kept a copy of the Download Index from Net Index's website but not a copy of the corresponding Upload Index. As a result, CSL had to purchase the upload source data from the test agency so as to substantiate its claim when needed. OFCA notes from CSL's representation made on 26 July 2013 that it had in fact purchased the upload source data from the test agency (which was the raw data from which the test results as presented in the Upload Index were worked out) back in March 2011, i.e. about the time when CSL launched the Promotional Materials. In the circumstances, OFCA is satisfied that CSL did maintain documentary evidence to substantiate its marketing claims in the present case. In so far as maintaining good marketing practices are concerned, OFCA would advise operators to strive to maintain the original source data upon which the claim is made, as it may not always be possible for them to acquire or purchase those data through the same or alternative means after a marketing claim has been made, in order to support or substantiate its claim.

*Exercising discretion in interpreting the test results*

66. CSL claimed that the 1.7 Times Faster Claim was fully supported by the test results conducted by the test agency. OFCA however notes from CSL's representations that it had exercised discretion in interpreting the test results produced by Speedtest.net in arriving at the "1.7 Times Faster" conclusion. These discretions include (a) taking into account only the test results for "Hong Kong, Hong Kong" between 30 January 2011 and 28 February 2011 but excluding those for "Kowloon, Hong Kong" for the same period (paragraphs 20 to 22 and 36 to 39); (b) applying a round up method (paragraph 33); (c) averaging the upload and download speeds (paragraphs 19 and 34 to 35); and (d) excluding the test results of Operator D reported in the Download Index for "Hong Kong, Hong Kong" between 30 January 2011 and 28 February 2011 (paragraphs 43 to 44).

67. On (a), regarding CSL taking into account only the test results for the "Hong Kong, Hong Kong" Index but not the "Kowloon, Hong Kong" Index during the relevant period, OFCA considers that the "Kowloon, Hong Kong" Index was relevant given that it also captured the test results of Hong Kong mobile users. Nonetheless, OFCA notes from CSL's submission that according to the raw data from Net Index, at the relevant time, only Operator A was listed in the Net Index for "Kowloon, Hong Kong" and the speed performance of CSL was at least 1.72 times faster in the download direction, and 2.26 times faster in the upload direction, than the speed performance of Operator A. As such, on the particular facts of this case, given that the speed performance of Operator A in the "Kowloon, Hong Kong" Index happened to be at least 1.7 times slower than that of CSL in both the download and upload directions, OFCA takes no issue on CSL not taking into account the "Kowloon, Hong Kong" Index in its calculations in making the 1.7 Times Faster Claim.

68. On (b), in respect of CSL's rounding up of the figure "1.63", OFCA is of the view that a reasonable person would not expect the digit "3" in the second decimal place, which was smaller than "5", to be rounded "up". A reasonable person would more likely than not round the figure "1.63" down to

“1.6”. If CSL were to make presentation of the download speed on a standalone basis in the circumstances of the case, the presentation of it as “1.6 times faster” should be made rather than “1.7 times faster”.

69. On (c), in respect of the approach adopted by CSL of claiming “1.7 times faster” by averaging the figures of “1.63” (download direction) and “1.84” (upload direction), OFCA notes that the speed representation in the Promotional Materials was simply that CSL’s mobile broadband service was 1.7 times faster than those of the others. Adopting the reasonable person test, a person seeing the claim would interpret it to mean that the speed of CSL’s mobile broadband service was 1.7 times faster in *both* the download and upload directions. CSL should have made it known in the relevant representation that such an “averaging approach” was adopted and that the quoted figure was an averaged figure. Nonetheless, on the particular facts of this case, as the individual figures of both “1.63” and “1.84” happened to be very close to the averaged figure “1.7”, OFCA accepts that whether “1.63”, “1.84” or “1.7” had been quoted would probably not have made a material difference to a reasonable person.

70. On (d), on CSL exercising discretion to exclude Operator D’s test results in the Download Index for “Hong Kong, Hong Kong”, CSL’s explanation was that at the relevant time, Operator D did not provide any 3G or 4G services, but only offered 2.75G or EDGE data services to the market. CSL therefore argued that it was logical and reasonable not to include the test results of Operator D in the comparison. According to OFCA’s record, at the relevant time Operator D was holding spectrum which entitled it to provide 2G (up to 2.75G or EDGE services) and 4G services. Operator D only commercially launched its 4G data services using its 4G network in April 2012 and its 3G services as a mobile virtual network operator after April 2011. Therefore, OFCA accepts that between 30 January 2011 and 28 February 2011, Operator D was only able to offer up to 2.75G or EDGE services to the market. The download speed of 2.75G or EDGE services has a theoretical maximum speed of 473 kbps<sup>18</sup> and it could not technically reach the speed level that was

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<sup>18</sup> See a brief description of the EDGE technology at [http://en.wikipedia.org/wiki/Enhanced\\_Data\\_Rates\\_for\\_GSM\\_Evolution](http://en.wikipedia.org/wiki/Enhanced_Data_Rates_for_GSM_Evolution).

captured in the Download Index for “Hong Kong, Hong Kong” as attributable to Operator D. The fact that the test results of Operator D showed a higher speed than that of CSL might be due to testing by Operator D or whatever abnormality that existed in the test data of the test agency. Despite the fact that OFCA recognizes and accepts the reason behind CSL’s exclusion of the test results of Operator D, the exclusion does reflect a certain degree of discretion exercised by CSL in interpreting the test results which underpin the 1.7 Times Faster Claim which does not appear to be substantiated by any test results directly released by the test agency itself or any other independent third parties.

*Non-disclosure of CSL’s exercise of discretion in interpreting the test results*

71. In respect of this case, OFCA accepts that the data available from the third party test agency is factual data collected from the actual test performances of fixed and mobile network operators all over the world. Further, OFCA has considered each of the discretions (accounted in the previous paragraphs 67 to 70) that CSL had exercised in processing and analysing the data and found that the discretions, on the basis of the particular facts of this case, did not render the 1.7 Times Faster Claim itself materially false to a reasonable person. That notwithstanding, OFCA is concerned that such exercise of discretion or making of adjustments by CSL was not disclosed in the representations or associated qualifiers and disclaimers.

72. As CSL’s representations have revealed, the 1.7 Times Faster Claim was not based directly on the test results from Speedtest.net but was arrived at by CSL by its exercising the discretion to include certain data and exclude other data and by adopting a certain calculation methodology. The Download Index for “Hong Kong, Hong Kong” of Net Index for the period between 30 January 2011 and 28 February 2011 provided by CSL at **Appendix D** serves to illustrate this clearly. From the Download Index, it can be seen that the test results were presented in the following manner:

- (a) the test results were obtained by analysing test data between 30 January 2011 and 28 February 2011. Tests from 739,733 unique Internet Protocol addresses were taken and of the total tests of

4,554,650, 121,816 were used for the current index;

- (b) the index then named and ranked the top 25 Internet service providers (“ISPs”) (both fixed and mobile service providers were included) according to their download speed performances; and
- (c) the speed performances of the ISPs were presented in terms of the download speeds (Mbps) that they each achieved during the period.

73. The Net Index therefore did not compare the speed performances of the ISPs with each others’. As such, in order for CSL to make use of the data in the Net Index (both Upload and Download Indices) to arrive at the 1.7 Times Faster Claim, OFCA believes that CSL would have to take a number of steps, as follows :

- (a) choose to take into account the data presented in the Net Index for “Hong Kong, Hong Kong” only, but not those presented in the Net Index for “Kowloon, Hong Kong”;
- (b) extract the speed performances of the mobile operators from the list of ISPs for making calculations;
- (c) exclude the speed performance of the mobile operator which CSL considered to be irrelevant (i.e. test results of Operator D);
- (d) compare the speed of CSL with that of the mobile operator closest to it in performance and work out the ratio in respect of both the upload and download directions; and
- (e) average the upload and download performance ratios, or alternatively apply a rounding method.

74. Given that the 1.7 Times Faster Claim was arrived at after CSL had

processed the data in the Net Index following a number of steps, OFCA cannot agree with CSL's submission that the figure of 1.7 was obtained *directly* based on the test results released by the test agency.

75. The fact remains that CSL had not disclosed in the 1.7 Times Faster Claim or its associated disclaimers that it had processed the data provided in the Net Index and had exercised discretion in including or excluding certain data. Rather, the disclaimers that qualified the 1.7 Times Faster Claim, namely Disclaimer 2 and Disclaimer 4, stated explicitly that the claim was based on the test results from Speedtest.net on the speed of mobile broadband networks in Hong Kong between 30 January 2011 to 28 February 2011. The original texts in Chinese are set out below:

Disclaimer 2:

根據Speedtest.net測試結果。該項測試採用2011年1月30日至2011年2月28日期間所得的測試數據進行分析(由香港739,733個網絡通訊位址進行測試,測試次數合共4,554,650次,當中採用了121,816個測試結果)。

Disclaimer 4:

根據Speedtest.net於2011年1月30日至2011年2月28日期間所進行的香港流動寬頻網絡速度測試的結果。

76. Disclaimer 4 simply said the 1.7 Times Faster Claim was based on the test results from Speedtest.net for the relevant period. Disclaimer 2 elaborated this further by saying that the test results were based on the analysis conducted by Speedtest.net on certain test data collected during the period. Adopting the reasonable person test, OFCA considers that a potential customer, upon seeing Disclaimer 2 or Disclaimer 4, would have little idea that CSL had in fact further processed the test data in coming to the "1.7 Times Faster" conclusion, let alone the fact that CSL's own data processing had involved exercising discretion to include certain data and exclude other data, and to adopt a certain calculation methodology. On seeing the 1.7 Times Faster Claim together with Disclaimer 2 or Disclaimer 4, a reasonable person would likely be misled or deceived into believing that CSL was directly adopting the test results



compiled, analysed and released by a reputable independent third party, namely Speedtest.net, to make the claim, which was in fact not the case. There is little doubt that to a reasonable person, a claim made by an operator promoting its service will generally carry more weight, or be more credible, if the claim is attributed directly to the test or survey results of an independent third party. In this regard, whilst an operator is at liberty to conduct further processing of the test results of an independent third party and to rely on the processed results to make a claim, the fact that the data had been further processed should be disclosed to enable potential customers to determine the extent to which such claim can be relied upon in their consideration of their purchase decisions. OFCA cannot agree with CSL that the disclosure constitutes a burdensome requirement. For the present case, a simple statement making known the fact that the data of the independent third party had been further processed by CSL in arriving at the 1.7 Times Faster Claim would have been sufficient. It is not necessary to disclose all the steps taken or the calculations in the disclaimers.

77. In the present case, the Promotional Materials put heavy emphasis on the speed performance of CSL's network. The 1.7 Times Faster Claim would no doubt be impressive to the target audience, of the speed advantage of CSL's mobile broadband services, and would likely factor in in a reasonable person's purchase decision. This makes it all the more important for CSL to ensure that its speed claim was accurate, with the basis for comparison provided, and the fact that the data from the independent third party had been further processed by CSL disclosed. Taking into account the fact that Disclaimer 2 and Disclaimer 4 had failed to reveal that CSL had conducted its own processing on the data in reaching the conclusion about its speed claim, OFCA considers that the 1.7 Times Faster Claim was misleading or deceptive to a reasonable person.

78. As regards the 1.7 Times Faster Claim that appeared on the glass walls of or, inside CSL's retail outlets in Kwun Tong, Mongkok, Tseung Kwan O, Shum Shui Po and Tsuen Wan, OFCA notes that the 1.7 Times Faster Claim was prominently displayed on the glass walls in large fonts and marked in eye-catching colour, whilst Disclaimer 4 was shown at the bottom of the glass walls in very small print, which was hardly visible at all (at **Appendix C**). It is doubtful if any passerby who was attracted by the 1.7 Times Faster Claim

displayed prominently on the glass walls would have noticed at the same time the existence of Disclaimer 4 at all.

79. CSL also cited the launch of CSL's LTE/DC-HSPA+ network on 25 November 2010 as substantiation that its speed was at least 1.7 times faster than those of the other operators at the time. OFCA considers that this piece of information was irrelevant. The 1.7 Times Faster Claim was qualified by Disclaimer 2 and Disclaimer 4 which only made reference to the tests conducted at Speedtest.net during the relevant period.

80. In the response to the complainant's claim that the test results from Speedtest.net for the later months showed that CSL was not even the fastest mobile network in Hong Kong (paragraph 12), CSL had in its submissions provided data for the period and explained that those data should be further processed before they could be relied upon (paragraph 24). OFCA notes the explanation provided by CSL but considers that the data were not directly related to the consideration of the 1.7 Times Faster Claim, which was subject to Disclaimer 2 and Disclaimer 4 expressly making reference to the test results conducted between 30 January 2011 to 28 February 2011.

81. **In view of the considerations given above, and on the basis that CSL had failed to disclose that it had processed the test results from Speedtest.net, OFCA is of the view that the 1.7 Times Faster Claim appearing in various media platforms were misleading or deceptive in breach of section 7M of the TO.**

### **District Speed Claims**

82. The District Speed Claims appeared in the advertisement inside the Tsuen Wan MTR station and on the glass walls of, or inside CSL's retail outlets in Kwun Tong, Mongkok, Tseung Kwan O, Sham Shui Po and Tsuen Wan. The District Speed Claims were not subject to any qualification. CSL argued that the claims were supported by the test results of the Net Index for the period between 30 January 2011 and 28 February 2011, the speed tests conducted by

PC Market magazine (Issue 955, 15 November 2011), as well as the launch of CSL's LTE/DC-HSPA+ network on 25 November 2010.

83. OFCA considers that the test results of the Net Index for the period between 30 January 2011 and 28 February 2011 were not relevant as they did not provide any breakdown of the speed performance of individual 3G operators by districts. Technically speaking, it is commonly known that the speed of connection experienced by mobile users on the same network varies from one location to the other, as the performance of the network depends on a number of external factors like geographical environment, signal quality and the number of users at a particular location. It is not acceptable for CSL to argue that because it had the fastest mobile broadband network in the territory, it can then generalize the result and claim that it had the fastest mobile broadband service in individual districts in the territory. As for speed tests conducted by PC Market magazine, OFCA notes that the relevant issue of the magazine was published in November 2011. The test results cannot be used to support the claim made by CSL back in April to July 2011.<sup>19</sup> Furthermore, OFCA observed that the speed tests conducted by the magazine revealed that another operator provided a faster upload speed in Tsim Sha Tsui, thus contradicting CSL's claim that it provided the fastest internet access in the district of Yau Tsim Mong (paragraph 13(b)). As for CSL's claim that it was the only mobile network operator operating a 4G network at the relevant time, OFCA fails to see its relevance in proving that its mobile broadband speed was the fastest in the specified districts. Even though 4G technology used by CSL was superior to 2.5G/3G technologies employed by other mobile network operators at the relevant time in terms of the theoretical maximum transmission speed, a specific speed claim would have to be substantiated with supporting measurement data of user connections to the networks.

84. In respect of the report submitted by CSL on 26 July 2013 showing its calculation on its 4G/LTE coverage as of 31 August 2011, and relying on the report to demonstrate that the minimum download speed that its 4G/LTE

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<sup>19</sup> CSL stated in its representations dated 3 April 2012 that the District Speed Claim was displayed at CSL's retail outlets from the end of April 2011 to the end of July 2011, and the District Speed Claim appearing on the poster on a wall inside the Tsuen Wan MTR station was displayed between May 2011 and June 2011.

network could attain in the areas with 4G/LTE coverage was 5.7388 Mbps, which was faster than the download speeds of the other local mobile operators as presented in the Download Index of Net Index for the period between 30 January 2011 and 28 February 2011, OFCA does not consider that the report is relevant to substantiate the District Speed Claims for the following reasons:

- (a) the report showed CSL's calculation of its 4G/LTE network coverage as of 31 August 2011, which was a month after the publicity campaign ended at end July 2011;<sup>20</sup> and
- (b) the minimum download speed that its mobile network was able to support (i.e. 5.7388 Mbps) as of 31 August 2011 was but a computed result. It is not appropriate to compare this with the speed performances of the other local mobile operators as provided in the Download Index, which were actual measurement results recorded between 30 January 2011 and 28 February 2011. Put simply, the comparison is not like-for-like in terms of the nature of the speeds concerned (computation VS actual results) and the different periods covered.

85. Overall speaking, CSL is not able to produce any substantiation to show that at the relevant time, its mobile broadband speed was the fastest in the named districts, namely Kwun Tong, Yau Tsim Mong, Tseung Kwan O, Sham Shui Po and Tsuen Wan as claimed in the District Speed Claims.

86. **In view of the complete lack of substantiation in support of the District Speed Claims, OFCA considers that the claims were misleading or deceptive in breach of section 7M of the TO.**

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<sup>20</sup> See footnote 14.

## THE CA'S ASSESSMENT AND DECISION

87. After examining the facts of the case, the information and representations provided by the complainant and CSL, the CA affirms OFCA's assessment that CSL had engaged in misleading or deceptive conduct in breach of section 7M of the TO in relation to the 1.7 Times Faster Claim and the District Speed Claims. A financial penalty should be imposed.

88. This is the second occasion<sup>21</sup> on which a financial penalty is to be imposed on CSL under section 7M of the TO, and the maximum penalty stipulated by section 36C(3) of the TO is \$500,000. In considering the appropriate level of financial penalty in this case, the CA has had regard to the Guidelines on the Imposition of Financial Penalty issued under Section 36C of the TO (the "Penalty Guidelines"). Under the Penalty Guidelines, the CA is to consider the gravity of the breach (such as the nature and seriousness of the infringement, damage caused to third parties by the infringement, and duration of the infringement), whether the licensee under concern has previous records of similar infringements, and whether there are any aggravating and mitigating factors.

89. In considering the gravity of the breach and therefore the starting point for the level of penalty, the CA notes that speed performance is a key element of mobile broadband service, and comparative speed claims serve to differentiate the services between competing service providers, it is therefore important that comparative speed claims are properly substantiated and presented, with the basis for comparison provided and relevant limitations disclosed. The 1.7 Times Faster Claim and the District Speed Claims featured prominently in a high profile publicity campaign of CSL, which lasted for several months using various media platforms promoting the speed advantage of its mobile broadband services. The potential impact of the publicity campaign on the consumers is huge.

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<sup>21</sup> The first case of CSL's breach of section 7M of the TO (Case Ref. No.: T9/2010) is available at [http://tel\\_archives.ofca.gov.hk/en/ca\\_bd/case\\_closed/T9\\_10.pdf](http://tel_archives.ofca.gov.hk/en/ca_bd/case_closed/T9_10.pdf).

90. While considering that this was a substantive breach of section 7M, the CA has not found any previous record of similar infringement committed by CSL in relation to speed comparison. The former OFTA / OFCA had only received this industry complaint concerning the Promotional Materials. There was no consumer complaint. There is no evidence to suggest that a large number of consumers had been misled or deceived.

91. In consideration of the above, the CA is of the view that the appropriate starting point for determining the level of financial penalty is \$120,000.

92. On mitigating factors, the CA notes that CSL has been cooperative with the former OFTA and OFCA during the course of investigation.

93. The CA has not been able to establish any aggravating factors.

94. Having carefully considered the circumstances of the case and taking all factors into account, the CA concludes that in this case of the second occasion on which a financial penalty is imposed under section 7M of the TO on CSL, the penalty which is proportionate and reasonable in relation to the breach concerned is **\$90,000**.

**The Communications Authority**  
**September 2013**

one2free

隨身Wi-Fi  
分享one2free  
全港最快流動寬頻!

- one2free流動寬頻網絡，全港最快\*
- 快人1.7倍†
- 獨有UMTS 900網絡，最佳室內覆蓋\*
- 讓你發揮平板電腦及Wi-Fi裝置最強效能
- 下載速度高達7.2Mbps\*

想有速同享，就係咁簡單！



Powered by

銷售熱線：29 722 123    24小時網上專門店：[shop.one2free.com](http://shop.one2free.com)



**NEXT**

[illegible]





- **one2free** 平板電腦數據服務計劃，月費由\$87起\*，畀你極速釋放平板電腦最強效能
- **one2free** 流動寬頻網絡，全港最快#
- 快人1.7倍+
- 獨有UMTS 900網絡，最佳室內覆蓋°

Powered by

銷售熱線：29 722 123    24小時網上專門店：[shop.one2free.com](http://shop.one2free.com)

\*根據Spotify的數據,2011年2月整年的下載量,遠低於2010年每個星期加爾各答的測試版流行度。自超過100位用戶使用同一款新手機後,流行度才飆升。本報調查二台雜誌社聯合的約12月整度流行度,8月2次之加爾各答和孟買兩地,根據Spotify的數據,該兩地測試版2011年1月30至2月28日28天整度的流行度,分別為每星期73.73和73.73部電影,比流行度流行,測試版在2月,分別為1,554,552次,分別為12,116部電影結果)。在印度Coimbatore 2010年4月8日發行的電影測試版,本報調查流行度,分別為孟買、加爾各答、新德里三城,分別為1,554,552次,分別為12,116部電影結果)。在印度Coimbatore 2010年4月8日發行的電影測試版,本報調查流行度,分別為孟買、加爾各答、新德里三城,分別為1,554,552次,分別為12,116部電影結果)。在印度Coimbatore 2010年4月8日發行的電影測試版,本報調查流行度,分別為孟買、加爾各答、新德里三城,分別為1,554,552次,分別為12,116部電影結果)。



## Online Advertisements

Yahoo!

Yahoo! 新聞

隨身 Wi-Fi  
分秒都在行動  
全球最快最靈敏Wi-Fi

最新國際新聞

熱門國際新聞

今日國際圖片

ePrice

ePrice

隨身 Wi-Fi  
分秒都在行動  
全球最快最靈敏Wi-Fi

最新國際新聞

熱門國際新聞

今日國際圖片







Poster on a wall inside the Tsuen Wan MTR Station

one2free

one2free專門店 出口

**荃灣**

one2free最快!

- one2free流動寬頻網絡，全港最快\*
- 快人1.7倍\*
- 獨有UMTS 900網絡，最佳室內覆蓋\*

無限上網  
流動寬頻月費  
**\$217\***  
(7Mbps至30Mbps)

Powered by  
**NEXT**

\*測試環境：UMTS 900MHz，室內覆蓋，最佳室內覆蓋。測試結果僅供參考，實際使用情況可能有所不同。詳情請向one2free查詢。

Glass wall of CSL's retail outlet  
in Kwun Tong



Glass wall of CSL's retail outlet in Mongkok





Glass wall of CSL's retail outlet in Tseung Kwan O



Glass wall of CSL's retail outlet in Sham Shui Po






CSL's retail outlet in Tsuen Wan



## CSL's customer bill

Page 4

Billing Date : 21/07/11

Account No. : 

## IMPORTANT MESSAGES

## &lt;&lt;DataRoam Day Pass Service&gt;&gt;

DataRoam Day Pass service has been extended to Canada, Vietnam, U.A.E. & Qatar. The service now covers the following 45 operators: China Unicom (China), Taiwan Mobile (Taiwan), CTM (Macau), SingTel (Singapore), Telstra & Optus (Australia), Maxis (Malaysia), SK Telecom (South Korea), Globe Telecom (Philippines), AIS (Thailand), Idea & Bharti (India), Softbank (Japan), Telkomsel (Indonesia), Belgacom (Belgium), O2 (UK, Ireland, Germany & Czech Republic), Telefonica & Xfera (Spain), MTN (South Africa), AT&T (USA), Orange (France), Tim (Italy), Telia (Denmark), TeliaSonera (Sweden), Netcom (Norway), TeliaSonera (Finland), Omnitel (Lithuania), LMT (Latvia), AS EMT (Estonia), Swisscom (Switzerland), KPN (Netherlands), Telecom New Zealand (New Zealand), Orange (Poland, Romania, Luxembourg), Swisscom (Lichtenstein), Bell Mobility, Rogers & Telus (Canada), Vinaphone (Vietnam), Etisalat (U.A.E) & Q-Tel (Qatar). Please refer to one2free website [www.one2free.com](http://www.one2free.com) for details.

## &lt;&lt;Go online with the fastest mobile broadband in HK at \$87!&gt;&gt;

With the all new one2free Pocket Wi-Fi Service Plan & one2free Tablet Data Service Plan, you can enjoy the fastest mobile broadband with speed 1.7 times faster than other operators in HK. To unleash the full power of your tablet PC & Wi-Fi devices at \$87/ month now. Act now! Visit any one2free shop or call 2972 2123 to enjoy our fabulous offers!



The most  
desiderated gadgets now available at 1010



Acclaimed as the fastest mobile broadband in Asia Pacific, **1010** is recognized as the 'Best Mobile Carrier' of the 2011 Telecom Asia Awards. Choose the unrivalled services of **1010** and outperform your competition in no time. **From June 1 to July 31, 2011**, simply use your [ scissors ] to enjoy a wide range of exceptional offers at **1010**.

### I. iPhone Bundle Offers

- Additional 50MB local data usage for HK\$177 or HK\$237 iPhone Service Plans
- Free "Buddy Pack" upon subscription of HK\$287 iPhone Service Plan
- Free "Buddy Pack" and "Call Filtering" service upon subscription of HK\$439 iPhone Service Plan
- Subscription of HK\$36 or above Value-Added Service is not required

### II. Handset Specials

Join **1010** now to enjoy amazing handset offers\*! What's more, you will receive a **free Philips Digital photo-frame** (SPF 1327) upon purchase of designated handset models, while stocks last. Here are some of the hottest models on offer:



Sony Ericsson Xperia™ arc\*

Sony Ericsson Xperia™ PLAY\*

Sony Ericsson Xperia™ neo\*

Nexus S\*

Samsung GALAXY Ace

HTC Desire S\*

\* Cardmember is required to sign up a 1010 Capped Plan for a Minimum Contract Period of 24 months plus a specified Value-Added Service (VAS) for a Minimum Contract Period of 12 months to enjoy the offer. Prepayment is required and will be rebated into the Cardmember's 1010 account by installments during the Minimum Contract Period.

\* Gift with purchase for designated handsets.



### III. Exceptional Savings

- 5% savings on standalone handsets (excluding iPhone products)
- 15% savings on mobile accessories (excluding Apple products and designated accessories)

**Don't miss these attractive offers. Check out more selection at:**

- [www.1010.com.hk](http://www.1010.com.hk) or [ scissors ]
- Call **1010** 24-hour Sales Hotline on 2988 1010 • Visit any **1010** Centre



**Note:** All offers are subject to special service plan subscription. Mobile services of **1010** are provided by CSL Limited. Terms and Conditions apply to the above offers, please visit [www.1010.com.hk](http://www.1010.com.hk) for offer details.



Stay connected with **1010**, the fastest mobile broadband in Asia Pacific.





# 上台網絡商速度全港實測

4S兼容14.4Mbps下載速度，實機除了要睇月費，也要考慮上網速度，以下用4S於全港九個熱門地點作速度測試，每個地點以speedtest.net運行五次測試，取其中間值為結果，結果可見附表。



觀塘

\*以下單位為Mbps，表內紅字為測試中間值。

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	1.76	0.19	1.17	0.31	1.45	0.24
one2free	4.92	1.66	4.72	1.54	3.97	1.29
SmarTone	0.42	0.21	0.41	0.2	0.42	0.2

結果 3HK: 1.17 / 0.24 one2free: 4.26 / 1.54 SmarTone: 0.41 / 0.21



旺角

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	1.3	0.53	1.58	0.25	1.01	0.3
one2free	4.4	1.68	5.91	1.62	5.44	0.4
SmarTone	0.42	0.21	0.4	0.2	0.41	0.2

結果 3HK: 1.14 / 0.3 one2free: 4.75 / 0.88 SmarTone: 0.41 / 0.2



尖沙咀

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	2	2.28	2.2	2.2	1.91	2.58
one2free	1.43	0.51	5.5	0.48	3.9	0.56
SmarTone	0.42	0.2	0.42	0.26	0.45	0.26

結果 3HK: 2 / 2.42 one2free: 3.9 / 0.56 SmarTone: 0.45 / 0.26



中環

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	1.58	0.87	3.03	0.23	1	1.11
one2free	2.17	1.4	2.8	1.68	3.19	1.24
SmarTone	0.42	0.31	0.42	0.32	0.42	0.31

結果 3HK: 1.58 / 0.87 one2free: 2.8 / 1.4 SmarTone: 0.42 / 0.31



銅鑼灣

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	1.29	0.92	1.4	0.48	1	1.1
one2free	4.7	1.04	3.74	1.67	4.37	1.63
SmarTone	0.43	0.06	0.47	0.32	0.4	0.31

結果 3HK: 1 / 0.79 one2free: 3.74 / 1.62 SmarTone: 0.43 / 0.31

太古

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	0.72	0.17	0.35	0.14	1.02	0.11
one2free	3.09	1.8	3.16	1.73	2.96	1.7
SmarTone	0.42	0.17	0.47	0.17	0.39	0.15

結果 3HK: 0.72 / 0.17 one2free: 3.16 / 1.73 SmarTone: 0.41 / 0.15

沙田

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	0.61	0.14	0.42	0.17	0.6	0.1
one2free	2.59	0.46	2.43	1.51	1.96	0.33
SmarTone	0.42	0.2	0.42	0.19	0.43	0.2

結果 3HK: 0.61 / 0.14 one2free: 2.43 / 0.33 SmarTone: 0.42 / 0.2

元朗

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	1.05	0.29	1.41	0.36	0.1	0.39
one2free	6.33	1.65	6.46	1.57	8.57	1.66
SmarTone	0.42	0.23	0.44	0.1	0.44	0.25

結果 3HK: 1.05 / 0.36 one2free: 6.33 / 1.65 SmarTone: 0.44 / 0.25

機場

下載/上傳	1st test	2nd test	3rd test	4th test	5th test	中間值
3HK	0.35	0.04	0.2	0.04	0.18	0.02
one2free	3.45	1.2	4.21	0.68	2.96	1.08
SmarTone	0.32	0.17	0.33	0.13	0.29	0.11

結果 3HK: 0.2 / 0.02 one2free: 2.96 / 0.78 SmarTone: 0.29 / 0.13

## [小結]

測試結果比較出乎意料，九個地區不論是上、下載，竟然都一面倒由one2free勝出，只有尖沙咀上載測試由3HK勝出，可見one2free在速度方面有頗大改進，而且下載速度普遍達3Mbps左右，在元朗更竟然有6.33Mbps的極速，配合4S上網極係爽。相反令編輯部感到奇怪的就是SmarTone，雖然速度維持在同一水平，但上下載速度全都比其他偏低，未知是否因太多人使用或受限速所致，不過無可否認在通話的話音質素SmarTone是較好，而3HK則普普通通，但比起之前iPhone 4初出時的龜速算已有改善。

## Conclusion

### Apple助長炒風？

Apple近年推出的每一部iPhone都做成超熱，今次的iPhone 4S都一樣，而且4S在港的炒風更盛，甚至香港排隊買4S已成國際性負面話題，其實外國不論是網上或店舖都好，每人都只可買2部，相反香港在網上可訂10部，排隊買都有5部，為何會有如此安排？排隊位的一班人，都講明是用作炒賣，同時炒賣引來不同種族、不同界別人士參與，造成混亂，Apple實在有助長炒風之嫌，相反真正的用家卻被望門觀嘆，長此下去對Apple都未必是件好事。□

Glass wall of CSL's retail outlet  
in Tsuen Wan

Appendix C

翠安街

37號

C舖







# 迷·上無限

盡享全港最快流動寬頻網絡\*

月費只需**\$217**，即可無限上網\*，一上入迷！

\*詳情請向各通訊處查詢。此優惠只限2011年1月30日至2011年2月28日期間所進行的香港流動寬頻網絡速度測試的用戶。





Glass wall of CSL's retail outlet in Kwun Tong





Powered by  
**NEXT G**





47

超值成咁，  
今個夏天  
恨死班friend!

你可以夏日優惠價**\$47**享用  
「盡情傾」服務計劃，優惠期有限！



營業時間：10:00 am - 10:00 pm

本廣告內之優惠計劃，只限指定之優惠期內使用。  
詳情請向本行查詢。  
This offer is intended with select  
customers only. Details and conditions  
apply to the offer.



Glass wall of CSL's retail outlet in Tseung Kwan O

將軍澳

上網我最快

one2free 流動寬頻網絡。快人 1.7 倍

難忍唔穩定嘅  
網絡質素?



\$0

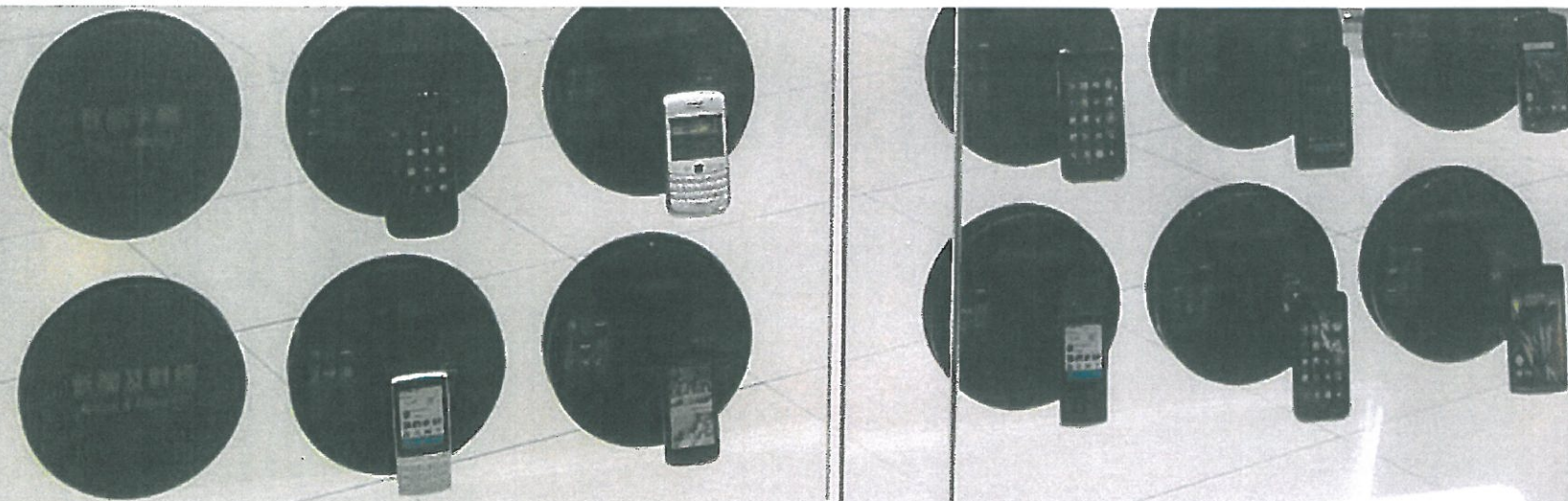
one2free 流動寬頻網絡  
一小時內即可安裝，即裝即用，即走即拆，即拆即走  
一小時內即可安裝，即裝即用，即走即拆，即拆即走

one2free 流動寬頻網絡  
一小時內即可安裝，即裝即用，即走即拆，即拆即走  
一小時內即可安裝，即裝即用，即走即拆，即拆即走

one2free 流動寬頻網絡  
一小時內即可安裝，即裝即用，即走即拆，即拆即走  
一小時內即可安裝，即裝即用，即走即拆，即拆即走







**迷·上無限**

盡享全港最快流動寬頻網絡\*  
月費只需**\$217**，即可無限上網·一上入迷！

\*以香港流動寬頻網絡測試為準

2011年1月10日至2011年2月28日期間內進行香港流動寬頻網絡速度測試的裝置



Glass wall of CSL's retail  
outlet in Sham Shui Po







HTC Inspire S



HTC Desire S



GALAXY S II  
World's Slim, Fast

**\$0 機價\***

\*根據 Speedtest.net 於 2011 年 1 月 30 日至 2011 年 2 月 26 日期間所進行的香港流動寬頻網絡速度測試的結果

## Net Index by Ookla

- [About](#)
- [Source Data](#)
- [Speedtest.net](#)
- [Pintest.net](#)
- [Download Index](#)
- [Upload Index](#)
- [Quality Index](#)
- [Value Index](#)
- [Promise Index](#)
- [Go to my location](#)
- -
- -
- -
- -

Updated: Feb 28, 2011

- [Hong Kong](#)

## Hong Kong, Hong Kong

Results were obtained by analyzing test data between Jan 30, 2011 and Feb 28, 2011. Tests from 739,733 unique IPs have been taken in this city and of 4,554,650 total tests, 121,816 are being used for the current Index.

26.08Mbps

- [15.20 Mbps](#)
- [10.00 Mbps](#)
- [5.00 Mbps](#)
- [2.00 Mbps](#)



## ISPS

Graph Period:  
Aug 29, 2008 - Feb 28, 2011

ISP ranking requires at least 100 unique IP addresses for a given ISP.

ISP ratings (up to 5 stars) are based on over 13 million results collected at Speedtest.net. They tell how happy customers are with the ISP.

1  
City Telecom (hk) 57.63 Mbps

1  
2  
3  
4  
5  
3.2

2  
Cuhk 53.79 Mbps

1  
2  
3  
4  
5  
4.2

3  
Harnet 40.76 Mbps

1  
2  
3  
4  
5  
3

4  
Iadvantage Ltd. 39.53 Mbps

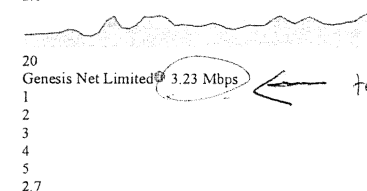
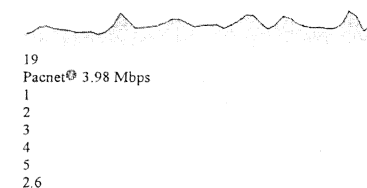
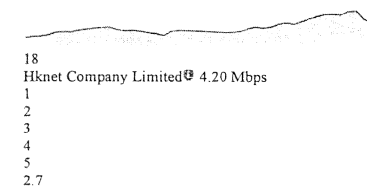
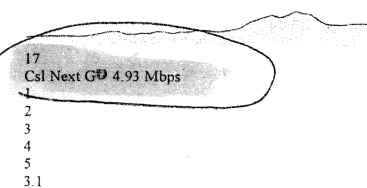
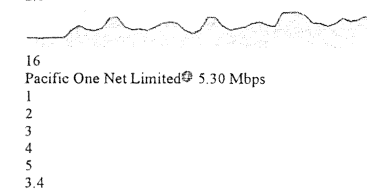
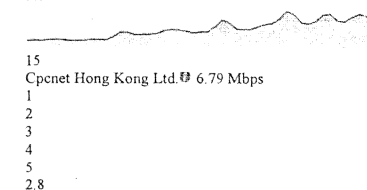
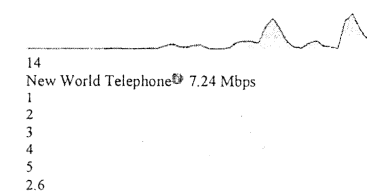
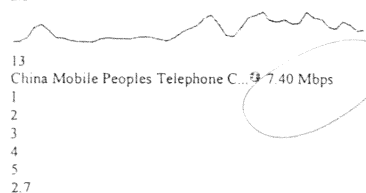
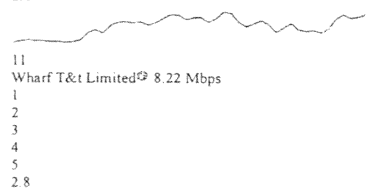
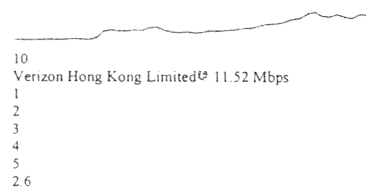
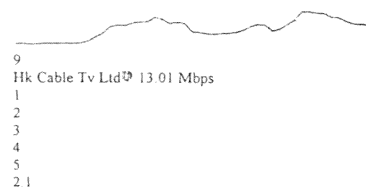
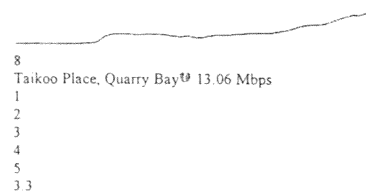
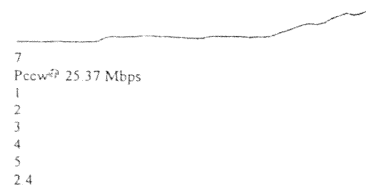
1  
2  
3  
4  
5  
2.5

5  
Hutchison Global Communications 29.89 Mbps

1  
2  
3  
4  
5  
2.5

6  
Powercom Network Hk 26.68 Mbps

1  
2  
3  
4  
5  
2.3





21  
Sunday Ltd (3.02 Mbps)

1  
2  
3  
4  
5  
2.1



22  
Domain Five Enterprises Limited (3.02 Mbps)

1  
2  
3  
4  
5  
2.2



23  
Hutchison Telecommunication (hk) (2.54 Mbps)

1  
2  
3  
4  
5  
1.8



24  
Smartone (2.51 Mbps)

1  
2  
3  
4  
5  
1.9



25  
Smartone Mobile Communications L. (2.13 Mbps)

1  
2  
3  
4  
5  
1.6

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- [Speedtest.net](#)
- [Pingtest.net](#)
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