

**Personal Data (Privacy) Ordinance (“the Ordinance”)
Google Street View Cars Collecting
Wi-Fi Payload Data in Hong Kong**

**Decision by the Privacy Commissioner
for Personal Data (“the Commissioner”)**

Case No.: 201006847

Date issued: 30 July 2010



**香港個人資料私隱專員公署
Office of the Privacy Commissioner
for Personal Data, Hong Kong**

The Background

Google Inc. (“Google”) announced on 14 May 2010 that it had mistakenly collected the unencrypted Wi-Fi payload¹ data while it should only have captured the Service Set Identifiers (SSIDs²) and the Media Access Control (MAC³) addresses of Wi-Fi routers for the purpose of its location-based services during the exercise of taking pictures by the Google Street View cars being driven around in Hong Kong during the period from December 2008 to October 2009. Google submitted that the equipment that had collected the payload data changed channels five times a second so the collected data would have been snippets of information.

2. As the Wi-Fi payload data might contain personal data of individuals collected without their knowledge, the matter raises personal data privacy concerns on compliance with the requirements of the Ordinance. Similar happenings had been reported in other parts of the world in which Google Street View cars operated and the matter had received international attention.

Immediate Actions Taken by PCPD

3. In exercise of his regulatory functions to supervise and monitor compliance with the requirements of the Ordinance, the Commissioner made a public announcement on 17 May 2010 to begin a compliance check against Google. Google’s representative in Hong Kong was invited to attend before the Commissioner on 18 May 2010. During the meeting, Google’s representative expressed deep regret to the Commissioner about the collection of personal data through the Wi-Fi network⁴.

4. At the suggestion of the Commissioner that immediate remedial actions should be taken by Google, Google signed and gave an Undertaking⁵ to the Commissioner on 7 June 2010 to the effect that :

- (a) Google had ceased operating its Street View cars in Hong Kong;
- (b) when Street View cars commence driving in Hong Kong again they would not collect Wi-Fi data;
- (c) it would provide the Office of the Privacy Commissioner for Personal Data (“PCPD”) access to the Wi-Fi payload data collected in Hong Kong (“the Data”) and such assistance that

¹ The actual contents of Wi-Fi communications

² Names of Wi-Fi networks

³ The unique number given to a device like a Wi-Fi router

⁴ See media statement: http://www.pcpd.org.hk/english/infocentre/press_20100518.html

⁵ See media statement: http://www.pcpd.org.hk/english/infocentre/press_20100608.html

- might be required to facilitate PCPD's understanding of the collection and interpretation of the Data;
- (d) it would securely store the Data and not to tamper with or subject the Data to any unauthorised uses or access which may contravene the laws of Hong Kong;
 - (e) it would completely delete the Data and provide PCPD with an independent third party's verification of such deletion;
 - (f) it would provide PCPD a copy of an analysis by an independent technical service firm which reviewed the source code involved in the payload data collection; and
 - (g) future Street View car operations carried out in Hong Kong would comply with the requirements of the Ordinance.

The Examination of Collected Payload Data

5. Since the Data could not be read and interpreted without a decoder developed by Google, Google was asked to provide the necessary technical assistance to enable examination and understanding of the Data by officers of PCPD. Google subsequently provided facilities to PCPD's officers to examine the Data on 23 and 24 June 2010 at its Hong Kong Office. As it was reasonable to suspect that the majority of the messages captured were in the Chinese language, Google was asked by PCPD to develop a Chinese decoder. With the development of the Chinese decoder a third examination was conducted by PCPD officers on 9 July 2010.

6. During the examination, Google showed PCPD the Data which comprised 364 files in 44 folders with a total size of 358MB (megabytes). As it was impractical to browse through all the contents manually, keyword-based searches were first conducted on the files and then all matches examined manually to determine the type of messages collected.

7. Using the above approach, the results of the examination showed that only a minimal amount of personal data, often fragmented pieces instead of a whole and complete content of the data were captured. As was suspected, the majority of the messages captured were in the Chinese language and consequently more data were found in the third examination with the assistance of the Chinese decoder which was developed for this purpose. Even then, my officers found that the amount of personal data such as email messages remained low. The type of messages seen were mainly :

- (a) Small number of fragmented email messages containing names, business addresses, phone numbers and recipient email addresses;
- (b) Instant messages such as MSNs;

- (c) Social networking messages such as the ‘Wall’ messages in Facebook;
- (d) Fragments of discussion forum postings;
- (e) Fragments of web pages; and
- (f) Fragments of downloading/sharing messages such as the headers of Foxy, BitTorrent (BT) downloads.

8. No sensitive personal data, such as passwords or contents of the whole of email messages, etc. were detected.

Further Evidence Obtained from Google

9. On 29 July 2010, Google provided an Affidavit (“the Affidavit”) to the Commissioner confirming that :

- (a) the Undertaking given by Google on 7 June 2010 remained effective, except to the extent its terms had already been satisfied;
- (b) its senior management team had no actual knowledge that the Data were being collected in Hong Kong and stored;
- (c) the equipment which collected the Data changed Wi-Fi channels five times a second thus only collected fragments of information;
- (d) the Data had never been used by Google and had not been transferred before outside of Google; and
- (e) Google has not accessed or converted the Data, except pursuant to the formal written requests by PCPD.

10. There exists no evidence upon which the Commissioner can rely to contradict the statements made in the Affidavit.

Matters Taken into Consideration

11. The Commissioner has considered all the circumstances of the case, in particular :

- (a) The amount and extent of personal data captured which did not reveal any significant amount of personal data; a large proportion (over 90%) of the Data were examined and the amount of personal data collected was negligible and non-sensitive;
- (b) The fact that Google had to develop and experiment with the Chinese decoder, as observed during its development stage,

suggests that Google had not itself studied the contents of the Data before;

- (c) The immediate remedial measures taken by Google as set out in the Undertaking, especially its commitment not to collect Wi-Fi Data in its future Street View car operations;
- (d) The Affidavit deposing to the lack of intention to collect the Data and the Commissioner did not have any reason to disbelieve this; and
- (e) Google's Undertaking that its future operations of the Street View cars shall comply with the requirements of the Ordinance.

The Conclusion

12. While the Commissioner does not preclude the possibility that other data protection authorities may find that personally identifiable data had been collected in their jurisdictions, he is reasonably satisfied that in regard to the Wi-Fi data captured by Google in its Street View car operation in Hong Kong, they do not contain any meaningful details that can directly identify any one individual.

13. Furthermore, the Commissioner has no reason to disbelieve Google's assertion that Google had no intention to compile personal information through the Street View car operation in Hong Kong and that it had not accessed or used any of the Wi-Fi data captured in Hong Kong through the operation.

14. The Commissioner has decided not to carry out a formal investigation of the case since he cannot reasonably expect to obtain a more satisfactory result than that already achieved, i.e. the procurement of the Undertaking which sets out the remedial measures that Google will take in this incident.

15. The Commissioner has concluded this case on the bases mentioned above. Since no formal investigation will be carried out, there is no finding of a contravention. It is to be stressed that, the decision in this case is made without prejudice to the exercise by the Commissioner of his regulatory functions and powers in relation to any other matter or complaint concerning the future operation of the Street View cars.

Deletion of the Data

16. The Commissioner is conscious of the reality that even after a complex and contracted investigation he would still be left with the option to issue an enforcement notice requiring Google to erase the Data and to adopt the remedial measures contained in the Undertaking. That being the case, the

Commissioner has asked Google to completely and irreversibly erase all the Wi-Fi payload data collected in Hong Kong, and to provide to the Commissioner a third-party verification of such erasure.

Roderick B. WOO
Privacy Commissioner for Personal Data