

KCC requests Apple and Google to take corrective action with regard to their violation of the Location Privacy Protection Act and fines them

- ▲ Apple fined KRW3 million for collecting location information of some users despite their withdrawal of consent.
- ▲ Apple and Google were requested to take corrective action against saving the location information in users' mobile devices without encrypting it.
 - Apple and Google are to apply software encryption technology to the location information cache in the mobile device.
- ▲ Apple and Google were recommended to provide users with sufficient information on methods of collecting the location information and utilization thereof.

- The Korea Communications Commission (Chairman Choi, See Joong) held its 45th general meeting on August 3, 2011, and levied a fine upon Apple Korea of KRW3 million for collecting the location information of some users despite their withdrawal of consent, and requested Apple Korea and Google Korea to take corrective actions to address their saving the location information in the users' mobile devices without encryption.

< Cf. : Concept of location information and

the location information cache >

- ◆ **(Location information)** Information revealing the place where a mobile device or person exists or existed at a certain time, which was collected using telecommunication equipment and facilities or telecommunication lines.
- ◆ **(Location information cache)** Storage area located in the smartphone where location information service providers temporarily save some location data so that the smartphone may recognize the location more quickly.

< Progress >

- April 20, 2011 ~: Local media reported on Apple Korea's collection of location information using customers' iPhones.
- April 25, 27, 2011: Apple Korea and Google Korea are officially inquired by the KCC about their collection of location information.
- May ~ June 2011: The KCC proceeds with a legal review of Apple Korea's and Google Korea's replies and request submission of additional data.
- July 6~8, 2011: The KCC performs a site inspection of the location information system of the US HQs of both Apple and Google.
 - Especially an inspection of the location information business plan submitted by Apple and Google when they applied for permission.
 - Reviewed in detail the replies of Apple and Google to KCC's inquiry (April 2011) to ascertain the truth thereof.
 - Checked details for possible violations of the Location Privacy Protection Act.

- o July 19~26, 2011: The KCC sent a prior notice of the administrative measures and listened to the opinions of service providers.

〈 Results of the investigation 〉

- The Korea Communications Commission investigated Apple and Google's acquisition of users' consent to their collection, use and provision of Location Privacy Protection Act in relation to the smartphones' location-based services and their measures to protect leakage of the location information.
- o According to this investigation, the KCC confirmed (1) that Apple collected location information from some iPhones from June 22, 2010 to May 4, 2011 (about 10 months) despite users' withdrawal of consent and (2) that Apple and Google's technical protective measures were inadequate, i.e. they stored location information in the cache of the mobile device without encrypting it.

① Apple Korea

- According to the result of KCC's investigation, Apple receives users' consent with regard to the collection, use and provision of location information (1) by way of the user agreement as to location information in the telecommunication companies' application form, (2) through the service level agreement (SLA) during the initial activation of the iPhone, and (3) by indicating "OK to use your current location" when a location-based application is first executed on the iPhone,
 - Between June 22, 2010 and May 4, 2011 (about 10 months), even when some iPhone users turned off the location service, the location data of the base stations and WiFi APs near the iPhone was sent to the server, and the Apple server sent the latitude and longitude information of the Wi-Fi APs and base stations to the iPhone, that is, location information continued to be collected.
- The KCC did confirm that the location information DB, managed by Apple Inc., does operate with proper technical protective measures such as encryption and firewalls as stipulated in Article 16 of the Location Privacy Protection Act and Article 20 of the Enforcement Decree of the same Act, as well as administrative protective measures, such as datacenter access control, but
 - Apple designed the iPhone in such a way that part of the location information DB is saved as a cache file in the user's

mobile device for the sake of the efficiency of the location information business and that data is not encrypted.

- ※ Between June 22, 2010 and May 4, 2011 (about 10 months), the location of the WiFi APs and base stations near the iPhone was continuously accumulated, and the software update on May 4, 2011, and cache information older than 7 months will be deleted.

2 Google Korea

- KCC confirmed that Google (1) notifies users about collection, use and provision of location information and receives users' consent in the initial Android phone setup screen, and (2) Google notifies users about the use of location information when they install a location-based application and allows users to decide whether to install it.
 - o Users can withdraw their consent to collection of location information by canceling on the checkmark placed next to "Use wireless network" option, and if users withdraw their consent, no location service-related data will be transmitted to the Google server.
- The KCC confirmed that the location information DB, managed by Google Inc., operates with proper technical protective measures, such as encryption and firewalls as stipulated in Article 16 of the Location Privacy Protection Act and Article 20 of the Enforcement Decree of the same Act, as well as administrative protective measures, such as datacenter access control, but,

o as with Apple, Google does not encrypt the location information cache in the mobile device.

※ An Android phone cache can save the location information of up to 200 WiFi APs, and up to 50 base stations, equivalent to about 7 days' location information.

< Judgment of illegality >

□ Clause 1 of Article 15 of the Act on Protection & Utilization of Location Information, etc. (referred to as the “Location Privacy Protection Act”) bans the collection, use and provision of the location information of a person or mobile object without the consent of the owner, but,

< Provision on the ban on collection of

location information without consent >

◆ Article 15 of the Location Privacy Protection Act (Ban on the collection of location information, etc.) ① No one should collect, use or provide the location information of a person or mobile object without the consent of the person or owner. In case there is a request for an emergency rescue by an emergency rescue agency or for issuance of a warning in accordance with Article 29, or if stipulated otherwise in other laws, however, an exception shall be made.

□ Even though iPhone users withdrew their consent by turning off the location service in the setup, Apple continued to update the location of the base stations and WiFi APs near the iPhone in the location information cache, and

o violated Clause 1 of Article 15 of the Location Privacy Protection Act banning the collection of location information of a mobile device without the owner's/user's consent.

- Also, Clause 1 of Article 16 of the Location Information makes it mandatory to take “technical measures, such as installing a firewall or using encryption software in order to prevent the leakage, alteration or compromise of location information,” and Clause 2 of Article 20 of the Enforcement Decree of the same Act stipulates that technical measures should include “encryption and installation of a firewall to prevent unauthorized access to location information system.”

< **Provision on protection of location
information** >

- ◆ Article 16 of the Location Information (protection of location information, etc.) ① In order to prevent the leakage, alteration and compromise of location information, location information providers, etc. should take administrative measures, such as establishing guidelines for the handling and management of location information, and take technical measures, such as installing a firewall or using encryption software. In this case, the details of such administrative and technical measures shall be determined by the Presidential Decree.

- ◆ Article 20 of the Enforcement Decree of the Location Privacy Protection Act (administrative and technical measures to protect location information) ② The technical measures pursuant to Clause 1 of Article 16 of the Act shall include the following:
 1. Identification and certification to verify authority to access location information and the location information system,
 2. Encryption and installation of a firewall to prevent unauthorized access to the location information system,
 3. A system for automatically recording and preserving data having access to the location information system,
 4. Installation and operation of security programs to prevent intrusions into the location information system.

□ The KCC determined that Apple and Google's saving of the location information cache in the mobile device without encryption is a violation of the encryption obligation to prevent unauthorized access to the location information system as stipulated in Subclause 2 of Clause 2 of Article 20 of the Location Privacy Protection Act because,

① If the location information cache is not encrypted, the location trace of the user can be exposed to others when the mobile device is lost or hacked, thereby creating the risk of invasion of privacy.

※ The method for accessing the cache on a smartphone by acquiring the administrator's authority (jail breaking, rooting, etc.) is widely known, and as doing so is not strictly considered illegal (as is hacking), it cannot be said that the cache is sufficiently protected.

② The location information cache is used not only to determine the location of the user, but also to transmit the latest location of the nearby base stations and WiFi APs to the service provider's location server, i.e. the smartphone is organically linked to the service provider's server, and thus it is an organic part of the total location information system.

③ And as the location information cache is saved in the mobile device, and the cache contains the same data as the service provider's server, it must be encrypted so as to prevent leakage even though it may not be possible to take all protective measures listed in the Enforcement Decree of the Location Privacy Protection Act such as authentication, identification, etc.

< **Administrative measures, etc.** >

- The Korea Communications Commission requested Apple Korea and Google Korea to take corrective actions and levied a fine upon them as follows with regard to their violations of the Location Privacy Protection Act:

【Apple: Collection of location information without users' consent (violation of Clause 1 of Article 15)】

- Each were fined KRW3 million in accordance with Clause 2 of Article 43 of the Act, and Annex No. 5 of the Enforcement Decree of the same Act

【Apple & Google: Violation of the obligation to encrypt location information (violation of Clause 1 of Article 16)】

- It is possible to suspend their business or impose a fine of up to 3/100th (3%) of the sales revenues of the location information business in accordance with Subclause 4 of Clause 1 of Article 13 and Clause 1 of Article 14 of the Location Privacy Protection Act, but:

- ① It is believed that it was difficult for the service providers to clearly know in advance whether they were obliged to encrypt the location information saved in the smartphone, and;
- ② Since the investigation both Apple and Google have announced a plan to encrypt the location information saved in the smart phone.

③ Ordering the service to be suspended might cause damage to users, and though both Apple and Google must be fined equivalently, as the location service is provided free of charge, imposition of a fine based on their sales revenues would not be practical.

o Therefore, the KCC decided to request them to take corrective actions to address their violations as soon as possible instead of imposing a large fine.

□ An additional charge was that Apple and Google have not provided users with sufficient information about the method of collecting location information and the scope of its use, and thus caused anxiety about the service use among users.

o To address this, the KCC recommended that Apple and Google should provide users with sufficient information about their new method of collecting and using location information so that users can better understand the risks (if any) involved.

< Future plan >

□ The Korea Communications Commission is planning to make efforts to ensure that, when smartphone location information service providers and location-based service providers (OS makers, manufacturers, app developers, etc.) develop new services, they will comply with the Location Privacy Protection Act and do their part to promote an environment where users can use smartphone location-based services safely.

- o Also, the Korea Communications Commission will continue to monitor the situation so that corrective actions are carried out faithfully, and will pick out violators of the Location Privacy Protection Act, investigate them fairly, and, if necessary, impose punitive and corrective sanctions against them.

- Additionally, the Korea Communications Commission has also announced that it would improve the Location Privacy Protection Act as follows to impose reasonable sanctions against violators of the Location Privacy Protection Act.
 - ① The KCC will **raise the ceiling of the penalty and revise the Enforcement Decree** so that it will be possible to **differentiate penalties** in consideration of the damages resulting from violations.

 - ② To improve the predictability of the service providers' location information protection measures, the KCC will better clarify **the definition of the location information system and the scope of application of protective measures**, and **downgrade detailed protective measures to the level of notification** in consideration of the possibility of introducing new services.

 - ③ Also, even if there are no sales related to the location information business or location-based service business, the KCC will introduce **a fixed-amount penalty system** so that it will be possible to impose a fine on violations of the Location Privacy Protection Act.