NOKIA

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The Honorable Fred Upton
Chairman, House Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20151-6115

The Honorable Greg Walden
Chairman, Subcommittee on Communications and Technology
2125 Rayburn House Office Building
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The Honorable Mary Bono Mack
Chairman, Subcommittee on Commerce, Manufacturing and Trade
2125 Rayburn House Office Building
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The Honorable Lee Terry
Vice Chairman, Subcommittee on Communications and Technology
2125 Rayburn House Office Building
Washington, DC 20151-6115

The Honorable Marsha Blackburn
Vice Chairman, Subcommittee on Commerce, Manufacturing and Trade
2125 Rayburn House Office Building
Washington, DC 20151-6115

Dear Chairmen and Vice-Chairmen:

Thank you for your letter to Stephen Elop regarding the privacy of location data on our smartphones. We are pleased to have the opportunity to present Nokia's position in relation to Nokia smartphones based on the Symbian software platform.

Our smartphones typically support a number of widely available positioning technologies, including GPS, Assisted GPS, cellular network-based and Wi-Fi positioning. This allows us to offer a variety of location-based services and features within Ovi Maps, Nokia's navigation and location service, as well as location features on the device such as the geo-tagging of photos.

Nokia does not collect positioning data to create histories of consumers' locations or to track individual consumers. We take the privacy of our consumers and their data very seriously and we are committed to comply with applicable data protection and privacy laws, wherever we operate around the world.

In response to your specific questions:

1. What location data do devices running your operating system track, use, store or share?

The location data gathered depends on several factors, including the technology used to deliver specific location-related functionality. The smartphone stores a small subset of the locations of cell towers and Wi-Fi hotspots it has most recently identified. When an application on the smartphone requests location information, nearby cell towers and Wi-Fi hotspots are detected. The smartphone then uses locally stored information for those that it recognizes. If sufficient information for positioning is not available on the device, it asks for its position from a positioning server, which maintains a database of known locations of cell towers and Wi-Fi hotspots, kept up to date in part with information on such locations, which is only sent by the smartphone to the server when these positioning methods are used. All communication to the positioning server is encrypted.

When customers choose to use Drive navigation in Ovi Maps, certain location data is sent to Nokia to report traffic jams, traffic patterns, changed road conditions and other such general information so that Nokia can provide a better service to all consumers, for example to provide alternative directions around a blocked road. This information, which is not personally identifiable, includes latitude/longitude, speed, direction and timestamp.

2. Why does the device track, use, store or share that data?

Positioning data, as described above, is not used to track consumers' location but is used to provide the best service experience. The storage of certain positioning related data on the smartphone and its subsequent sharing with the positioning servers is essential for effective positioning. Without it, the performance of all positioning methods would be seriously impaired or they would not work at all.

Nokia location based services and features may require the use of location data, for example to perform location based searches, provide local weather features or the street address of the current location when using Ovi Maps.

Many Nokia smartphones also allow consumers to geo-tag content such as pictures and video with location data.

3. Where on the device is the data stored; how is it used, stored or shared; and how is it protected?

All location data on the smartphone is stored either in a protected area of memory which is designed to prevent access by other applications, or stored in encrypted form. Some of this data may be backed up to a PC to enable the device to be restored to a previous state, for example when device firmware is updated.

4. How is the data accessible and who can access it? Is the data transferred automatically to your company or to other devices, or to third parties? If so, how and why? Is there any other manner in which the data can be transferred to or obtained by your company, or by other devices, or by third parties and, if so, how and why?

In addition to the details above; location data created by the positioning capabilities may be used as explained below. Note that applications can only make use of the actual location calculated by the positioning methods; they cannot access the location information stored on the device.

Drive navigation data collected when the consumer has chosen to use Drive navigation in Ovi Maps is sent to Nokia when using the Ovi Maps service online, or when the smartphone is connected to a PC through the Ovi Suite or Map Loader applications or when using Wi-Fi.

Nokia has implemented technical and organizational measures to prevent location information related to our positioning methods from being used to identify, profile or to establish the location history of any consumer. Information is stored and processed on secured servers.

Symbian has attracted a large ecosystem of application developers who may create location enabled applications for Nokia smartphones and, if they agree to the Ovi Store Publisher Registration and Distribution Agreement, may publish those applications on the Ovi Store (Nokia's application store), subject to background checks and other reviews.

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Publishers must adhere to Ovi Store terms and conditions to publish and distribute applications through Ovi Store, which include the requirement to comply with applicable laws, as well as to:

- Provide consumers with clear and understandable notice about how their location information will be collected, used, disclosed and protected;
- Provide consumers with tools that enable them to determine and control whether, when, and with whom their information is shared;
- Provide, as appropriate, parental controls and child protection tools for consumers under 18 years of age and their parents or guardians; and
- Adhere to industry standards regarding the transmission, storage, and access to sensitive personal information like location information.

Through the Symbian Signed process, Nokia can also revoke applications published in Ovi Store or preloaded on Nokia devices if they are found not to comply with Nokia's requirements; a revoked application can no longer be installed on a Nokia smartphone. More information about the Symbian signed process can be found at: https://www.symbiansigned.com/app/page.

Finally, since 2004, Symbian platform security has controlled application access to smartphone capabilities. If an un-signed application tries to use positioning features of the smartphone, the operating system requests the consumer's explicit consent before allowing access.

5. Is the user informed of, or given an opportunity to prevent, such tracking, use, storing, or sharing of data and, if so, how? Can the end-user disable the tracking, use, storing, and sharing of such data? Can the user delete the data?

The use of Nokia smartphones and services typically requires explicit acceptance of Nokia's general privacy policy (also available at nokia.com/privacy) and Ovi Service Terms. Nokia's general privacy policy defines our location based services and features related practices.

The Nokia user guide, available in the sales package or electronically on the smartphone, includes information about Ovi Maps features, the positioning methods as well as further information about location enabled device features, such as geo-tagging of pictures and videos.

Nokia smartphones allow consumers to enable and disable positioning methods, Drive navigation data collection and the geo tagging functionality anytime through the device settings and to remove geo-tags

from the content. Once positioning methods are disabled by the consumer, no further location information is stored by Nokia applications on the smartphone or sent to Nokia.

6. How long does the device store the data?

Nokia smartphones use both time based and item storage based limits for location data.

The last known position is replaced every time a new position is calculated. Wi-Fi or GPS based positions are stored for a maximum of 7 days and for network based positioning, up to 2500 of the most recent locations may be stored, after which location information will be deleted or replaced when Wi-Fi or network positioning is next used. The length of time that the data is stored will therefore vary depending on how frequently the positioning services are used in different locations.

For data collected when using Drive navigation on Ovi Maps, information stored on the smartphone is collected from a maximum of 40 hours of driving. All information stored in the smartphone is encrypted and is deleted from the smartphone once it has been transmitted to Nokia.

7. Section 222 of the Communications Act contains privacy provisions. Do those provisions apply to you? Should they? Does it make sense that similar information is afforded different privacy protections depending on what entity does the collecting and what service the data is collected from, especially since the entities collecting such information are increasingly competing against each other in today's information age?

Nokia is confident that the privacy protections on our devices and services described above are consistent with the provisions of Section 222 of the Communications Act.

While Nokia is not a telecommunications carrier subject to Section 222, we believe it is reasonable to ensure a level playing field between providers of broadly similar competing services. Although the provision of telecommunications services includes specific aspects and protections pertinent to that particular field of business, the providers of similar location based services should be treated equally.

Nokia hopes that the information above helps you to understand the situation regarding location data privacy and Nokia smartphones based on Symbian and that Nokia takes the privacy of our customers and their data very seriously. Information about Nokia's privacy practices for location based services is available at www.nokia.com/privacy. Should you have any further questions or need additional information,

please contact myself or Leo Fitzsimon, the head of Nokia's Washington, DC office, at leo.fitzsimon@nokia.com, or by phone at (202) 887-0145.

Sincerely,

Louise Pentland
Executive Vice President, Chief Legal Officer
Nokia Corporation

cc: The Honorable Henry A. Waxman, Ranking Member
Committee on Energy and Commerce

The Honorable Anna G. Eshoo, Ranking Member
Subcommittee on Communications and Technology

The Honorable G.K. Butterfield, Ranking Member
Subcommittee on Commerce, Manufacturing and Trade