

Part of our Online Relationships Series



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What you need to know about...

LOCATION TRACKING

What is it?

'Location Tracking'

Location tracking has always been a fundamental part of the way mobile phones work, the most basic element of which is the ability to triangulate a device's position in relation to a mobile network's radio masts. As smartphones became popular, Global Positioning System (GPS), Wireless networking (Wi-Fi), and Bluetooth Low Energy (BLE) technologies complemented this, any one or combination of which can now feed highly accurate location data via any app on that device.

How Does it Work?

Based on consent

In the UK, data protection laws require that access to a person's personal data (including their location) is based on consent. In principle, the same protection applies to children even when parents use location tracking to keep tabs on them although this is a grey area for under-16s.

Location sharing apps

As well as being built into Google's Android and Apple's iOS software, location sharing is often a feature of popular apps, for example Snapchat's Snap Maps, specifically designed to appeal to children, or WhatsApp Live Location. These usually require the user to turn the feature on.

Wi-Fi surveillance

Although location tracking is associated with GPS, in urban areas Wi-Fi is more important. Tech companies have built up highly accurate pictures of the location of Wi-Fi networks in towns and cities. As a smartphone moves within range of these networks, it's possible to accurately calculate that device's location.

Know the Risks

Non-consensual monitoring

Whilst location tracking has many benefits, a number of apps have recently emerged that allow location data to be sent to third parties. This inevitably raises the risk of location tracking via apps being used, without consent, to keep tabs on someone's whereabouts.

Frequently visited locations

A function of mobile operating systems is to document location history, which can provide someone with access to all past locations a child may have visited since location permission was granted. Anyone with access to a child's phone could establish where they go and when an build up a pattern of where they are likely to be at any particular time of the day.

Stalking apps

Whilst these apps are often illegal, gathering evidence for prosecutions can be difficult. Stalking apps are designed to monitor someone's smartphone communication and location without their knowledge or consent and could be used as part of harassment or stalking activity.

Safety Tips

Disable when not in use

It's possible to turn off or limit location sharing on mobile devices, but this will also disable other features such as street navigation. It may be better to explore which apps are using location sharing and in what ways and that young people know to turn it off when the app is not in use.

Discuss the risks

Young people are often unaware that location sharing is powerful and open to abuse. Talk to them about how it can be misused and discuss the importance of keeping their data private. Tell them to never provide others with unauthorised access to their phone and to always keep it locked when not in use.

Talk about location monitoring

Remind children that smartphones are a powerful technology that can monitor and record everywhere a person goes as well as all their communication. Talk about the law and about what they can and can't do to others and that monitoring someone else's location without their consent is a huge invasion of their privacy.

Our Expert John Dunn



John E Dunn is a hugely accomplished cybersecurity expert who has edited and written for numerous computer and technology magazines since the early 1990s, most recently Which Computing, The Register, Computerworld and Naked Security. He is the co-founder of Techworld and has featured on BBC TV/radio as well as CBC Canada.