Explainer: What is geoblocking?

April 19 2013, by Karl Schaffarczyk

Location-restricted services are becoming ever easier to access, wherever you live. Credit: Daniel Dionne

So you sit down in front of your computer to catch the latest episode of Doctor Who directly from BBC's iPlayer, and you are greeted by an error message informing you that the program will play only in the UK. So why are you blocked? How does the BBC website know you are not in the UK?

Geoblocking is the system used to limit your access to the internet, based on your geographic location.

How does it work?

Each computer on the internet has a unique numerical identifier (e.g. 172.30.0.254), known as an IP (internet protocol) address. Each time your computer makes a request to a server for content, its IP address is sent with that request, so the server knows where to send the requested content.

IP addresses are allocated in blocks to internet service providers (ISPs) who in turn allocate them to customers. Typically the IP address of your computer has no special significance. But an IP address can be used to determine a computer's geographical location with reasonable accuracy.

Many databases exist that map IP addresses to countries. These databases then form the basis of block-lists, more commonly known as "geoblocks".

How is it used?

Geoblocks are used to limit or change content depending on the end-user's geographic location. Credit: BBC

Most people are familiar with technological protection measures (TPM) in the form of region coding on DVDs. Those particular TPMs try to prevent the disc being copied and try to prevent [playback](#) in a place other than the market in which the disc was sold.

Region coding allows Hollywood to segment global markets, releasing movies to one market at a time, maximising the effect of promotional campaigns.

Geoblocks are the extension of this concept online – website administrators, such as those who manage video-streaming sites such as BBC's iPlayer, [Netflix](#) and ABC iView use geoblocks to limit their audiences to the UK, USA, and Australia respectively. These providers all cite rights licensing limitations as the reason for which they are geoblocking.

Online businesses such as gambling services may use these geoblocks to deny availability of their site to countries in which they cannot legally operate.

Controversially, many online retailers use geoblocks to charge people in one country one price, and people in another country a higher price. This has been the subject of Parliament's inquiry into IT Pricing in Australia, although the practice is not limited only to IT-based goods.

How to get around geoblocks

Due to the legal grey area occupied by those who bypass geoblocks, consumer advocate Choice is campaigning for greater legal clarity on behalf of Australian internet users who bypass geoblocking.

Because most geoblocking is based on the IP address of your computer, it can be defeated by any method that alters or hides your IP address in

favour for an IP address recorded as belonging to another country.

The most common way to do this is to use a Virtual Private Network (VPN). Using a VPN will in most cases route all of your internet traffic via a remote location, and the technology is proven, secure and reliable.

Proxy servers are also useful to get around geoblocking. Rather than change the IP address of your computer, they act as an intermediary and obtain content on your behalf, and then pass it to you. The site providing the content only sees the requests originating from the proxy server, and they don't see you.

[The Onion Router project](#) (TOR) is a high-security encrypted VPN solution. Originally developed by the US Naval Research Laboratory, it is designed for use in situations where personal freedoms might be threatened by surveillance. If you are located in a liberal western democracy, TOR is probably overkill for accessing geoblocked movies.

Novel methods of bypassing geoblocks are now emerging. Canadian business [unblock-us.com](#) uses a carefully configured array of proxy servers which are accessed through alternative DNS configurations. This arrangement simplifies configuration of proxy servers for the home user, and allows most traffic to flow directly to and from the internet without using the proxy.

Other apps and services such as the browser plug-in Hola! have also arrived. Available for free, Hola! is deliciously simple to install, configure and use. It utilises a more robust peer-to-peer network to allow the end user access to the [BBC](#) and other websites.

As mentioned already, bypassing geoblocks from Australia is a grey area legally. But technological advances have made it easy to smash through old location-based business models and access all that the world has to

offer.

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