

WHAT3WORDS

Addressing Just Got Smarter



what3words has developed a new global address system based on three words. Its API and software allows other businesses to enhance their own services by adding user-friendly location referencing, thus providing people around the world with a simple and easy way to communicate addresses.

The geospatial industry is worth an estimated US150bn annually, yet there is

no precise global address or location reference system that can be used easily by everyone. According to the Universal Postal Union, 75% of the world's countries suffer from inconsistent, complicated or no addressing systems. This means that around 4 billion people are 'invisible': unable to report crime; unable to get deliveries or receive aid; and unable to exercise many of their rights as citizens because they simply have no way to communicate where they live. In remote locations, water facilities are difficult to find, local businesses and tourist attractions are difficult to find and deliveries go astray. A third of delivery and logistics firms' costs are in the 'last mile' where addressing plays a key role. At best, poor addressing is costly and annoying in developed countries, while at worst it

hampers the growth and development of nations around the world, and ultimately costs lives.

User-friendly reference system

Latitude and longitude coordinate pairs provide a precise location reference but, whilst this is great for machines, it is ineffective for people as they are impossible to remember, even in the short term, and errors in understanding, transcription, and communication make widespread use prohibitive.

Having spent 10 years organising live music events around the world and constantly facing huge logistical frustrations that came with poor addressing, Chris Sheldrick, CEO of what3words, sought a solution. He discussed the idea of a more usable and less error-prone version of the latitude and longitude coordinate system with a mathematician friend, who subsequently wrote an early version of the what3words algorithm on the back of an envelope. The company was founded by the pair and two other friends in London, UK, in March 2013.

The what3words global address system uses an algorithmic engine similar to that of a coordinate system. Each address comprises three words instead of numbers or alphanumeric codes so that non-technical people can find any location accurately and communicate it more quickly, more easily and with less ambiguity than any other system. Based on a grid resolution of 3 x 3m, the planet has been divided into approximately 57 trillion squares, with a pre-assigned and fixed sequence of three words for each of them.

Since the what3words system works via algorithm as opposed to a database, the core technology is contained within a file around 10MB in size. The system is non-hierarchical and since all the units referenced are the same size, there is no need to interpret the code to know what size of area is being referenced. The system is also non-topological; the three words used to reference any square on the Earth's surface are not dependent on the three words to reference any of the adjacent squares.

Global service

what3words released its own app and website in July 2013 and technical developments have followed rapidly ever since. The online API was released in November 2013 and the offline SDK in October 2014. Autocorrect error detection and Compass offline navigation functionality was added in February 2015. The company is committed to offering a global service that everyone can use. It is available in eight languages: English, Spanish, French, Portuguese, Russian, Turkish, Swahili and Arabic.

what3words has its own apps and web services including iOS, Android, Pebble and Google Glass. More importantly, the API and SDK are plug-ins for businesses and developers for whom communicating location is important. To date the system has been integrated into 25 apps and services and one national mapping service. The privately owned company now consists of eight people.

Doing good

The business model is based around charging for access to the API or SDK. The company is now coming to the end of the free API period and starting to sign commercial agreements with clients, partners and distributors. what3words will always be free for individuals to use for their own websites and apps. When what3words charges for access to its API or SDK, it also intends to support fair and equitable use. The company employs a structure that provides qualifying organisations, including humanitarian and not-for-profit entities, with a range of free and discounted usage plans. “We believe in doing good by doing business,” says Chris Sheldrick.

Common location language

With the advent of smart watches, wearable technology, the Internet of Things (IoT) and connected vehicles, people now expect to be able to communicate precise locations verbally with their devices, and for that location to work across all devices and operating systems. Hence, voice will become a key requirement for users and a point of differentiation for businesses. Furthermore, what3words expects everything to become increasingly customised around location; the company sees an ever-growing use and demand for linking psychology, services, traditional advertising and social advertising with location data.

Global standard

The company’s target for this year is to be integrated into several national addressing services. In 5 years’ time, what3words aims to be the global standard for addressing, used by billions. And its mission: to help everyone and every location use a simple three-word address.

www.what3words.com

<https://www.gim-international.com/content/article/addressing-just-got-smarter>
