AJAX, KML and GDF

As may be expected from a technology driven magazine, these pages are strewn with TLAs and FLAs (Three and Four Letter Abbreviations). A small selection drawn from recent bouquets includes 'AJAX', 'KML' and 'GDF', all relating to the internet revolution. But what do these FLAs and TLAs all mean? What do they stand for? And is their existence justified?

Internet Era
Basic (Beginner's All-purpose Symbolic Instruction Code), Algol (Algorithmic Language) and Fortran (Mathematical Formula Translating System) were all once important programming languages introduced a myriad years ago. A myriad, at least, in the calendar of the digital era. All belong to the generation of proprietary software running tasks on standalone computers. Generations of students have been brought up on Pascal, designed to force the user to carry out programming in a structured way and so teach students good programming practices. But we are now living in the internet age, and a host of new lan-guages has emerged to enable communication between devices equipped with chips, and to transfer data between them.

AJAX
All sorts of businesses wishing to sell products and services via user-friendly web pages are pushing rapid advances in web development technology. As a result, over the past decade this has become one of the fastest growing industries globally. And while Ajax is both a Greek mythological hero and a Dutch soccer team, in the present context it is also an important offspring of the worldwide desire to do business via the internet. AJAX stands for Asynchronous Javascript And XML, a group of techniques for web development. Introduced in 2005, its primary aim is to increase functionality, speed and usability of interactive web applications, and thus improve user friendliness with an eye to boosting web use. There is no transmission of entire pages from server to client in response to user request, only parts are exchanged. 'Asynchronous' means that additional data is loaded at the client side and kept in reserve in anticipation of coming requests. This feature tremendously improves responsive efficiency and the user does only notice the presence of this feature by fast responses. This is because the data is loaded in background, without interfering with the data the user sees on display. The language in which function calls are made is Javascript. XML (Extensible Markup Language), the last function abbreviated in AJAX is used to encode documents and is a language which facilitates sharing of structured data across the internet.

KML
Keyhole Markup Language (KML) is a file format based on XML and used to display geo-data. Originally developed by Google Inc and thus, unsurprisingly, employed by Google Earth and Google Maps, KML 2.2 has since 14th April 2008 been a worldwide industry standard for geobrowsers; further developments are being co-ordinated by the Open Geospatial consortium (OGC). The reference system used by KML is based on geographic coordinates (latitude and longitude) in WGS84 (World Geodetic System, 1984), which is the only reference system supported. KML makes it possible to put features, images, 3D models, text information, and so on in geo-browsers, and view the scene by virtual camera. The view given by the camera can be steered by moving it along x, y and z (height) axis, and the viewing direction by rotating along these axes: heading, tilt and roll.

GDF
Geographic Data Files (GDF) is a file format for exchanging geographic files. It originally came into existence as a European standard developed by the European Committee for Standardisation (CEN) in co-operation with digital map providers, automotive and electronic-equipment manufacturers. The file format makes it possible to describe and transfer information about roads and related data. The CEN GDF 3.0 has been the main input for the world standard ISO GDF 4.0. GDF is a flat plain-text file, and this impedes its use for large-scale geo application, inducing the need for conversion into a more efficient format. GDF is predominantly used for (car) navigation systems. Map vendors such as Navteq and Tele Atlas, who were in on its dawning, are now providing maps in GDF. The format is also applied in fleet management, dispatch management, road-traffic analysis, traffic management and automatic vehicle location.

As with many standards developed for transmitting data over the web, the existence of a standard does not prevent some vendors from producing their own dialects. Which is to say that this what they in fact do. A serious encumbrance to arriving at smooth interoperability.