

**Ajax Application Development: the future use and development of Ajax is sustainable.**

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## **Abstract**

No longer are you forced to wait five seconds for a web page to reload every time you click on something (Pen et al. 2008). With the constant evolution of technology, Ajax could well be the next big web technology, achieving a de facto standard status in the web community due to the influence and drive by web giants. It has also been proposed that Ajax is nothing more than a "web fashion" soon to be replaced by superior technology, and will become a victim of the rapidly moving web development fashions. Ajax isn't something you can download; it's an approach, a way of thinking about the architecture of web applications using certain web technologies (Garrett 2005). This paper aims to ascertain the direction Ajax will move in; attempting to re-validate its future by evaluating the direction of the web philosophy and where Ajax fits with its association with Web 2.0, its applicability to both business and customer needs, and the direction of further appropriate research and development.

## **Ajax Application Development: the future use and development of Ajax is sustainable.**

Ajax has been identified as a major development in assisting the web to move forwards at such a rapid rate due to the drive of this technology by web giants. Google Maps, Gmail and Facebook, all demonstrate the immense need to dynamically update content without reloading the webpage (Zakas, McPeak and Fawcett 2007). Web traffic to such sites would reduce significantly without the functionality and usability provided by Ajax (Masnick 2006).

Many enterprises are reaping significant benefits from Web 2.0 (Murugesan 2007). One of the key components of the philosophy of Web 2.0 is to view content dynamically (Garrett 2005). To be able to achieve this, specialised markup languages (for example Ajax) are needed (Sankar and Bouchard 2009). Without a way of controlling dynamic web content, sites such as Facebook, Flickr and Google would become very static and the usability of such sites would be reduced massively. In short, Ajax produces a full Web 2.0 experience which dynamically consumes data that has been produced in a dynamic way.

In order to maintain the current level of interactivity with the World Wide Web, it will therefore be necessary to either maintain the dynamic content consumption which currently exists or build upon the technology which makes Web 2.0 possible allowing the philosophy to progress to Web 3.0, and the development of the web to move forward.

Ajax can be compared to DHTML as they both share the same principle web technology components. Ajax portrays a natural enhancement to DHTML, which is the current de facto standard, to also include XML (Kyryn 2011). Identifying the growth and acceptance of DHTML by the web development community, we can compare the possibility that Ajax will be the replacement de facto standard.

From a business point of view, Ajax can be applied to pretty much any business. Take the most simple of business logic that every organisation in order to survive must sell something. Whether this is a product or service depends on the nature of the business. The business's real time information involving orders or sales has the ability to be incorporated into an Ajax application giving them instant representation of their key performance indicators. In theory, if it makes financial business sense, it makes Ajax sense. Therefore the business need for real time information exists.

The need of Ajax from a business perspective can be identified from the business' service requirements. If the application or service that the organisation is trying to provide requires

the use of Ajax in its delivery, then this automatically provides a need to utilise Ajax technology.

From a web consumer point of view, the need for Ajax can be seen as managing a user's expectation. If a consumer of web technology has come to expect Ajax's advanced functionality within their daily browsing experience, then it becomes the need of the business to offer Ajax functionality in order to manage their expectation (Disabato 2006).

To secure Ajax's future as a vital web development technology, firstly the widely documented issues regarding its security and availability need to be mitigated (Paulson 2005). This then ensures that any Ajax disadvantages are minimised and any reason for developers to discount and therefore discredit it as a vital web technology lessen.

A possible new direction which could see Ajax usage rapidly increase is in the development of the web browser. There is the ability of all written websites to be automatically converted into Ajax sites without the relevant JavaScript being written for each site. In theory a web browser would load a website within its own container, and the browser can then control this content dynamically via Ajax. This advanced browser functionality is also possible due to the widely available and constantly lowering cost of broadband internet (Sanjaya 2010). This in turn means that dynamic content "refreshes" of web pages are not a strain on the internet infrastructure which is required by the end user.

With the development of HTML 5 and the new inclusion of the HTML audio and video tags (W3 2011), interaction with Ajax and other client side programming languages will greatly improve and could see Ajax take on a more powerful role with regards to multimedia (Ajaxwith 2011). This then puts Ajax on a more equal footing with Adobe Flash, allowing it to compete with what was previously the generally accepted technology.

The future of Ajax could well see the development of its own Ajax standard (CMS Wire 2007) which will aim to achieve a more efficient and tightly controlled research and development in the future. It may also break through into the mobile and Smartphone market, allowing dynamic content to be consumed by portable devices and therefore increasing the number of overall consumers.

To conclude, we believe that Ajax does have a sustainable foreseeable future. With the web giants constantly adopting and pushing Ajax's boundaries, this will see its continued development and the wider uptake of its technologies and programming principles.

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