Web 2.0 Oriented Application Development - A Business View on AJAX - '*Is it a Success?*'

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Abstract

This report outlines key findings of AJAX that impact the overall success of the technology, since its arrival in 2005. It will also aim to cover aggressive technologically organisations taking on board AJAX, the downfalls of the technology and the main question of is it a success or failure, within today's enterprises.

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It is possible to sum up the objectives of AJAX technology in two key uses; buffering of data before the user needs it and the improvement of user interactivity with the application interface. AJAX is primarily used for web application design. VALDES, R. (2008), suggests that AJAX has been "limited to most technologically aggressive early adopter organisations". An example of some of these would be Google, which is using AJAX for their Mail and Map application. Amazon for its fast search engine, A9.com and the photo storage site, Flickr.com has also made use of the technology.

One of the drawbacks of the technology is that organisations need to consider the vast amount of programming languages that AJAX consists of. Many reports have indicated that the development of even normal AJAX applications needs "broad background knowledge" according to WANG, W. (2008). Suggesting that, without a full understanding of AJAX technology it is presumed that any take on of the technology will result in a major risk of failure.

Major concerns with AJAX are found to be recurring, when questions regarding the capabilities of AJAX come up. According to HAMMOND, J.S. (2008) these are 'Accessibility' and ‘Security’. SMITH, D.M. (2009) stated that enterprise IT organisations have taken a "don't ask, don't tell" approach to consumerism, which does not enable firms to leverage the power of the Web 2.0 movement. According to SCHWARZ, M. (2005) a perfect example is that AJAX does not work well with search engines, as web crawlers will only search for HREF, SRC or some other link tags and not JavaScript code that is used by AJAX.

Security issues surrounding AJAX are no different from other scripting language security problems. The difference being common best practices for the technology are yet to be developed. An example of one of the security issues relates to the Server side code being "pushed" into the Client side, which has been suggested as "dangerous". Web Services that used to be Server side are being opened up to the public allowing anyone to access the same features which used to be protected. SIMA, Caleb. (2007)

AJAX can manipulate data instantly, if a user was to fill in an online form, they would usually expect to send the data once they have pressed the submit button. With AJAX, the submission of data can happen at any given time without any obvious notification to the user. Thus, if the user has sight impairment it would be almost impossible for them to recognise any subtle notifications. Gibson (2006) has suggested useful accessibility practises. Two of their examples are; *provide an indication that scripting is required* and *Provide notification of updates*. The First is to advise people who use assistive technologies (AT) with clear statement in initial stage to inform when AJAX technologies are in use. The Second gives the opportunity to the user of AT with cognitive or attention issues who may not notice the sudden changes when there is Dynamic updates. Although we have had AJAX technology for almost a decade during which it has matured immensely, it has shown little sign of enterprise adoption. A recent publication by VALDES, R. (2009) states that "less than 20% of enterprises have made a commitment to modern user interface technology or platforms". Understandably, organisations aspire to new technologies that deliver user experience that is unique, in comparison with existing productions. The majority of web based enterprises are waiting to see how other companies use AJAX before they make any decisions to take on board this Rich Internet Application. KLEIN, J. and SPECTOR, L. (2007) suggest that most web based applications are not using AJAX technology to achieve "unrelated computations", but merely to improve the overall user experience.

Discussion and conclusion

It is indicated that AJAX is still in the infancy stages of its development. Many organisations are not willing to adopt the technology because of the major concerns surrounding it. Although many web professionals and large organisations have successfully implemented AJAX, it still has risks and under the current economic climate organisations are still unsure of adopting the technology.

Currently the major concerns of the technology are security and accessibility which do not comply with the current legislations; Data Protection Act 1998 for security of confidential data and the Disability Discrimination Act 1995 with regard to the accessibility issue. Although it is a possibility that these can be solved during future developments, but for now these still stand as a major downfalls.

The future could see AJAX as a major technology, adopted by many web based organisations, as it is rich in user experience, and the joining of the web revolution that is 'Enterprise Web 2.0'. Although recently movements reveal major companies such as Microsoft and Adobe have developed their own production of RIA technologies; Silverlight and Flex. These provide similar features of AJAX but with a successful and trusted name behind them which could draw the attention of organisations away from adopting AJAX.

As for the present, AJAX is not a failure but not yet the success that it could be. The main issues with the technology will need to be addressed before any signs of major organisation adoption are considered.

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