The *Fifth* IASTED European Conference on
Internet and Multimedia Systems and Applications

PROPOSAL FOR A TUTORIAL AT
EuroIMSA, Cambridge

July 13 – 15, 2009
Cambridge, United Kingdom

1.   TUTORIAL TITLE
Web Design based on crawler visibility, human usability and logic errors.

2.   PRESENTER CONTACT INFORMATION

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3.   AIMS/LEARNING OBJECTIVES
The aim of this Tutorial is to give the attendee a holistic and practical view of website design, as seen from both the search engine crawler and the user side.

Some of the objectives are:
-       to identify, recognize, rank and use website elements which could increase website visibility (eg inlinks, keywords, sitemaps, etc)
-       to identify, recognize, rank and use website elements which could decrease website visibility (eg link spam, cloaking, invisible text, etc)
-       to understand the layout of a well designed website in terms of usability
-       to identify and learn how to avoid logic errors in website appearance

Some of the outcomes for this Tutorial include:
-       the attendees should be able to evaluate the website visibility of a given website
-       the attendees should be able to evaluate the website usability of a   given website, while identifying and criticizing the important aspects of user-centred design
-       the attendees should be able to identify errors in the logic flow of concepts on a given website, and know how to rectify these

4.   DURATION
The planning as done in this document is for a three hour tutorial.

5.   SCOPE
The general topic area is Web Design, specifically website visibility and human interface design.

6.   RELEVANCE TO EuroIMSA ATTENDEES
This proposed Tutorial fits into the "Web Design" topic listed on the Tutorials homepage. I consider this Tutorial to be highly relevant to the EuroIMSA series, since it addresses the central element of the World Wide Web: the website. The angle is application focussed rather than technical, making it suitable to a wider audience. The largest emphasis will be on website visibility, while programming is not covered.

7.   KEYWORDS
design, search engine, website visibility, usability, logic flow

8.   TARGET AUDIENCE
The target audience includes any person who has an interest in improving the usability, general functioning and especially the visibility to crawlers of a website. These could be students, webmasters, CIO's, marketers and academics.

9.   PREREQUISITE KNOWLEDGE OF AUDIENCE
-    full familiarity with the use of any WWW browser
-    familiarity with the use of search engines
-    familiarity with the interpretation of search engine result pages
-    a very basic understanding of HTML coding, although no coding will be covered in the tutorial
-    each attendee must provide his/her own laptop with Internet capabilities, and the organizers should provide wireless access – alternatively a PC lab with Internet enabled PCs.

10.   TUTORIAL ABSTRACT
The presenter of this Tutorial will attempt to merge the (sometimes clashing) demands of website visibility with human usability and the logic flow of websites. Through both theory and practical sessions, the elements of websites contributing to the positive and negative sides of these three issues will be explored.

Practical application rather than Internet programming technologies will be covered. The emphasis will be on understanding and identifying the contributing factors in a given website, and on the evaluation of a website from these three perspectives.

11.   FULL DESCRIPTION

The purpose of this three hour Tutorial is to expose the attendee to three relevant and related areas of website design. Attendees should have a good understanding of working on the Internet, including browser and search engine usage basics. It would also be beneficial to be able to read basic HTML coding, although coding is not covered in this Tutorial.

The first of the three areas is that of Website Visibility. The growth of the Internet since its inception 18 years ago has had an enormous impact on our lives on many fronts. Email use has grown to become the biggest so-called "killer application", with Internet searching a close second. As a result, search engine usage and economics have been in the news, especially since around 2000. The phenomenal rise of Google stocks from a mere $85 in 2004 to over $700 last year, currently sitting at $400, is ample proof of this trend.

The tendency of Internet users to expect answers from the Internet quickly has resulted in an almost unhealthy focus on the top part of a screen with search results. Users are likely to respond only to what they can see above the fold on the first screen of results. Research has proved that an average of 67% of users will read just the first page of results, while only 9% will read past the third page. The implication is that if a website is not listed on the top half of the first page of results, it is virtually invisible as far as the average user is concerned. As a result, the fight for dominance in the top few spots of a search engine result page is fierce, hence the importance of understanding the elements of making a website visible. At the same time, it is dangerous ground to tread on, since certain actions by the designer could earn a website blacklisting with the search engines, with disastrous results in terms of visitor numbers and income.

Secondly, the focus in website design world wide has shifted from technology centered to being user-centered (UCD). Users are easily irritated by bad design, incorrect colour usage, strange navigation systems and other errors of usability. Since a competitor site might be just a click or two away, the stickiness of a website (ability to retain users for a period of time) has grown in importance.

Thirdly, users need to be lead through especially a complex website without distractions, and without the possibility of the user making dead-end choices. At the same time, no situation should arise which will leave a user confused and frustrated, resulting from choices offered which do not make sense, or which are illogical.

With this proposed Tutorial, the presenter will be attempting to address these three issues, while also linking them in synergy. The overall result should be one of providing a website which is easier to find and use, and which hold no unpleasant surprises in terms of the user experience. A broad outline of the proposed content follows.

WEBSITE VISIBILITY
Theory
Introduction, ID of + and – elements, previous research, ranking of elements, identification inside existing websites, reasons for using and not using them.
Practical
Sample websites indicating both types, finding example websites, results of spamming, search engine exclusion policies, evaluation of websites.

WEBSITE USABILITY
Theory
Introduction, Nielsen's work on screen real estate, the F-pattern/Golden triangle, previous research, examples.
Practical
Sample websites of top ten mistakes, good examples, evaluation of websites.

LOGIC ERRORS
Theory
Introduction, Johnson's work on logic errors and user frustration, previous research, examples.
Practical
Sample websites showing both components.

12.   TUTORIAL MATERIALS
Required materials (notes, presentations, CDs, case studies) will be provided as handouts to attendees. There will be no copyright issues at stake.

13.   TUTORIAL HISTORY

Parts of this Tutorial have been offered while I did a Fellowship at the Munich University of Applied Science in 2008.

Courses in English
SoSe 2008

UNIVERSITY
OF APPLIED SCIENCES
MÜNCHEN

Website Visibility and Information Retrieval

&

Mathematical Application: Search Engines

by

Prof. Dr. Melius Weideman

**Cape Peninsula University of Technology
South Africa**

Fellow der Hochschule Muenchen im SoSe 2008

Im SoSe 2008 wird Prof. Dr. Melius Weideman, Cape Peninsula University of Techno-logy, South Africa, als Fellow der Hochschule Muenchen ein Seminar und ein formales FWP im Bachelorstudiengang Wirtschaftsinformatik anbieten (siehe unten).

Die Faecher greifen die hochaktuellen Themengebiete "Search Engines" und "Website Visibility and Information Retrieval" auf.

Neben dem interessanten Inhalt bieten die Faecher eine seltene Moeglichkeit, wichtige internationale Erfahrung zu sammeln und Veranstaltungen bei einem Native Speaker zu hoeren.

Die Faecher bieten die einmalige Gelegenheit, sich relativ risikolos zu testen, ob ein internationaler Karriereweg - im Rahmen eines Auslandssemester oder gar im Beruf - eine persoenliche Option sein kann. Auf jeden Fall sind sie weitere Bausteine, die Sie interessanter fuer spaetere Arbeitgeber machen.

I conceptualized, designed, offered and evaluated two new subjects, titled as above. Both involved specific theory and practical objectives, the attainment of which were measured during a number of evaluation sessions.

I have also just completed a full academic book, to be published by Chandos in Oxford, on the elements of website visibility and search engines, from which parts for this Tutorial have been taken.

More detail about the book can be found at: http://chandospublishing.net/chandos _publishing_record_detail.php?ID=242

Further content has been taken from an invited workshop series I have done in Graz, Austria (2008), on Internet Marketing and Website Visibility.

The rest of the contents are drawn from a mixture of: my personal research experience and results, consultation with industry and practical real-life experience.
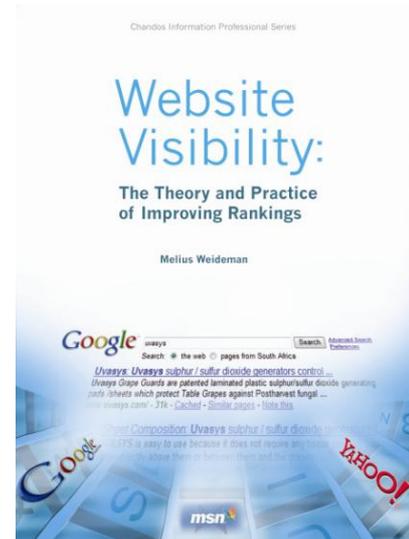
14.   PRESENTER BIOGRAPHY

Melius Weideman is currently a Head of Department in the Faculty of Informatics and Design, Cape Peninsula University of Technology in Cape Town. After working in the electronics and computer industry, he joined the academe in 1984. His research interests were initially focussed on computer viruses, but after 1994 the Internet, and specifically search engines started fascinating him.

He graduated with a Doctorate in Information Science from the University of Cape Town in 2001, and has managed to find a way to assist students in finding study-related material easily through the correct application of search engine technology. Numerous of his publications have seen the light since then on topics including website visibility and usability, search engines and information retrieval.

Melius has a strong international presence, and has delivered a number of guest lectures over the years. These include those at two of the world's top ten universities: Oxford in the UK and Columbia in the USA. Others include:
-        Wolverhampton, Hull and Durham Universities (all UK),
-        Technische Universitat München, Vrije Universiteit Amsterdam, Johann Wolfgang Goethe University Frankfurt, University of Maribor Slovenia (all Europe) and
-        United Arab Emirates University, Al Ain, UAE.

During 2007 he was chosen from 40 international applicants to become the first Fellow at the Munich University of Applied Sciences. In mid-2008 he spent three months teaching at this university. Campus02, in Graz, Austria invited him to do two workshop series on Internet Marketing through Websites in 2008. He was appointed as an Associate Professor in 2004, and a full Professor at CPUT in 2008. He also actively manages two websites: one to support this book

(www.book-visibility.com), and another to make research funding and resource information easily available to colleagues and students (www.mwe.co.za).

Melius lives in Protea Valley near Cape Town, enjoys spending time with his family and for recreation cycles, reads and dines out. He has completed four Double Centuries and 15 Argus Cycle Tours to date, plus numerous shorter fun rides.

15. RELEVANT REFERENCES THAT SUPPORT PROPOSAL EVALUATION

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