

行政院所屬各機關因公出國人員出國報告書

(出國類別：考察)

出席 2002 年 ICSTI 年會及參訪歐洲科技資訊機構

服務機關：行政院國家科學委員會科學技術資料中心

出國人姓名職稱：邱淑麗 研究員

李美慧 副研究員

出國地區：瑞典、荷蘭

出國期間：民國九十一年六月十五日至六月二十四日

報告日期：民國九十一年八月二十六日

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行政院及所屬各機關出國報告提要

頁數：xx 含附件：否

報告名稱：出席 2002 年 ICSTI 年會及參訪歐洲科技資訊機構

主辦機關：行政院國家科學委員會科學技術資料中心

聯絡人/電話：李美慧/02-2737-7636

出國人員：邱淑麗 行政院國家科學委員會科學技術資料中心 研究員
李美慧 行政院國家科學委員會科學技術資料中心 副研究員

出國類別：考察

出國地區：瑞典、荷蘭

出國期間：民國 91 年 6 月 15 日至民國 91 年 6 月 24 日

報告日期：民國 91 年 8 月 26 日

分類號/目：I8/資訊科學

關鍵詞：科技資訊國際聯盟, ICSTI, 加拿大科技資訊局, CISTI, 瑞典皇家技術學院圖書館, KTHB, 荷蘭科技資訊服務局, NIWI, Elsevier Science, EMBASE

內容摘要:

本次出國主要是參加 2002 年科技資訊國際聯盟(ICSTI)年會，瞭解世界各國資訊機構資料處理及網際網路新技術發展，吸收其實貴經驗，以供本中心提升資訊服務品質及促進國際合作之參考。會議主題為「科技資訊的產生與獲取的挑戰」(Scientific Information: the Challenges of Creating and Maintaining Access)，探討網際網路新技術對科技資訊業者與使用者造成的衝擊，及如何迎接隨之而來的挑戰。總共有來自 31 個國際重要資訊機構的 40 位代表與會。

開會期間順便與加拿大科技資訊局(CISTI)洽談續約問題，並達成其他共識，有利於後續合作業務的推展。與會單位中來自俄羅斯的科技資訊機構(VINITI)及瑞典的皇家技術學院圖書館(KTHB)均表明樂於與本中心建立合作關係，將先從雙方出版品的交換開始，未來期望能有更進一步實質合作與交流。

此次行程中並順道參訪荷蘭科技資訊服務局(NIWI)及 Elsevier Science 資訊機構，主要在瞭解各機構資訊服務運作機制的特色，作為未來本中心業務推展之參考，並希推薦更多我國優良期刊為其資料庫收錄。此次心得與建議並可提供做為本中心未來業務興革之參考。

本文電子檔已上傳至出國報告資訊網

行政院及所屬各機關出國報告審核表

出國報告名稱：出席 2002 年 ICSTI 年會及參訪歐洲科技資訊機構	
出國計畫主辦機關名稱：國科會科學技術資料中心	
出國人姓名/職稱/服務單位：邱淑麗等二人	
出國計畫 主辦機關 審核意見	<input type="checkbox"/> 1.依限繳交出國報告 <input type="checkbox"/> 2.格式完整 <input type="checkbox"/> 3.內容充實完備 <input type="checkbox"/> 4.建議具參考價值 <input type="checkbox"/> 5.送本機關參考或研辦 <input type="checkbox"/> 6.送上級機關參考 <input type="checkbox"/> 7.退回補正，原因： <input type="checkbox"/> (1)不符原核定出國計畫 <input type="checkbox"/> (2)以外文撰寫或僅以所蒐集外文資料為內容 <input type="checkbox"/> (3)內容空洞簡略 <input type="checkbox"/> (4)未依行政院所屬各機關出國報告規格辦理 <input type="checkbox"/> (5)未於資訊網登錄提要資料及傳送出國報告電子檔 <input type="checkbox"/> 8.其他處理意見：
層轉機關 審核意見	<input type="checkbox"/> 同意主辦機關審核意見 <input type="checkbox"/> 全部 <input type="checkbox"/> 部分_____（填寫審核意見編號） <input type="checkbox"/> 退回補正，原因：_____（填寫審核意見編號） <input type="checkbox"/> 其他處理意見：

說明：

- 一、出國計畫主辦機關即層轉機關時，不需填寫「層轉機關審核意見」。
- 二、各機關可依需要自行增列審核項目內容，報告審核完畢本表請自行保存。
- 三、審核作業應於出國報告提出後二個月內完成。

摘要

本次出國主要是參加 2002 年科技資訊國際聯盟(International Council for Scientific and Technology Information, ICSTI)年會，瞭解世界各國資訊機構資料處理及網際網路新技術發展，吸收其實貴經驗，以供本中心提升資訊服務品質及促進國際合作之參考。會議主題為「科技資訊的產生與獲取的挑戰」(Scientific Information: the Challenges of Creating and Maintaining Access)，探討網際網路新技術對科技資訊業者與使用者造成的衝擊，及如何迎接隨之而來的挑戰。總共有來自 31 個國際重要資訊機構的 40 位代表與會。

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重要活動日程

日期	行程說明	接待人員
6月15日(六)	抵瑞典斯德哥爾摩，報到，並參加歡迎酒會	1. Ms. Marie Wallin (ICSTI 專案經理) 2. Ms. Sarah Dunlop (ICSTI 助理秘書)
6月16日(日)	參加 ICSTI 年會	開會
6月17日(一)	參加 ICSTI 年會	開會
6月18日(二)	參加 ICSTI 年會	開會
6月19日(三)	參訪瑞典皇家技術圖書館 (Royal Institute of Technology Library)及前往荷蘭	1. Dr. Kjell Jansson 2. Ms. Yingfang He 3. Ms. Slobodanka Adler
6月20日(四)	參訪荷蘭科技資訊服務局 (Netherlands Institute for Scientific Information Services)	1. Ms. Elly Dijk 2. Mr. Patrick Nuyens
6月21日(五)	參訪荷蘭Elsevier Science 資訊 機構	1. Mr. Oscar Mendonca 2. Mrs. Jeannette Wagenaar
6月22日(六)	假日	整理資料
6月23日(日)	自荷蘭阿姆斯特丹返台北	路程
6月24日(一)	抵台北	路程

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壹、目的

一、出席 2002 年科技資訊國際聯盟(International Council for Scientific and Technical Information, ICSTI)年會

藉由參與科技資訊國際聯盟(ICSTI)年會，可以擴展國際視野，瞭解世界各國資訊機構資料處理及其網際網路新技術發展，吸收其實貴經驗，以供本中心提升資訊服務品質之參考，並促進國際合作管道更為通暢。

二、參訪瑞典皇家技術學院圖書館(Royal Institute of Technology Library, Kungl Tekniska Högskolan Biblioteket, KTHB)

瑞典皇家技術學院是瑞典最大的技術學院，有兩百多年的歷史，其圖書館館藏資源豐富，可支援該國三分之一的基礎科學及理工應用的研究，同時還可提供工業界研發所需的資訊資源。此次參訪，主要在瞭解該館資訊服務運作機制的特色，可作為未來本中心業務運作與推展之參考。

三、參訪荷蘭科技資訊服務局(Netherlands Institute for Scientific Information Services, NIWI)

荷蘭科技資訊服務局(NIWI)為荷蘭醫學、自然及人文社會科學方面重要的資訊服務機構，主要任務為針對學術研究與政策決策機構，以及企業界的需求，主動積極提供創新而前瞻的科技研究資訊。該局業務性質與本中心相似，此次參訪目的在瞭解其資訊服務運作機制，期對本中心未來資訊服務效能之提升有所助益。

四、參訪荷蘭 Elsevier Science 資訊機構

荷蘭 Elsevier Science 資訊機構為歐洲歷史最悠久的著名科技書刊出版及資訊處理機構，其所建置的 EMBASE 資料庫為生物醫學領

域重要的資訊資源，收錄了 1974 年以來全世界 70 多國的 4,000 多種期刊，其中包括我國的 24 種生醫期刊。該機構對期刊的選錄過程嚴謹，值得本中心學習，此次參訪亦希推薦更多我國優良為其資料庫收錄，促進我國學術交流並提升國際地位。

貳、過程

一、出席 2002 年科技資訊國際聯盟(ICSTI)年會

科技資訊國際聯盟(ICSTI)為國際間科技資訊服務領域的重要組織，成立於 1984 年，主要任務在於提升科技資訊對全球經濟、學術研究及社會進步的影響力，以及增進國際科技資訊機構間的瞭解與合作。目前共有 40 個會員單位，均為歐洲、北美及亞洲等重要科技資訊機構，今年增加印度及斯里蘭卡兩個觀察會員。本中心於 1994 年加入成為其會員，藉由每年年會的參與，可以擴展國際視野，並吸收各國資訊服務機構的寶貴經驗，以推動國內資訊服務更便捷，與國際合作管道更通暢。

2002 年 ICSTI 年會在瑞典斯德哥爾摩舉行，由皇家技術學院圖書館(Royal Institute of Technology Library, KTHB)主辦，討論主題為「科技資訊的產生與獲取的挑戰」(Scientific Information: the Challenges of Creating and Maintaining Access)，探討網際網路新技術對科技資訊業者與使用者造成的衝擊，以及如何迎接隨之而來的挑戰，共有來自 31 個國際重要資訊機構的 40 位代表與會，亞洲僅有本中心為正式會員代表參加，會中有多位資訊機構負責人對本次相關主題作專題報告，報告內容重點如下：

(一)Strategic Approaches to Web Evaluation. (Dr. Elliot Siegel, Associate Director, US National Library of Medicine)

係以美國國家醫學圖書館(National Library of Medicine)網站的使用情形為例，提出技術上、法律上以及倫理上的網站評估方法。所探討網站使用情形的監測技術包括使用者計量、網站分析比較以及國內外網站使用者端的表現測試等，並評估使用者網路基礎建設的頻寬大小與應用，調查使用者的資訊需求和滿意度，並提出新的評估資訊檢索結果的方法。

(二)The Second Generation Web – Opportunities and Problems. (Dr.

Uwe Assmann, Associate Professor, Research Center for Integrational Software Engineering (RISE) at the University of Linköping, Sweden)

本篇報告係目前一項跨國際、跨領域的創新研究，介紹由 W3C (World Wide Web Consortium) 所主導發展的第二代網站—語意網站(Semantic Web)，主要是對資訊賦予較明確的意義，使得電腦更能瞭解網上資料的內容，與人們作較好的互動，提供較好的檢索服務。最新進展就是將文獻的靜態語意轉變成標準化的描述語，如此才能有更好的網上檢索技巧，使文獻處理一致化，以及得與其他網站服務結合。但是語意網站並不是萬靈丹，它也有技術上的弱點及限制。同時，語意網站對許多個人隱私亦會產生威脅，對網上個人資料的保護，必須以全球性的尺度審慎考量，才能確保語意網站對大家都有好處。

(三)A University View on User Behavior in Accessing Scholarly Information (Prof. Ian Butterworth, Imperial College, London)

作者以大學的觀點，分析探討讀者檢索科技資訊行為改變的政策含意，並就大學與研究機構、學生與研究人員間的差異作比較。

(四)Scientific Information in the Periphery: Managing the Divides (Prof. Ana Maria Cetto, Instituto de Fisica, UNAM and R. Hanako Takayanagui, Direccion Generral de Bibliotecas, UNAM)

由於開發中國家普遍缺乏現代化的電腦及通訊設備，在獲得科技資訊的技術上遠遠落後於工業化國家。本報告以墨西哥一個中型國立大學物理系為例，探討其網際網路的使用情形及帶來的影響，調查結果內容包括科技資訊的需求與使用情形的指標

以及其產出，還有利用網路的資訊產品所帶來的好處，所提出的相關指標可用來界定該國在國際間資訊領域的地位。

在研討會之外，並有專門技術合作委員會(Technical Activities Coordinating Committee, TACC)、資訊政策委員會(Information Policy Committee, IPC)、財務委員會(Finance Committee)、會員資格委員會(Membership Committee)及年度會議委員會(Annual Meeting Committee)等不同委員會分組討論相關主題，並報告已完成與正在進行之計畫。其中特別值得一提的是在專門技術合作委員會(Technical Activities Coordinating Committee, TACC)中所提出討論的兩個未來新的研究計畫方案(Proposed New Projects)，包括：

(一)Scientific Classification Project—B. Carroll

主要是以聯合國教科文組織索引典(UNESCO Thesaurus)與下列其他幾個國家網站上的科技資料常用的分類法作比較，(1) Australia TAGS: Thesaurus of Australian Government Subjects (2) Canada: CISTI Virtual Library (3) the United Kingdom: ukonline.gov.uk (4) the United States: science.gov 及 (5) AAAS Fellows Web site: the American Association for the Advancement of Science，結果發現僅有此四個國家級的網站是被認可的，其中加拿大和美國的分類有很多相似之處，而 AAAS 網站則比其他網站詳細。其實各網站間的差異頗大，然而要發展出一個跨國際網站的共同大分類是可能的，若以 UNESCO 索引典為基礎，配合各國實情與需求，稍加修訂則可能成為這個指標。至於是否要進行此一發展，應再擇期討論，必要時將籌組委員會負責推動研擬。

(二) Socio-Economic Impacts of Scientific, Technical and Medical Information Project – B. Dumouchel

此計畫為加拿大科技資訊機構(Canada Institute for Scientific and Technical Information, CISTI)所提出，目的是要確認在知識經濟時代中，科技醫學資訊的社會與經濟影響力，並探討國家創新體系下科技醫學資訊機構所扮演的角色定位與長期的影響力。研究主題包括科技醫學資訊對國家創新體系的貢獻、對中小企業的價值、對研發與產品商業化的影響和對知識經濟的社會經濟的意涵，以及各國科技醫學資訊機構的長期價值等。本計畫將委託 Bytown Consulting 公司執行，該公司曾是加拿大許多公私立機構的顧問，執行過許多大型計畫，經驗相當豐富，ICSTI 對其深具信心。本計畫總結報告將提報於明年在加拿大渥太華(Ottawa)舉行的 ICSTI 年會，技術活動合作委員會(TACC)將是計畫進行的評審小組(review panel)與指導委員會(steering committee)。

此外，由於本中心與加拿大科技資訊局(CISTI)訂有長期合作協定，在開會期間順便藉機與其現任主管 Dr. Bernard Dumouchel 洽談續約問題，新合約將大部份維持原狀，僅作小幅修訂，例如今後雙方互訪及訓練所需經費將改為各自負責，另亦達成其他共識，有利於後續合作業務的推展。

與會單位中來自俄羅斯的科技資訊機構 VINITI(All-Russian Institute of Scientific and Technical Information)以及瑞典的皇家技術學院圖書館(即今年主辦單位 Royal Institute of Technology Library)均表明樂於與本中心建立合作關係，將先從雙方出版品的交換開始，未來期望能有更進一步實質合作與交流。

二、參訪瑞典皇家技術學院圖書館(Royal Institute of Technology Library, Kungl Tekniska Högskolan Biblioteket, KTHB)

瑞典皇家技術學院(Royal Institute of Technology, Kungl Tekniska Högskolan, KTH)是瑞典最大的技術學院，成立於1827年，校園環境優美，除主校區外，另有其他三個分校。其圖書館係由原來比鄰的兩棟舊建築，經重新設計合併改建而於今年初甫完成的新建築，並獲該國改建設計獎，具有十分明亮的自然採光與寬廣舒適的空間。

該校圖書館(KTHB)館藏資源相當豐富，包括5,000種電子期刊與1,000種紙本期刊及碩博士論文等，並可透過Netlibrary系統提供電子圖書服務，可支援該國三分之一的基礎科學及理工應用的研究，同時還可以簽約方式針對個別企業或公司，提供其研發所需的資訊資源。

該館利用由瑞典皇家圖書館(Royal Library)所發展的網上館際合作系統LIBRIS，提供線上查詢及館際合作文獻傳遞服務(ILL)，包括近300個圖書館的各類型龐大館藏資源共400萬筆書目資料。

其資訊檢索服務係由九位不同領域的專家協助提供，另外，透過其所主導的歐洲資訊網服務EINS GEM (The European Information Network Services, EINS)，可查詢其他資訊服務系統如CINECA, DIMDI, FIZ Karlsruhe, 及Questel-Orbit等，提供其國內使用者線上獲取完整而最新的科技資訊，充分達到資源共享的目的。KTHB亦是STN International及CAS Online在瑞典的總代理，經常為讀者舉辦訓練課程及研討會。

KTHB最大的特色除了豐富的館藏資源外，就是能夠充分利用Internet的環境，蒐集各領域的網上資訊資源，提供讀者最完整而便捷的服務。

三、參訪荷蘭科技資訊服務局(Netherlands Institute for Scientific Information Services, NIWI)

荷蘭科技資訊服務局(NIWI)隸屬於荷蘭皇家人文暨科學院(Royal Netherlands Academy of Arts and Sciences)，係於1997年由該院六個研究所的科技資訊單位合併而成立，為荷蘭醫學、自然及人文社會科學方面重要的資訊服務機構，主要任務為針對學術研究與政策決策機構，以及企業界的需求，主動積極提供創新而前瞻的科技研究資訊。

該局館藏相當豐富，蒐集主題包括生物醫學、環境科學、人文及社會科學等圖書期刊、學位論文及研究報告等，並將1990年以前的過期期刊拍成微片以節省儲存空間，使用自動旋轉式的微片櫃，可極其輕鬆地找到所要的微片，迅速提供全文服務；此外還從其現有6,000種館藏期刊中挑選3,000種1998年以來的生物醫學方面期刊，提供目次服務(Table of Contents)，可以線上直接點選訂購全文。由於長期來與荷蘭Elsevier Science公司、大英圖書館(British Library)及法國科技資訊機構(Institut de l'Information Scientifique et Technique, INIST)建立合作關係，得以利用其龐大的期刊資源，節省成本，快速提供全文服務，每年服務量約有20萬件，提供率約為八成五，平均每件處理時間為三至四天；採先收費後服務方式，讀者須預先存款或以信用卡付費，每年服務收入約150萬歐元(合新台幣約5,000萬元)。

值得一提的是，其自建之NIWI Databanks系統包含13種專業研究領域資料庫，具有跨資料庫檢索(OneSearch)及線上文獻傳遞的功能。同時由於其扮演國際間資訊交流的重要角色，所建立的線上公用目錄系統(Online Public Access Catalog, OPAC)包括全球83種語言的15萬筆各類文獻書目資料，極具國際特色，我國出版的臺灣醫誌亦列名其中，在2001年就曾被申請139篇。

四、參訪荷蘭 Elsevier Science 資訊機構

荷蘭 Elsevier Science 資訊機構為歐洲歷史最悠久的著名科技書刊出版及資訊處理機構，一向自詡以創新、經驗及獨特精神領先全球，迅速提供科技醫學研究新知。其所出版的書刊主題涵蓋科技、醫學、經濟及商業管理等，其中不乏學術界高知名度權威期刊，並都已電子化。1998 年併購 Engineering Information(EI)公司，2001 年又併購著名的出版社 Academic Press，擴大其資訊服務範圍。

近年來並利用網路新技術發展數位圖書館資料庫系統 (ScienceDirect)，提供國內外電子期刊線上查詢、瀏覽、列印、及下載全文等快速便捷的資訊服務。本中心全國學術電子資訊資源共享聯盟(CONCERT)亦已引進該資料庫系統。

Elsevier Science 所建置的 EMBASE 資料庫為生物醫學領域重要的資訊資源，收錄了 1974 年以來全世界 70 多國的 4000 多種期刊共 700 多萬筆資料，其中亦包括我國的 24 種生醫期刊。此次參訪主要為瞭解 EMBASE 資料庫評選期刊的要件及過程，並希推薦更多我國優良期刊為其資料庫收錄。

期刊被 EMBASE 資料庫收錄的要件包括下列各項：(1)內容與收錄主題相關(2)編輯委員會 (3)同儕評審(peer review)(4)被摘要性期刊收錄 (5)英文刊名 (6)英文摘要 (7)英文篇名 (8)投稿須知 (9)參考文獻等，上述要件與國科會獎助國內學術研究優良期刊評審標準大致相同。該公司每年 3 月至 9 月評選新期刊，由專業工作人員依所製訂之評選表將期刊評定為四等級(Core, High, Medium 及 Low)，屬於 Core 等級者列為優先考慮，負責此項業務的主管 Mendonca 先生答應未來將會優先評審由科資中心所推薦的我國生醫方面的優良期刊。

參、心得與建議

一、出席 ICSTI 年會

- (一) ICSTI 為國際間科技資訊服務領域的重要組織，每年都是由來自世界各國著名的資訊機構負責人齊聚一堂，共同討論科技資訊對全球經濟、學術研究及社會進步影響力的議題，對增進國際科技資訊機構間的瞭解與合作有所助益。此次與會，可以看出有些機構積極投入人力與經費的精神令人感佩，例如加拿大科技資訊機構(CISTI)與美國國家醫學圖書館(NLM)，均是熱心參與的單位。
- (二)由與 ICSTI 與會者之間的溝通中，加上對其他三個參訪單位的瞭解，可斷言在資訊服務的領域裡，資訊聯盟(Consortium)的理念早已經形成趨勢，惟若能採用整合性檢索界面，將可解決不同資訊系統檢索時可能帶來的不便。
- (三)此次 ICSTI 年會發表的專題報告僅四篇，較往年為少，但主辦單位瑞典 KTHB 仍費心安排，除了開會之外，並安排極具該國特色且意義重大的參觀活動，如維京島之旅及諾貝爾博物館造訪，以及在市政廳招待一次與諾貝爾獎得主同等待遇的榮耀晚宴等，均令與會者倍感溫馨難忘。
- (四)本中心曾於一九九九年圓滿主辦此項國際會議，某些與會代表至今仍念念不忘當年受到的溫馨接待經驗，甚至今年的主辦單位亦不敢居功，謙稱只是承接我國成功的舉辦精神，可見在國際組織上，曾經付出的努力不會白費，所獲得的成果仍可永久深留人心。
- (五) ICSTI 年會的許多討論議題常須由與會者立即作政策決定與回應，為增進國際科技資訊交流，拓展國際合作管道，建議今後此類會議由機關首長親自參與較佳。

二、參訪科技資訊機構

- (一)此行參訪的資訊單位的館藏均極其豐富，又能充分利用網路技術與資源，且資料提供的形態也頗為多元化，故能提供較佳的全文服務，但是其中以豐富的館藏資源才是高品質資訊服務的先決條件。
- (二)參訪各館的收費政策均採「先收費後服務」的方式，讀者須預先存款或以信用卡付費，較少產生與讀者間的收費糾紛，建議本中心參考此方式，改變目前「先服務後收費」的政策，以避免呆帳產生的困擾。
- (三)參訪的各館資訊服務系統均與其館際合作系統(ILL)結合，可提供一站到底(One-Stop Service)的服務，建議本中心加強全國科技資訊網路(STICNET)與我國館際合作系統(ILL)結合的功能，相信未來必可提升服務效能。
- (四)由瑞典皇家技術學院圖書館(KTHB)的資訊檢索服務，深感如能由不同領域專業背景的人員負責此項服務，讀者所獲得的資訊精確度與滿意度均會提高。
- (五)參訪的各館均有對企業界提供個別的資訊服務，建議本中心亦能充分利用產業資訊室所蒐集的高科技產業資訊報告資料，加強推廣對企業界提供專題資訊服務，將對國家產業科技發展有所助益。

肆、附錄


NATIONAL LIBRARY OF MEDICINE

ICSTI Conference on Scientific Information:
The Challenges of Creating and Maintaining Access

Strategic Approaches to Web Evaluation

Elliot R. Siegel, PhD
U.S. National Library of Medicine

Stockholm, Sweden
June 17, 2002

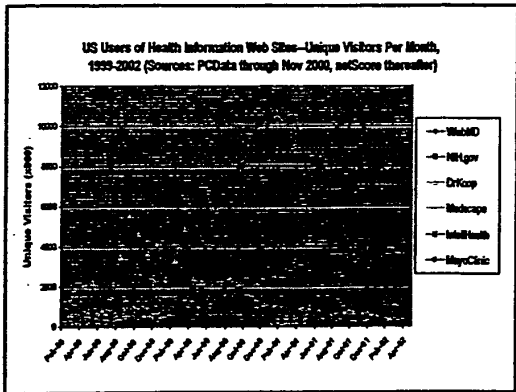


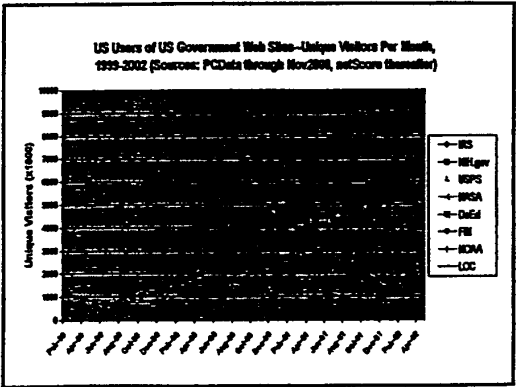
Overview

1. Monitoring Web Site Usage
2. Testing End-to-End Internet Performance
3. Assessing Broadband Infrastructure Capacity
4. Measuring Information Needs and Satisfaction
5. New Models to Enhance User Access and Evaluate Impact

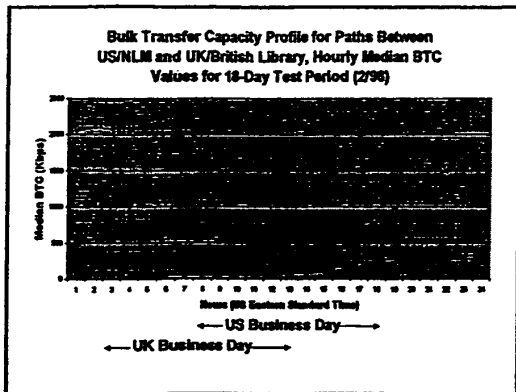
I. Techniques for Monitoring Web Site Usage

- Internal Web Log Data
- External Internet Audience Measurement
- Drill Downs
- Comparative Site Analyses





- II. End-to-End Performance Testing**
- Domestic and International Sites
 - Keynote (40)
 - NLM Partners (100)
 - Metrics
 - Web Page Download Times
 - Bulk Transfer Capacity
 - Trace Route
 - Packet Loss

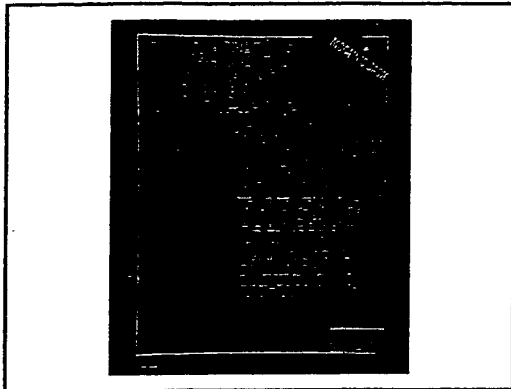


**Comparison of Internet Connectivity Test Results
Selected Pathways NLM to Host Web Sites
April 1998 and April 2001 (courtesy V. Cid)**

Host name	Median BTC [Mbps]		Mean RTT [ms]	
	1998	2001	1998	2001
www.socf.cornell.edu	4.91	6.85	18	15
www.library.sdu.edu (*)	2.67	3.96	70	73
www.nicomp.nic.edu (*)	0.16	1.32	65	40
www.hbfh.washington.edu (*)	3.74	5.16	83	74
www.cisf.ucr.ca (*)	0.53	8.02	84	53
www.diaf.de	0.12	13.33	160	116
www.syam.org	0.443	1.42	35	25

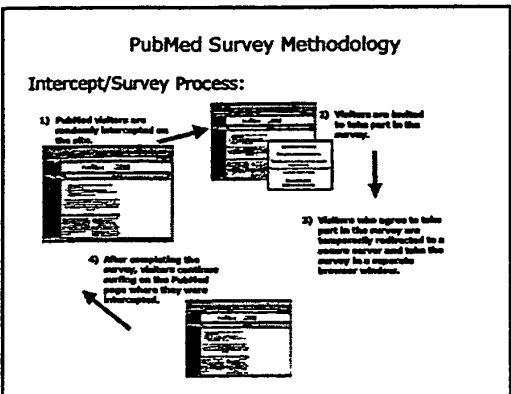
(*) Paths between NLM and these hosts are today (2001) through the Abilene network

- III. Broadband Infrastructure Capacity and Needs**
- History of Bigger and Better Infrastructure
 - HPCC
 - Telemedicine Testbeds
 - Next Generation Internet (NGI)
 - Scalable Information Infrastructure-(SII)
 - Users' Biomedical Research and Health Care Applications
 - Internet2 CIT Study



IV. Measuring Information Needs and Satisfaction

- Usability Lab Testing
 - Performance—one at a time
- Online Focus Groups
 - Needs and Expectations—a few at a time
- Online User Surveys
 - Satisfaction and Impact—many at a time
- Syndicated Surveys
 - Baseline—everyone
- Competitive Site Surveys—by category segment

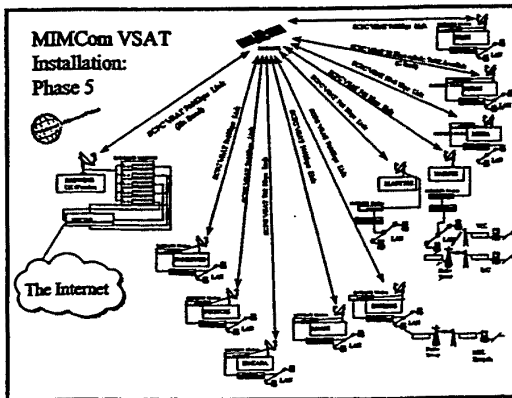


V. Enhancing User Access and Evaluating Impact

- **Tribal Connections Project**
–16+ sites in Pacific Northwest & Alaska
- **MIMCom.Net Project**
–10+ sites in Mali, Kenya, Ghana, Tanzania, Uganda

**Elim Health Clinic (and Town Hall)
Norton Sound Health Corporation, Alaska**





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**The 2nd Generation Web -
Opportunities and Problems**

Dr. Uwe Almann
Research Center for Integrational Software Engineering (RISE)
Swedish Semantic Web Initiative (SWEB)
Linköping University

Contents

- From 1st to 2nd Generation Web -The Semantic Web
 - ✦ Use Cases of the Web
 - ✦ What does "Semantic Web" mean?
- Opportunities and Problems
 - ✦ Standardized Document Processing Architecture
 - ✦ Standardized Vocabularies
 - ✦ Standardized Context Constraint Languages
- Outlook

1

The Semantic Web

is an extension of the current one,
in which information is given well-defined *meaning*,
better enabling computers and people to work in
cooperation.

T. Berners-Lee, J. Hendler, O. Lassila

1

The Problem with the 1st Generation Web

- Only syntax
 - Work is based on strings,
 - not concepts
- Only context free structure
 - No context dependencies

1

Use Cases of the Web (1): Document Processing

- Car manufacturers and their suppliers need to exchange specifications of cars
- They also must pay taxes
- They need different software
- XML is not powerful enough for a uniform document processing architecture



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Use Cases of the Web (2): Search

- "Find the home page of Uwe Assmann"
- "Find the home page of this computer scientist, Uwe - I forgot the surname - who is working in Linköping"



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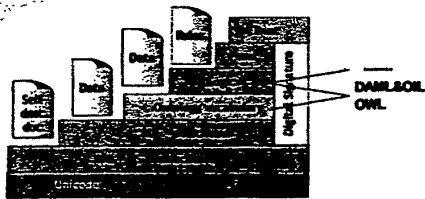
Use Cases of the Web (3): Web Services

- "Bring a doctor here - as fast as possible - who knows about fever, diabetes, and heart insufficiency"
- Electronic Yellow Pages
 - ✧ Discovery of services
 - ✧ Execution of services
 - ✧ Composition
- CORBA has the same idea (Trader) but:
 - ✧ The CORBA trader works with keyword search
 - ✧ No preconditions, postconditions for services
 - ✧ Only simple services, no composition
- ... it failed...

1

Berners-Lee's Vision with the Semantic Web

- Make web content machine-understandable
 - ✧ To provide more automation and more service
- Base the web on semantics



1

Problem: What Does *Semantics* Mean Here?

- An *interpretation function* from a syntactic to a semantic domain
 - ✧ Informally: an explanation what the syntax means
- Here: a function from XML syntax to an *ontology*
 - ✧ An *explicit and shared specification of a conceptualization*
 - ✧ A *standardized taxonomy with constraints*
- Contains:
 - ✧ Terms, partially ordered in a multiple inheritance hierarchy
 - ✧ Context constraints between the terms, specified with inference rules

1

What Does *Semantics* Mean Here?

- However...
 - ✦ Often, syntactic domain and semantic domain are mixed
- Then, the semantic language degenerates to a constraint language with inheritance
 - ✦ I.e., markup is done in a modelling language similar to UML/OCL
 - ✦ But executed in a XML processor
 - ✦ And standardized
- And the "Semantic Web" degenerates to markups in a standardized modelling language

1

One of the Languages: DAML&OIL

- Language Features
 - ✦ Class hierarchy for terms
 - ✦ Inheritance on relations
 - ✦ Simple inference with subproperties and operators
Conjunction, Disjunction, Difference
 - ✦ Cardinality constraints on domains and ranges of relations (similar to UML)
 - ✦ Disjointness specifications for classes and relations
 - ✦ Transitive relations
- Based on decidable description logic
- DAML&OIL can be evaluated by checker tools

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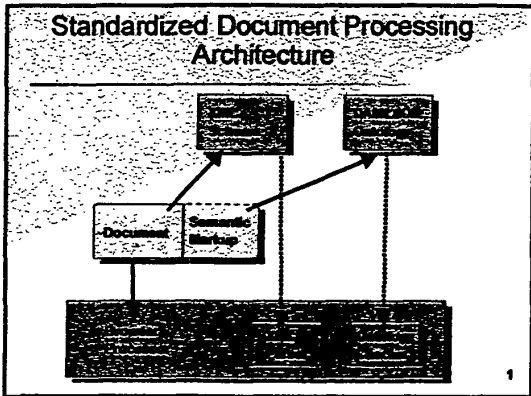
3 Basic Steps Forward in the Semantic Web

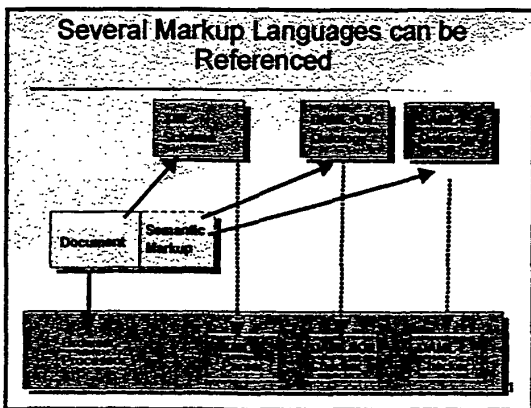
- Standardization of *document processing architecture*
- Standardization of *vocabularies for the Web (ontologies)*
- Standardization of *context constraints languages*

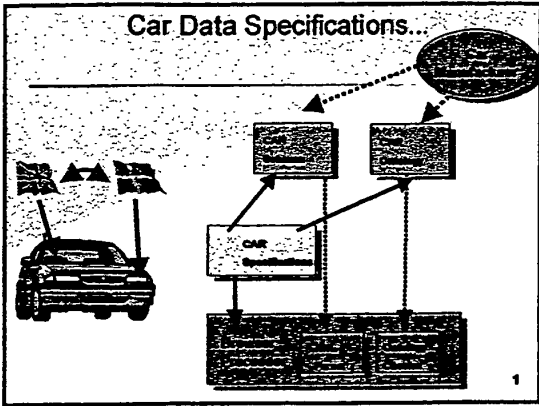
- *The following shows their influence on the use cases*

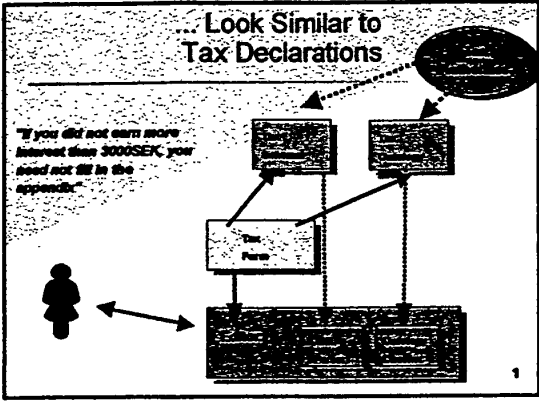
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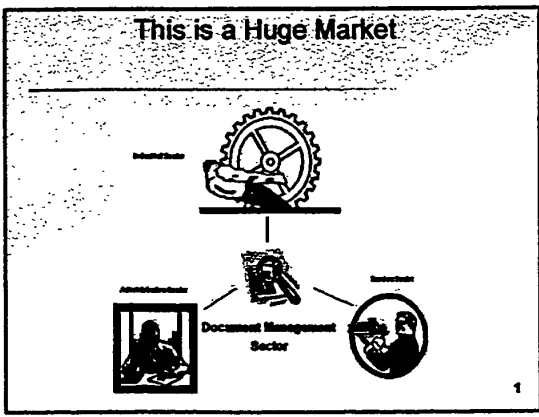
Standardized Document Processing Architecture











Technical Problem

- I want to process some documents, but it takes too long
 - Evaluation of large ontologies and large documents hard
 - Advanced compiler and generator techniques required

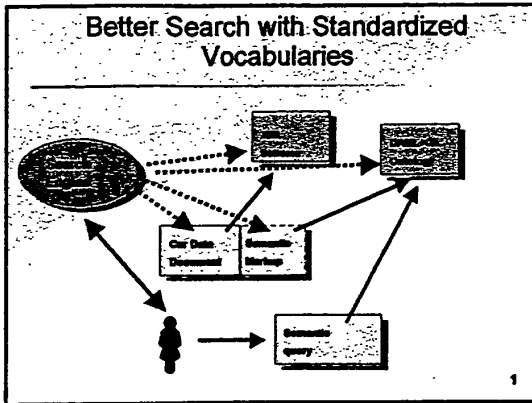
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Stakeholder Problem

- I want to share things with my friends in private
 - Intranet vs Extranet is a too simple a distinction
 - No definition of "groups" on the web possible so far
- ...but society must be secure
 - September 11 problem: crimes must be prevented
 - P2P networks cannot be controlled at the moment

1

Standardized Vocabularies



- ### Better Search on the Web
- Queries can utilize standardized ontologies
 - domain-independent ontologies such as Dublin Core (<http://www.dublincore.org>)
 - domain-specific ontologies
 - the vocabularies
 - *"Find the home page of Uwe Assmann"*
 - and their relations
 - *"Find the home page of this computer scientist, Uwe - I forgot the surname - who is working in Linköping"*
 - www.dmoz.org, the free Yahoo-like portal, builds on RDF metadata already
 - Search engines from European projects (OntoKnowledge, IBROW)
- 1

- ### Stakeholder Problem
- I want to communicate more efficiently
 - I'd like to mark up my email
 - so that it can be classified better
 - but I'm too lazy to mark up...
 - Mark up will slow down my writing
 - Solution: *Markup mining* of documents
 - Specialized knowledge mining
 - Then interactive improvement
- 1

Stakeholder Problem

- Vendor X uses a slightly different ontology than vendor Y
 - The "Tower of Babel" problem does not vanish
 - Use public standard ontologies such as Dublin Core
 - Mapping and equivalences required to map synonyms in different ontologies onto each other
 - Advanced translation techniques required

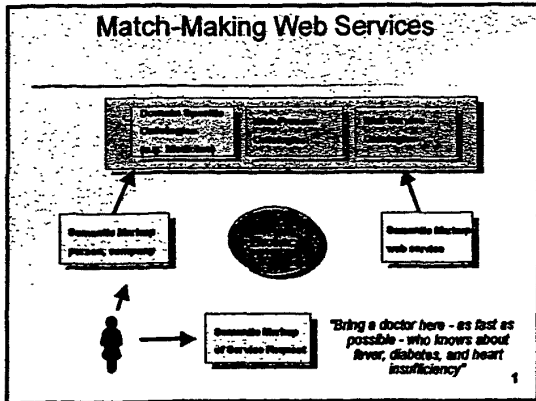
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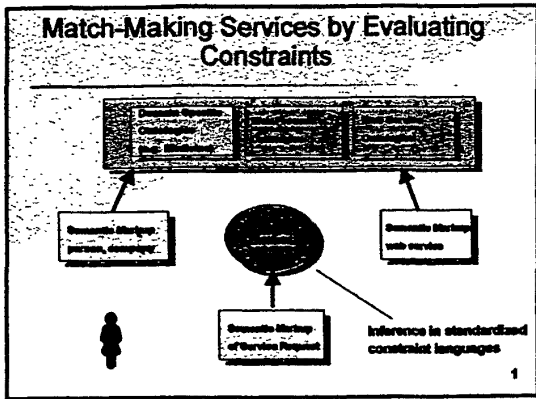
Standardized Context Constraint Languages

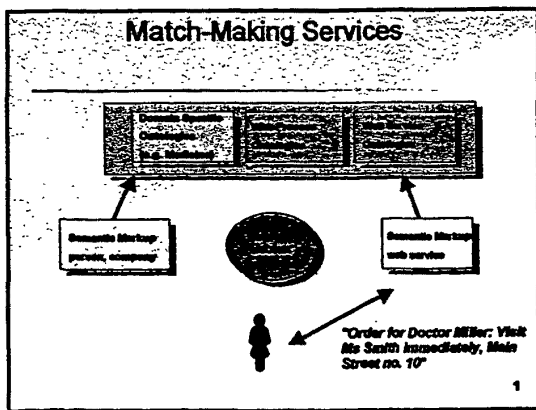
Standardized Context Constraint Languages for Web Services

- Markup of
 - User and group preferences
 - Web services (advertisements)
 - Prerequisites, consequences
 - Broker processes, partial compositions of web services
- Evaluation combines all markups
- And infers which services are executed when
- Example: DAML-S, a set of ontologies for Web Services
 - www.daml.org/services

1







Web Services and Standardization

- Requirement:
 - Uniform document processing architecture
 - Vocabularies for Yellow Pages are standardized
 - domain-independent and domain-specific Vocabularies
 - Constraint languages are standardized
- Goes beyond CORBA services

1

Stakeholder Problem

- I want to be found, but not to be compared...
 - Shopping Agents are the enemies of every business
 - They allow for comparison of prices
 - Companies invent dirty tricks not to be comparable
 - Format of outputs in irregular forms
 - No solution...

1

Stakeholder Problem

- I want to control who knows about me (Information self-determination)
 - Abuse of information must be prevented (totalitarian governments, economic competitors)
 - The web is one-way: no notification if somebody observed you

1

Stakeholder Problem

- I want web services, but do not want to be traced...
 - I want anonymous money
 - I don't want to be traced to my location
 - I want anonymous web services

1

Outlook

The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.

M. Weiser

Will the Semantic Web Be a Profound Technology?

- The "Semantic Web" extends the "running horse" XML and promises better end-user services by
 - Standardized document processing architecture
 - Standard vocabularies
 - Standard context constraint languages
- However:
 - The stakeholder, technical and security problems should not be underestimated
 - It will take a long time to make the technology "invisible".

1

Resources

- www.daml.org The DAML+OIL committee
- www.w3c.org/2001/sw/ The Semantic Web activity of the W3C
- www.semanticweb.org A nice portal
- www.ontology.org A website for ontologies
- www.dublincore.org The Dublin Core Ontology
- www.ontoweb.org The OntoWeb European Network
- www.easycomp.org (UKA and LIJ's project on component composition for the Web)
- www.ibrow.org IBROW Project
- www.ontoknowledge.org (OIL), www.ontobroker.org, www.wonderweb.org
- www.kth.se/sw/ The Swedish Semantic Web Initiative (SWEB)

1

Bibliography

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- D. Foray. Ontologies - a Silver Bullet for Electronic Commerce. Springer, 2000.
- S.K. McCreath et al. Semantic Web Services. IEEE Intelligent Systems, March 2001.
- K. Sævi. The Semantic Web - Challenges, Opportunities, and Challenges. Talk OntoWeb Kickoff, Crete, June 2001.

1

The End

Proposal for a Study on Socio-economic Impacts of Scientific, Technical, and Medical Information

Proponent—Canada Institute for Scientific and Technical Information (CISTI)

1. Introduction

A project on the socio-economic impacts of Scientific, Technical, and Medical (STM) information is proposed, to be carried out for International Council for Scientific and Technical Information (ICSTI). The project will address pertinent issues relevant to ICSTI's vision and objectives.

STM information organizations are currently challenged to demonstrate the value of their role, particularly in the context of the evolving field of electronic data and information transmission and storage. ICSTI member organizations are involved in providing STM publishing and library services, with long-term national and international consequences on economic, research, scholarly and social progress. There is a need to clearly determine the extent and value of these socio-economic impacts, to describe credible and effective ways of measuring these impacts, and to identify the appropriate strategic and operational role for measurement of impacts as it applies to STM information organizations.

2. Purpose of the Project

The purpose of the project is to identify the socio-economic impacts of STM information on the knowledge-based economy, and to determine the role and long-term impacts of STM information organizations in the national innovation system.

3. Rationale

One of ICSTI's aims is to "provide leadership in promoting recognition of the value of scientific and technical information to the world's economic, research, scholarly and social progress". Members of ICSTI share the goal of extending the knowledge and capability of the STM information community to examine its own role and to determine its long-term impacts. As such, it is important to identify credible and effective ways for determining impacts of STM information on the knowledge-based economy.

4. Objective

The study objective is to address three main questions:

- What are the social and economic impacts of STM information?
- How should we measure these impacts?
- How does the measurement of impacts of STM information apply to national STM information organizations?

5. Research Themes

Research themes that will be pursued as part of the study include the following:

- contributions of STM information to the national innovation system
- role of STM information in competitive technical intelligence
- value of STM information to small and medium-sized enterprises (SMEs)
- impacts of STM information on research, development and commercialization of products
- social and economic implications of STM information for the knowledge-based economy
- long-term value of STM information organizations for their respective countries
- significance of the library and publishing sides of STM information organizations.

The literature on evaluation of impacts of STM information has to some extent addressed these research themes, but not in a handy or practical way for STM information organizations to apply the analysis of impacts to their particular strategic or operational needs.

6. Results

The project will result in a comprehensive report that addresses the key questions and study themes indicated above. An interim report on preliminary findings will be presented to the TACC meeting in Paris (winter 2003). A final report and presentation will be prepared for the May 2003 ICSTI annual conference in Ottawa. A discussion panel will be organized to discuss results and findings of the research at the Ottawa event, and contributions will be invited on topical articles related to performance measurement and socio-economic impacts of STM information.

7. Resources

It is proposed that the project would be done by a consultant on behalf of ICSTI (see consultant profile in section 10 below). Canada Institute for Scientific and Technical Information has already committed Cdn\$25,000 to undertake this study in the Canadian context. Matching funds of an additional US\$25,000 are being sought to broaden the scope of this study to include other members of ICSTI, and to address common STM information issues related to the research themes identified above.

8. Research Design

To begin with, a detailed study framework will be prepared to define the appropriate scope of the study, and to contextualize it within the international ICSTI framework. As part of the research, key informants from ICSTI member organizations will be interviewed, and a comprehensive literature review of best practices in measuring socio-economic impacts of STM information will be conducted. This research will include reviewing and distilling the state-of-the-art in measuring STM information impacts and the contribution of STM to the knowledge-based economy and national innovation systems.

The consultant will compile and analyze the results of the review of literature and the key informant interviews by each of the research themes listed in Section 5 above. And, the consultant will prepare a report that addresses the three main questions of the study—namely: What are the social and economic impacts of STM information? How should we measure these impacts? How does the measurement of impacts of STM apply to STM information organizations? The headings and sub-components of the report will be consistent with these questions, and with the research themes to be addressed.

A presentation will be prepared by the consultant and delivered as an interim report to the TACC meeting in Paris (winter 2003), and a final presentation and report will also be prepared and delivered by the consultant for the May 2003 ICSTI annual conference in Ottawa.

9. ICSTI Member Collaboration

It is understood that key informants from participating ICSTI member organizations would be willing to share their knowledge and expertise during an interview with the consultant, and/or by completing a questionnaire about their organization's requirements for socio-economic impacts analysis. TACC will act as the review panel and steering committee. CISTI will be the lead contact organization.

10. Consultant Profile

Hussein Rostum, President of Bytown Consulting (Ottawa), is the proposed principal consultant for this project. He is eminently qualified to undertake this work on behalf of ICSTI. Mr. Rostum's consulting practice areas focus on providing evaluations of socio-economic impacts of government policies and programs; strategic and market research on the impacts and uses of technology for government and private sector clients; operational review and capacity analysis; and standards and regulations consulting. He is an expert in evaluation and review, quality management practices, strategic and business planning, performance measurement and benchmarking analysis.

As a consultant Mr. Rostum has advised many Canadian federal government departments and agencies, such as Natural Science and Engineering Research Council, National Research Council, Social Sciences and Humanities Research Council, Canadian Biotechnology Advisory Committee, Information Highway Applications Branch (Industry Canada), Medical Research Council of Canada, Department of National Defence, Natural Resources Canada, Department of Foreign Affairs and International Trade, Canadian Heritage, Treasury Board Secretariat, Transport Canada, Human Resources Canada, Agriculture and Agri-Food Canada, Transport Canada, and others.

He has also led projects for international organizations, such as the World Bank and the Asia-Pacific Economic Cooperation (APEC) Forum, and he has consulted for private organizations such as A.C. Nielsen, Bell Canada, Canadian Association of Broadcasters, KPMG Consulting, PricewaterhouseCoopers, and Nordicity Group Ltd.

During his twenty years of consulting experience, Mr. Rostum has conducted many studies involving S&T government organizations and R&D agencies. He is very familiar with the work of CISTI and other STM information providers around the world. He

conducted a very well received benchmarking study of STM information organizations for CISTI, which contributed to the evaluation and planning processes of that organization. He has also recently completed a major study on “Measuring and Ensuring Excellence in Government Science and Technology” for the Council of Science and Technology Advisors—an advisory group that advises the federal Cabinet of Canada on S&T issues.

Many of the evaluations and reviews conducted by Mr. Rostum involved consultation with the highest levels of management in federal departments and agencies, and in private sector organizations. He has been responsible for strategic presentations of reports and briefings to many executive committees and senior managers.

During the past four years, Mr. Rostum has developed expertise in Internet market research and e-business. He has led a syndicated national Internet consumer market research study with A.C.Nielsen Canada; an e-commerce applications study for Bell Canada and Stentor; a benchmarking analysis study of Internet-enabled electronic kiosks for Bell Canada; an e-business comparison between Canadian and U.S. small and medium-sized enterprises; a needs assessment for S&T online information services for Canada Institute for Scientific and Technical Information; a “standards-online” needs assessment study for the Standards Council of Canada; a survey of the communications and information technologies industry; and an evaluation study for the SchoolNet and Learnware program for Industry Canada.

Mr. Rostum has contributed to a number of organizations in addressing Internet and e-business services and strategies, including participating on panels and speaking at workshops for Canada Mortgage and Housing Corporation, the Ontario University Registrars Association, the Electronic Commerce Committee of Industry Canada, Canadian Advertisers Research Federation, Multimedia Conference (Toronto), Bell Canada, National Research Council, Ottawa Centre for Research and Innovation (OCRI) and others.

Mr. Rostum will conduct all the tasks listed in this proposal, including preparing the draft and final study reports, and preparing and presenting the results of the study for TACC and for the ICSTI annual conference in Ottawa.

Categorization of Science: Comparison of Four National Web Sites

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Background: Based on the discussions at the February 2002 ICSTI meeting, an investigation was undertaken to compare category schemes for science. The Objective of the Project is to see if harmonization of category schemes for top-level national science sites would be practical and useful. The UNESCO Thesaurus was also included in the comparison based on the specific request made in February.

Approach: In addition to the UNESCO Thesaurus, four national category schemes were identified Australia (TAGS: Thesaurus of Australian Government Subjects); Canada (CISTI Virtual Library); the United Kingdom (ukonline.gov.uk); and the United States (science.gov). The American Association for the Advancement of Science (AAAS) Fellows Web site was also included in the comparison as an international, scientific society's category scheme. A table was created identifying each of the four sites, their URLs, and their subject coverage. Observations about each site were also included (see Attachment 1).

For each of the sites, individual tables were created showing the top-level categories and their subcategories (see Attachments 2A-E). From these five charts, the topmost level was pulled and placed into a table (see Attachment 3) that allowed comparison of the four sites' main category schemes along with the science category scheme from the UNESCO Thesaurus.

Findings:

- Only four national level Web sites were identified (we welcome the contribution of others)
- Very different approaches were taken across sites
- Canada and the United States have a number of similarities
- It might be possible to develop a common top-level scheme for cross-national navigation
- The UNESCO Thesaurus could also be considered as a guideline in terms of its approach, but it would have to be modified/harmonized with other national approaches
- The AAAS site is more detailed than the national sites but provides an interesting option.

Recommendation: A discussion should be held to determine the value in trying to develop compatibility across national category approaches. If the decision is made to go forward, a committee of interested parties should be appointed.

Attachment 1: Categorization of Science--Comparison of Four National Web Sites

Site	Basic Intent--Coverage	Observations
<p>Canada: CISTI Virtual Library http://www.nrc.ca/zone/cisti/special/hotlinks/index_e.shtml</p>	<p>Canada's National Research Council portal. Gateway to major science and technology information Websites. Includes Canadian and other important sites.</p>	<p>Canada and the U.S. have most similarities, although Canada has fewer subdivisions. Has top level and two subcategory levels.</p>
<p>Australia: TAGS: Thesaurus of Australian Government Subjects http://www.govonline.gov.au/projects/standards/TAGS/TAGS.htm</p>	<p>Subject index for the portal to Australian Government information</p>	<p>A thesaurus with broader and narrower terms. Available in PDF. Is not a direct correlation with government portal categories, which has categories like "Strategy", "Standards", and "E-procurement". Has 15 subject categories for terms, of which four are science or technology related.</p>
<p>United Kingdom: ukonline.gov.uk information http://www.ukonline.gov.uk/Quickfind/QFHome/1,1585,~ZWF%252BZW5%252Bfn5%252Bfn5%252Bfg%253D%253D~27489cbca46d159d4580e67273422ac7e8c920da,00.html</p>	<p>Portal to UK government online information and services</p>	<p>Of 12 top-level topics, four are science or technology related. Within each, key web sites are pulled out before providing subtopic listings. Only has top level and one subcategory level.</p>
<p>United States: science.gov http://www.science.gov/</p>	<p>"Gateway to authoritative selected science information provided by U.S. Government agencies, including research and development results."</p>	<p>12 top-level categories. Two levels of subcategories. Most similar to Canada.</p>

Source	Eval. #	Title	Year Pub. (Y/N)	ABET (0,1,2,3)	CA(0-7)	Subj.	Lang.	Titl.	Publ. (Y/N)	Scope (E/M/B/O)	EL Advise (Y/N)	Scope BIOB (P/B/O)	Ed. Advise (BIOB/Y/N)	Remarks
Evaluation: new journals for EMBASE/ BIOBASE 2003.														
23550	001	Nature Reviews Drug Discovery	Y	2	7	A.3	engl	engl	n	GENERAL	Y	o	n	New 2002.
23552	002	Nature Reviews Cancer	Y	2	7	C.1.3/87	engl	engl	n	GENERAL	Y	o	n	New 2002.
23553	003	Nature Reviews Immunology	Y	2	7	E.1/86	engl	engl	n	GENERAL	Y	o	n	New 2002.
23554	004	Nature Reviews Neuroscience	Y	2	7	E.1/89	engl	engl	n	GENERAL	Y	o	n	New 2002.
23555	005	NeuroMolecular Medicine	Y	3	7	E.1/E.9/89/84	engl	engl	n	GENERAL	Y	o	n	New 2002.
23556	006	Cardiovascular Toxicology	Y	3	7	A.2/C.1.1/80	engl	engl	n	GENERAL	Y	o	n	New 2002.
23557	007	Clinical Reviews in Bone and Mineral Metabolism	Y	2	6	E.2/83	engl	engl	n	GENERAL	Y	o	n	New 2002.
23558	008	Cancer Cell	Y	3	7	C.1.3/E.3.3/87	engl	engl	n	GENERAL	Y	o	n	New 2002.
23559	009	Cerebellum	Y	3	7	E.1/88	engl	engl	n	GENERAL	Y	o	n	New 2002.
23560	010	Genes, Brain and Behavior	Y	3	7	E.1/E.9/88	engl	engl	n	GENERAL	Y	o	n	New 2002.
23561	011	Photochemical and Photobiological Sciences	Y	3	7	E.3.1/E.3.3/E.11.1	engl	engl	n	GENERAL	Y	o	n	New 2002.
23562	012	Eukaryotic Cell	Y	3	7	G.4/G.5/E.9/E.3.3/8	engl	engl	n	GENERAL	Y	o	n	New 2002.
23563	013	Technology in Cancer Research and Treatment	N	3	6	C.1.3/C.9.1/87	engl	engl	n	GENERAL	Y	o	n	New 2002.
7977	014	Indian Journal of Medical Microbiology	N	3	6	E.5	engl	engl	n	GENERAL	Y	o	n	
23564	015	Noise and Health	N	3	6	C.9/B.1/8.2	engl	engl	n	GENERAL	Y	o	n	
23565	016	British Journal of Diabetes and Vascular Disease	N	3	6	C.1/C.1.1.1	engl	engl	n	GENERAL	Y	o	n	New 2001. (sister jrl to 'Br.J. of Cardiol.')
23566	017	Reproductive Biomedicine Online	N	3	6	C.4	engl	engl	n	GENERAL	Y	o	n	Print & Electr. editions.
12557	018	Journal of Psychiatric Practice	N	3	6		engl	engl	n	GENERAL	Y	o	n	New 2000.
23567	019	Korean Journal of Cardiovascular Diseases	N						n	GENERAL	Y	o	n	
13008	020	Contemporary Topics in Laboratory Animal Science	N						n	GENERAL	Y	o	n	
23568	021	New Chinese Medicine	N						n	GENERAL	Y	o	n	
23569	022	Journal of Biomedicine and Biotechnology	N						n	GENERAL	Y	o	n	New 2001
23570	023	Indian Journal of Biotechnology	N						n	GENERAL	Y	o	n	New 2002.
23571	024	Expert Review of Vaccines	Y	3	7	E.4/A.1/86	engl	engl	n	GENERAL	Y	o	n	New 2002.
23572	025	Journal of Drug Evaluation: Respiratory Medicine	Y	1	6	A.1/C.1.2	engl	engl	n	GENERAL	Y	o	n	New 2002.
23573	026	Journal of Drug Evaluation: Obstetrics and Gynecology	Y	1	6	A.1/C.4	engl	engl	n	GENERAL	Y	o	n	New 2002.
23574	027	Practical Neurology	Y	0	6	C.8.1	engl	engl	n	GENERAL	Y	o	n	New 2001.
23575	028	Pediatric Case Reviews	Y	0	6	C.2	engl	engl	n	GENERAL	Y	o	n	New 2001.
23576	029	Oncology Forum	N	2	5	C.1.3/87	engl	engl	n	GENERAL	Y	o	n	
23577	030	Asian Journal of Ophthalmology	N	3	5	C.7	engl	engl	n	GENERAL	Y	o	n	
23578	031	Journal of the Hong Kong College of Radiologists	N	3	6	C.9.1	engl	engl	n	GENERAL	Y	o	n	
23579	032	Mediterranean Journal of Pacing and Electrophysiology	N	3	5	C.1.1/E.6	engl	engl	n	GENERAL	Y	o	n	
23580	033	Sports Cardiology	N	3	5	B.1/C.1.1	ital	ital	n	GENERAL	Y	o	n	
23581	034	Anaesthesiology, Intensive Therapy	N						n	GENERAL	Y	o	n	New 2001.
23582	035	Nutrition in Clinical Practice	N						n	GENERAL	Y	o	n	
23583	036	Kosmetische Medizin	N						n	GENERAL	Y	o	n	
23584	037	International Journal of Healthcare Technology and Management	N						n	GENERAL	Y	o	n	
23585	038	Southeastern Naturalist	N						n	GENERAL	Y	o	n	New 2002. Start with 2002/1/1. See also Northeastern Naturalist.
23586	039	Scripta Botanica Belgica	N						n	GENERAL	Y	o	n	Start with 2007/21. Mono. series.
23587	040	African Journal of Aquatic Sciences	N						n	GENERAL	Y	o	n	
22080	041	Ecological Management and Restoration	N						n	GENERAL	Y	o	n	Note: active GEO.
22134	042	Forest Snow and Landscape Research	N						n	GENERAL	Y	o	n	Note: active GEO.
22082	043	Biota	N						n	GENERAL	Y	o	n	Note: active GEO.
22093	044	Advances in Marine Biology	Y						n	GENERAL	Y	o	n	Note: active GEO.
23589	045	Journal European d'Hydrologie	N						n	GENERAL	Y	o	n	
23590	046	Baltic Journal of Coleoptology	N						n	GENERAL	Y	o	n	
23591	047	International Journal of Agricultural Resources, Governance and Ecology	N						n	GENERAL	Y	o	n	
23592	048	International Journal of Water	N						n	GENERAL	Y	o	n	
23593	049	Water Quality and Ecosystem Modeling	N						n	GENERAL	Y	o	n	
23594	050	Archaea	N						n	GENERAL	Y	o	n	

CAT score determination 2003										
Eval. #:	Title:	Edit. board: (1,0)	Peer-review: (1,0)	Engl. lang. art.: (1,0)	Major publ.: (1,0)	References: (1,0)	Total points:	CAT:	Date:	
001	Nature Reviews Drug Discovery	1	1	1	1	1	5	7	14 June 2002	
002	Nature Reviews Cancer	1	1	1	1	1	5	7	14 June 2002	
003	Nature Reviews Immunology	1	1	1	1	1	5	7	14 June 2002	
004	Nature Reviews Neuroscience	1	1	1	1	1	5	7	14 June 2002	
005	NeuroMolecular Medicine	1	1	1	1	1	5	7	14 June 2002	
006	Cardiovascular Toxicology	1	1	1	1	1	5	7	14 June 2002	
007	Clinical Reviews in Bone and Mineral Metabolism	1	0	1	1	1	4	6	14 June 2002	
008	Cancer Cell	1	1	1	1	1	5	7	18 June 2002	
009	Cerebellum	1	1	1	1	1	5	7	18 June 2002	
010	Genes, Brain and Behavior	1	1	1	1	1	5	7	18 June 2002	
011	Photochemical and Photobiological Sciences	1	1	1	1	1	5	7	18 June 2002	
012	Eukaryotic Cell	1	1	1	1	1	5	7	14/06/02	
013	Technology in Cancer Research and Treatment	1	1	1	0	1	4	6	14/06/02	
014	Indian Journal of Medical Microbiology	1	1	1	0	1	4	6	14/06/02	
015	Noise and Health	1	1	1	0	1	4	6	18/06/02	
016	British Journal of Diabetes and Vascular Disease	1	1	1	0	1	4	6	18/06/02	
017	Reproductive Biomedicine Online	1	1	1	0	1	4	6	18/06/02	
018	Journal of Psychiatric Practice									
019	Korean Journal of Cardiovascular Diseases									
020	Contemporary Topics in Laboratory Animal Science									
021	New Chinese Medicine									
022	Journal of Biomedicine and Biotechnology									
023	Indian Journal of Biotechnology									
023	Indian Journal of Biotechnology									
024	Expert Review of Vaccines	1	1	1	1	1	5	7	19/06/02	
025	Journal of Drug Evaluation: Respiratory Medicine	1	0	1	1	1	4	6	19/06/02	
026	Journal of Drug Evaluation: Obstetrics and Gynecology	1	0	1	1	1	4	6	19/06/02	
027	Practical Neurology	1	0	1	1	1	4	6	19/06/02	
028	Pediatric Case Reviews	1	0	1	1	1	4	6	19/06/02	
029	Oncology Forum	1	0	1	0	1	3	5	19/06/02	

