

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)

出席國際科技資訊聯盟 (ICSTI) 2004 年會  
並參訪科技政策研究機構

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：孟憲鈺 主任

邱淑麗 研究員

陳曉怡 助理研究員

出國地區：英國倫敦、蘇格蘭

出國期間：民國九十三年五月十二日至五月十八日

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行政院及所屬各機關出國報告提要

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報告名稱：出席國際科技資訊聯盟 (ICSTI) 2004 年會並參訪科技政策研究機構

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：陳曉怡/(02)2737-7860

出國人員：孟憲鈺 行政院國科會科學技術資料中心 主任

邱淑麗 行政院國科會科學技術資料中心 研究員

陳曉怡 行政院國科會科學技術資料中心 助理研究員

出國類別：參加國際會議暨考察

出國地區：英國倫敦

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關鍵詞：國際科技資訊聯盟, ICSTI, 英國 IEE, 奈米科技

內容摘要：

本次出國主要是參加在英國倫敦召開的 2004 年國際科技資訊聯盟(ICSTI)年會，藉以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。今年年會在英國倫敦召開，會議主題為「科學資訊在技術與經濟上面臨的挑戰」(Technical and Economic Challenges of Scientific Information: STM Content Access, Linking and Archiving)，主要探討電子資訊資源網上免費檢索，網站的連結及存檔與長期使用等相關的議題。總共有來自 21 個國際重要資訊機構的 30 位會員代表與會。同時本中心利用開會期間，藉機與加拿大科技資訊局(CISTI)負責人洽談續約問題，並就合約修正草案內容達成共識，有利於雙方後續合作業務的推展。

此次行程中並順道參訪蘇格蘭奈米科技研究中心 (The Institute of Nanotechnology, ION)，藉此學習歐洲奈米科技產業界與學術界的互動經驗，並瞭解英國奈米科技的發展與應用，進而建立科資中心與 ION 的國際合作與交流關係。

本文電子檔已上傳至出國報告資訊網

## 摘要

本次出國主要是參加國際科技資訊聯盟 (The International Council for Scientific and Technical Information, ICSTI) 2004 年會，藉以瞭解世界各國資訊機構資料處理、檢索及網際網路新技術發展，吸收其寶貴經驗，以供本中心提升資訊服務品質及促進國際合作之參考。本次年會在英國倫敦召開，會議主題為「科學資訊在技術及經濟上面臨的挑戰」(Technical and Economic Challenges of Scientific Information: STM Content Access, Linking and Archiving)，主要探討電子資訊資源網上免費檢索、網站的連結，及存檔與長期使用等主題在技術及經濟上面臨的問題。本次年會總共有來自 21 個國際重要資訊機構的 30 位代表與會，除了研討會外，並有由會員組成的各委員會分別討論相關議題。同時本中心利用開會期間，藉機與加拿大科技資訊局(CISTI)洽談雙方續約問題，並就合約修正草案內容達成共識，有利於雙方後續合作業務的推展。

此次行程中並順道參訪蘇格蘭奈米科技研究中心 (The Institute of Nanotechnology, ION)，藉此學習歐洲奈米科技產業界與學術界的互動經驗，並瞭解英國奈米科技的發展與應用，進而建立科資中心與 ION 的國際合作與交流關係。

最後所提出的心得與建議將可做為科資中心未來提升資訊服務品質之參考，並促進國際合作管道更為通暢。

## 重要活動日程

日期	行程說明	接待人員
5月12日(三)	前往英國倫敦	路程
5月13日(四)	至 ICSTI 會場報到，並參加歡迎酒會	1. Ms. Eva Dimmock (主辦單位 IEE) 2. Ms. Kathryn Johnson (ICSTI 助理秘書)
5月14日(五)	參加 ICSTI 年會	開會
5月15日(六)	參加 ICSTI 年會	開會
	前往英格蘭	路程
5月16日(日)	參加 ICSTI 年會	開會
	整理資料	
5月17日(一)	參加 ICSTI 研討會	開會
	參訪蘇格蘭奈米科技研究中心 (The Institute of Nanotechnology, ION)	1.Mr. Andy Garland (資 訊部主任) 2.Mr. Del Stark (業務開 發部經理) 3.Mr. Andrew Stewart (資 訊部經理)
5月18日(二)	英國倫敦返回台北	

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## 壹、目的

### 一、出席國際科技資訊聯盟 (The International Council for Scientific and Technical Information, ICSTI) 2004 年會

ICSTI 為國際間科技資訊服務領域的重要組織，其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，同時增進國際科技資訊機構間的瞭解與合作。ICSTI 會員包括歐洲、北美及亞洲等地的重要科技資訊機構。

科資中心自 1990 年起即加入成為其會員，歷年皆由中心主任率領同仁或派員參加年會，藉以瞭解國外主要科技資訊服務機構之最新發展，並與各國資訊服務單位建立良好互動關係，進而推動國內資訊服務使達到國際水準，提升台灣在國際的學術地位。

本次會議於 93 年 5 月 13 日至 17 日假英國倫敦電機工程學會(Institutions of Electrical Engineers, IEE)舉行，出席會員將以『科學資訊在技術與經濟上面臨的挑戰 (Technical and Economic Challenges of Scientific Information)』為主題進行研討及意見交換，並尋求國際合作的管道與空間。

### 二、參訪蘇格蘭奈米科技研究中心 (The Institute of Nanotechnology, ION)

ION 成立於 1997 年，前身為『蘇格蘭奈米科技中心』，並於 2002 年 7 月贏得歐盟的四年期專案委託計畫『奈米論壇』。由於 ION 長期以來不僅扮演歐洲地區產業界與學術界間的橋樑，與世界先進國家例如美國日本的奈米研究機構與產業界亦有緊密的連結與互動。而奈米科技政策研究與創新服務係本中心近年來之重點推動業務，藉由此次參訪行程學習歐洲奈米科技產業界與學術界的互動經驗，並瞭解英國奈米科技的發展與應用，進而建立科資中心與 ION 的國際合作與交流關係。

## 貳、過程

### 一、出席國際科技資訊聯盟(ICSTI) 2004 年會

國際科技資訊聯盟(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 41 個會員單位，均為歐洲、北美及亞洲等重要科技資訊機構，今年增加印度及韓國兩個會員國。

科資中心自 1990 年起加入成為其會員，主要目的是瞭解國外主要科技資訊服務機構之最新發展，並加強與各國資訊服務單位建立良好互動與合作關係，今年由孟主任率領中心二位同仁參加。

ICSTI 2004 年會在英國倫敦舉行，由電機工程學會(The Institutions of Electrical Engineers, IEE)主辦，本次大會討論議題為「科學資訊在技術與經濟上面臨的挑戰」(Technical and Economic Challenges of Scientific Information: STM Content Access, Linking and Archiving)，主要探討電子資訊資源網上免費檢索、網站連結及存檔與長期使用等主題在技術及經濟上面臨的挑戰。總共有來自國際 21 個重要資訊機構的 30 位代表與會，其中亞洲即有中華民國、日本、韓國及印度等會員國代表 8 位參加。年會共分為兩個主軸：(1)會員大會及各委員會小組會議，(2)舉辦對外研討會(Public Conference)。

會議的前段首先由各會員單位報告其最新業務發展，再由會員分別組成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)、網站與行銷委員會 (Website & Marketing/PR Committee)及會議事務委員會 (Meeting Committee)等小組討論相關議題，並報告已完成

與正在進行中的計畫。綜合各委員會討論的重點結論為：

1. 通過下一任的會長由 European Patent Office (EPO) 的主任 Mr. Gérard Giroud 擔任。
2. 2005 年 ICSTI 年會將在莫斯科舉行，由俄國科技資訊局 (All-Russian Institute of Scientific and Technical Information of Russian Academy of Sciences, VINITI) 主辦，會議的主題包括 (1) Abstract Journals in Contemporary World: Role and Meaning, Technologies and Distribution; (2) Provision of Fundamental and Applied Sciences with Information Services; (3) Standardization of Information Services as a Mean of Integration and Cooperation。同時並決議 2006 ICSTI 年會將在德國慕尼黑舉行，由 European Patent Office 主辦。
3. ICSTI 的會員有逐年減少的情形，希望能利用 ICSTI 網站推廣尋求更多新會員加入。
4. 歐洲專利局(EPO)將與美國專利局(U.S. Patent Office)及日本專利局(Japan Patent Office)共同擬訂國際專利分類法 IPC (International Patent Classification)，未來會綜合世界專利局 (World Intellectual Property Organization, WIPO) 的分類法，完成一套大家都適用的新專利分類法，提供各國使用。
5. 去年由加拿大 CISTI 主導的「Socio-Economic Impact of STM Information 研究計畫」已執行並完成報告撰寫，若有經費，將會印製成書。

科資中心孟主任在會上除了報告本中心最新業務發展動態外，並提出增加 ICSTI 新會員的構想，建議應考慮邀請產業界來參與 ICSTI 年會，但要給他們一些誘因(Incentive) (例如使用各資訊機構的資訊時給與優惠)。同時孟主任亦利用會中各種場合與各



國資訊機構負責人交換意見，拓展交流合作管道，例如與會單位中來自美國能源部的科技資訊機構(US Department of Energy, Office of Scientific & Technical Information)，表明樂於與本中心建立合作關係，雙方將先從機構簡介及出版品清單的交換開始，未來期望能有更進一步實質合作與交流。

此外，開會期間我們順便藉機和與本中心訂有長期合作協定的加拿大科技資訊局(CISTI)主管 Dr. Bernard Dumouchel 討論協定修正案一事，新版協定草案將大致維持原狀，僅作小幅修正，例如今後 CISTI 同意在北美地區強化中心科技政策創新研究相關出版品的推廣（如奈米科技專利分析系列等），以提升科資中心在該地區的能見度；同時，雙方互訪及訓練所需經費，包含來回機票、住宿費或日支費，將改為由接待方負責；另外，雙方將在合作研究案與共同舉辦國際或地區性研討會上作進一步協商與推動，最後科資中心也願意接受 CISTI 的委託進行研究計畫等。此項協定修正案目的在推動科資中心與 CISTI 未來的合作關係能更具體落實，跳脫科資中心被動性的資源提供角色，達到主動在國際資訊服務社群中發聲的目標。

會期的最後一天則是舉辦研討會，議題為「科學資訊在技術及經濟上面臨的挑戰 (Technical and Economic Challenges of Scientific Information: STM Content Access, Linking and Archiving)」，主要探討電子資訊資源網上免費檢索、資訊網站的連結及存檔與長期使用等主題在技術及經濟上面臨的問題。參加的人員共有 50 多位，包括 ICSTI 20 多位會員及來自英國、荷蘭、澳大利亞、日本等國的 30 多位專家。本次研討會共分成下列三個主題進行，總共發表 16 篇報告(請參見附件)，簡單摘要如下：

Session 1: Open Access (免費檢索網上電子資訊資源)

最近英國國會已針對免費上網檢索 e 化的研究論文提出關切

質詢，可見此議題已引起大家重視與討論。本場次是探討已將 e 化的期刊置於網上且提供免費查詢的出版商及資料庫製作商其新的商業經營模式的利弊得失及在經濟上及技術上面臨的問題。

#### Session 2: Easily Accessible Content and Linking (簡易檢索電子資訊資源與網站連結)

由於越來越多資料在網站上出版，造成很多查尋及連結的問題，因此資料庫製作商必須快速將期刊的書目上網並與全文資料庫系統自動連結，同時亦需要與其他相關資訊系統連結，才能滿足使用者即時的需求。例如美國的 AIP (American Institute of Physics) 和英國的 CABI Publishing，就將其書目資料置於網路上，再利用 Google, Scirus 等搜尋引擎(search engine)，以提高其書目被使用率，進而連結全文資訊庫系統，提供全文下載或列印等服務。同時亦與 Web of Science, Chemical Abstracts 及 CrossRef 等資訊系統連結，以提供快速的高品質資訊服務。

#### Session 3: Archiving, Content Preservation and Long Term Access (電子資訊資源的存檔與長期使用)

科技資訊數位化的結果也帶來其存檔(Archiving)及長期使用等相關問題。本場次首先由 IEE 公司報告其執行「Inspec 過期期刊(1898 至 1968 年)全文電子化計畫」的情形，包括處理的內容、數量、遭遇的困難及問題(例如書目控制、原稿錯誤、格式不一及分類索引等)，可作為未來有意執行類似計畫的單位參考。

其次由 Institute of Physics (IOP) 介紹其將全世界最重要的物理研究過期期刊(1874-2003)數位化的情形，及未來面臨的商機及挑戰，同時亦報告其推廣促銷產品的管道(例如利用 e-marketing，網站及電視廣告，或直接 e-mail 給潛在客戶(Potential User)等及其針對不同的客戶擬訂的收費方式)。單是 2003 年就有 20 萬篇文章被下載或列印，可見其推廣頗為成功。

最後由 Elsevier 公司報告其 e-journal 及 e-contents 的存檔 (Archiving) 及長期使用的政策，同時介紹其「回溯過期期刊數位化計畫(YOAS)」的執行情形。

## 二、參訪蘇格蘭奈米科技研究中心(The Institute of Nanotechnology, ION)

蘇格蘭奈米科技研究中心成立於 1997 年，其前身為『蘇格蘭奈米科技中心』(Centre in Scotland for Nanotechnology)，為世界上專門整理奈米科技資訊與提供奈米科技相關服務的創始機構之一。藉地利之便，ION 長期以來不僅扮演英國地區奈米產業界與學術界間的橋樑，與歐洲、美洲甚至亞洲地區先進國家的奈米研究機構與產業界亦有緊密的連結與互動。為此，ION 於 2002 年 7 月贏得歐盟的四年期專案委託研究計畫『奈米論壇』(Nanoforum)，總預算為 270 萬歐元，任務為領導大歐洲地區的奈米連網，除了普遍提升該區域奈米科技的科普教育之外，同時也將強化歐洲奈米科技研究的互動與合作，替產業界與學術界尋找有利的互動模式。

為達成上述目標，ION 建置了一套完整的服務機制，其提供的服務內容如下：

1. 提供最新而且完整的資訊給社會大眾
2. 舉辦新興科技相關議題的國際型研討會
3. 蒐集市場情報
4. 宣傳與推廣商機
5. 制訂研究方向與協調合作研究案
6. 提升奈米科技的教育與訓練水平

參訪過程一開始，先由孟主任以『中華民國奈米科技產業先期規劃工作』為題作大約 20 分鐘的簡報，讓與會的三位 ION 主管 (Mr. Andy Garland/資訊部主任，Mr. Del Stark/業務開發部經理，Mr. Andrew Stewart/資訊部經理) 對台灣的奈米科技發展有初步的認

識。孟主任除了介紹台灣的奈米國家型科技計畫之外，更將科資中心近年來在奈米科技政策研究與創新服務方面的成果，向與會的三位 ION 主管作扼要的說明。

由於 ION 目前掌握的資訊資源大半來自於歐洲大陸與美國等先進國家，對於亞洲地區的情形並不清楚。因此三位主管在聽了孟主任的簡報之後，即刻對於開發亞洲的資訊市場表示高度的興趣。除了提出許多有關台灣奈米科技發展現況的問題之外，也表示 ION 下一步希望能將歐洲的奈米科技資訊和亞洲甚至紐澳地區接軌，完成全球性的奈米科技相關資料庫。

為此，ION 當場提出與科資中心簽訂合作備忘錄的建議。ION 業務開發部經理 Mr. Del Stark 表示，由於科資中心的奈米科技創新服務內容與 ION 在歐洲地區提供的服務非常相似，因此若透過備忘錄的簽訂，整合兩機構的資源及服務經驗，將有助於雙方未來的業務拓展。

Mr. Del Stark 進一步表示，ION 將在近日內擬定一份備忘錄草稿，待孟主任回國之後，雙方再以電子郵件的方式進行內容修訂，待達成共識之後便可以進行簽訂儀式。經初步討論，雙方同意備忘錄內容將至少包含下列合作項目：

1. 資訊交換
2. 資料庫內容交換以及雙方願意擔任該地區產官學界的聯絡橋樑以利業務推展
3. 人員互訪
4. 舉辦雙邊研討會
5. 合作研究案的執行

參訪行程的最後，ION 資訊部主任 Mr. Andy Garland 表示計畫在十一月份的時候訪問台灣奈米科技相關的研究機構與廠商，希望屆時科資中心能夠協助相關聯繫事宜。

### 參、心得與建議

- 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參與，共同討論最新科技資訊服務發展相關議題，對增進國際科技資訊機構間的瞭解與交流合作有所助益，本中心參加亦可藉機拓展資訊交流合作單位。
- 二、 網上免費檢索 e-journal (Open Process)是未來的趨勢，技術上不會有問題，但是實質上將面臨製作成本及版權的相關問題。
- 三、網上技術如此進步，一站服務到底(One stop shop)的方式是必然的趨勢，期刊全文將隨時隨地可獲得，這將會影響各國資訊服務機構提供全文服務的業務。
- 四、未來 e-journal 將會慢慢取代紙本的期刊，因此各館在訂購 e-journal 時，必須同時兼擁有其存檔權(Archiving)及使用權(Long term access)才不會喪失權益。
- 五、由於愈來愈多的 User 利用網上查尋研究資料，因此有些出版機構(例如美國物理學會 AIP)已尋求與 Google 商業搜尋引擎合作，增加其研究資料被查詢的機會，使其廣為大眾使用，成效不錯，值得學習。
- 六、科資中心應加強推廣促銷產品的管道，例如利用 e-marketing，網站及電視廣告，或直接 e-mail 給潛在客戶(Potential user)等方式，拓展產品銷售服務。
- 七、主辦單位 IEE 費盡心思安排招待的英國中古世紀 style 的 Council Dinner，非常具有該國特色，建議本中心未來如舉辦類似國際會議應安排具台灣特色的節目如觀賞山地舞等。
- 八、由於 ION 地處歐洲核心地帶，與歐洲大陸和英格蘭都有密切的互動關係，加上 ION 的業務與科資中心的部分業務同質性相當高，因此若能善用雙方未來的合作關係，相信能將科資中心的國

際策略聯盟擴張到歐洲地區，以補強科資中心國際版圖的空缺。

九、由於 ION 是一個由 13 名員工組成的小型機構，並沒有培育自己的研究人才，大部分都是透過專案委託計畫，與外界的產學研界互動後，再將研究成果轉換成加值的內容，進而服務外界。類似模式值得小型企業或財團法人如科資中心這樣組織精簡的機構作參考。

十、若 ION 資訊部主任 Mr. Andy Garland 真能在十一月成行赴台訪問，科資中心除了允諾扮演聯繫的角色之外，也可以藉機積極參與 ION 與其他類似工研院等研究單位的互動，尋找拓展業務方向的可能。

## 肆、附錄

### ICSTI Public Conference Theme: Technical and Economic Challenges of Scientific Publishing: STM Content Access, Linking and Archiving)

#### Programme and Papers:

##### **SESSION 1: Open Access**

**Open Access: Sustainable Business Models and Ethical Imperatives**  
*Hugh Look, Senior Consultant, Rightscom Limited*

**Open Access – who pays the piper?**  
*Robert Campbell, President, Blackwell Publishing*

**Taking a Leaf out of Houdini's Book**  
*Jan Velterop, Publisher, BioMed Central*  
**Open Access – One more challenge, one more opportunity**  
*Mark Furneaux, Managing Director European Operations, CSA Europe*

**The Technology Behind Redistributing the Cost of Online Publishing**  
*Geoffrey Bilder, Chief Technology Officer, Ingenta Ltd*

**Is Open Access the Solution?**  
*Prof Charles Oppenheim, Professor of Information Science, Loughborough University*

##### **SESSION 2: Easily Accessible Content and Linking**

**Links Add Value to Research Publications**  
*Tim Ingoldsby, Director of Business Development, American Institute of Physics*

**The Role of Bibliographic Databases in the Resource  
Discovery and Linking Process**

Andrea Powell, *Product Development Director, CABI Publishing*

**CrossRef: Virtual Integration for Scholarly Content**

Ed Pentz, *Executive Director, CrossRef*

**Digital Identification – the new ISBN**

Shane O'Neill, *Managing Director, m Parliaments, Assemblies &  
Official Publishing Edivision TSO (The Stationery Office)*

**Full Text Linking at Loughborough University Library– a  
User Perspective**

Chris Bigger, *Academic Services Manager (Engineering),  
Loughborough University*

SESSION 3: Archiving, Content Preservation and Long Term  
Access

**SESSION 3:**

**The Past is a Different Database – They do things differently**

**there**

Jeff Pache, *Inspec Electronic Product and Service Development  
Manager, The IEE*

**An archive of Physics: 130 years of scientific research  
online**

Tony O'Rourke, *Assistant Director, Journals  
Institute of Physics Publishing Ltd. Bristol, UK*

**Digital Archiving at Elsevier**

Joep Verheggen, *Managing Director, ScienceDirect*

**Archives, Repositories, and the Effects of Library Time**

David Seaman, *Executive Director, Digital Library Federation*



### **SESSION 1: Open Access**

Moderator – Sally Morris, *Chief Executive, The Association of Learned and Professional Society Publishers (ALPSP)*

**Sally Morris** has been Secretary-General of the Association of Learned and Professional Society Publishers since August 1998. During that time the Association's membership has more than doubled and its activities have grown substantially.

For the previous three years she was Director of Copyright and Licensing for John Wiley and Sons Ltd, where she played an active part in drafting the PA-JISC model licence for electronic journals. Before that she was Journals Director at Churchill Livingstone, then part of Longman; she spent 11 years building up and managing a programme of some 50 medical and nursing journals and newsletters. In earlier years she worked in a wide variety of types of publishing, from school textbooks and reference books to poetry, novels and books on Scotland.

She has degrees in English and Medieval Studies from the Universities of Cambridge and York, and is a member of the Chartered Institute of Management. In her spare time she is an enthusiastic performer of early music.

### **Session Synopsis**

Open Access - free online accessibility of research papers - is much in the news, and is currently the focus of a Parliamentary Inquiry in the UK. Open Access can be achieved in two ways: either author self-archiving of their individual papers in parallel with publication in traditional subscription-based journals, or the conversion of journals themselves to a free-to-access business model, where costs are covered by payment on behalf of the author rather than on behalf of the reader. This session focuses primarily on the second approach; the speakers will look at the real issues behind the Open Access debate, and will examine the pros and cons and the economic and technical implications of this alternative business model from the perspectives of both primary and secondary publishing.

**Open Access: Sustainable Business Models and Ethical Imperatives**  
Hugh Look, *Senior Consultant, Rightscom Limited*

For the past nine years, **Hugh Look** has been a consultant, writer and lecturer working in the technology, media and publishing industries. He is currently undertaking a study of the competitiveness of the European publishing industries for the European Commission's Enterprise DG. Before becoming a consultant, he held senior management positions at Learned Information and Longman Cartermill.

**Synopsis**

The Open Access debate is already one of the most heated seen in the field of scholarly communications. There is some very clear thinking and questioning, and more than a little rhetorical posturing. What is fascinating, however, is the extent to which the debate focuses on a melange of ethical and pragmatic issues. In this talk I aim to consider both types of issue, but paying particular attention to the fault-lines that occur where there is a tension between ethically-driven and business-driven practices. I will attempt to set some aspects of the debate in the context of recent thinking about the nature of the business relationship between enterprises and their customers, where parts of the communication chain can be monetised, and who benefits from that monetisation. I will also look at some alternative models that might be used to charge for content.

### **Open Access – who pays the piper?**

Bob Campbell, *President, Blackwell Publishing*

**Bob Campbell** joined Blackwell Science directly from university in 1968, became Editorial Director in 1978, Managing Director in 1987 and President of Blackwell Publishing in 2001. Always interested in new technology and copyright, which led to being Chairman of the Adonis Consortium throughout the 1980s. Author or co-author of three books on publishing and a range of articles. Past Chairman of the STM Association. Currently Treasurer of CrossRef, Board Member of the Publishers Licensing Society, Trustee of INASP, and on the Council of the Publishers Association and the JISC.

### **Synopsis**

What do journal authors want? How are status and recognition achieved? What do pay-to-publish journals need to offer authors? And will pleasing authors be their downfall? Will pay-to-publish restrict the author's freedom. How will pay-to-publish funding be governed? If a journal changes to the pay-to-publish model will it lose or gain status?

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## **Taking A Leaf out of Houdini's Book**

Jan Velterop, *Publisher, BioMed Central*

**Jan Velterop** is Publisher of the BioMed Central Group, a group of companies within the Current Science Group. Throughout the 1990s he was the Managing Director of Academic Press Limited, where he was responsible for taking forward the highly successful and innovative IDEAL project which was one of the first e-journal initiatives. IDEAL was the model for ScienceDirect and subsumed in it with the acquisition of Academic Press by Elsevier. He previously worked at Macmillan Publishers, where he was the Publishing Director of Nature Publishing Group and President of Nature Inc, and at the Dutch Media Group, Wegener, where he was the Managing Director of one of their newspaper titles, and at Elsevier Science, as publishing editor.

### **Synopsis**

Open Access is necessary for science and beneficial for society at large, yet being "locked in by a chain of myths". I will address those myths, how they are related to each other, and offer ways to "break the chains". Some of the myths addressed are:

- The role of publishers in publishing research information is large and justifies the high costs associated with it
- The publisher is the guardian of scientific quality of articles published
- Copyright is important for research articles and must be protected
- Nobody protects copyright better than a publisher
- Publishers need to solve the archiving problem
- Open Access poses dangers of slipping academic standards and lapsing into vanity-publishing
- Open Access lacks a sustainable business model

The traditional model ain't broke, so doesn't need fixing.

**Open Access – one more challenge, one more opportunity**  
Mark Furneaux, *Managing Director European Operations, CSA Europe*

**Mark Furneaux** is Managing Director of CSA European Operations in Oxford. Mark joined CSA by acquisition in 1996, having been previously Director of Materials Information. He has been in the electronic publishing industry for over 20 years.

**Synopsis**

The paper will look at the opportunities provided by open access for secondary publishers, using CSA as an example. The role of the secondary publisher is to provide the researcher with access to high quality content, regardless of media or funding source. As a result open access provides secondary publishers with new sources of information and further opportunities for full-text linking. The key criteria for inclusion in the A&I databases are discussed, but are not necessarily impacted by the open access debate. Issues of citing, archiving and version control are concerns for the secondary publisher and end user alike. CSA's own Internet Database Service provides reference to the primary literature and capability for linking from the abstracting and indexing records to the full text. Customers with licensed access to both CSA and the full text experience seamless linking between the two sources.

**The Technology Behind Redistributing the Cost of Online Publishing**  
Geoffrey Bilder, *Chief Technology Officer Ingenta Ltd*

**Geoffrey Bilder's** interest in scholarly technology began at Brown University, where he co-founded the University's Scholarly Technology Group, an organisation charged with supporting "the development and use of advanced information technology in academic research, teaching and scholarly communication." He then worked for the Monitor Company, a management consultancy based in Cambridge, MA and for Dynamic Diagrams in Providence, RI, prior to Ingenta's acquisition of the Company in 2001.

**Synopsis**

In many respects the Open Access movement is a reaction to a perceived unfairness in the distribution of costs (and, in some cases, to outright profiteering). Current experiments in open access mostly seem to be experiments in redistributing publishing costs away from the library to either the author, to institutions by proxy (via the author), to institutions directly (institutional archives), or to the taxpayer (proposed mandatory licensing schemes, etc). However, the cost remains, and in some cases - such as in author-funded publishing - the burden of cost appears to be distributed just as unfairly as before. In all cases, in order to distribute the cost of publication fairly one has to have technology that is able to distinguish between types of users and their roles. So, for example, in a traditional online publication you have to be able to distinguish between a subscriber and a non-subscriber. In an author-funded publication you may want to be able to distinguish authors from corporations, public universities, private universities, small liberal-arts colleges, universities in developing countries, etc. From Ingenta's perspective the technology that allows you to distribute the cost of an online publication fairly is the same whether you are talking about a subscription-based journal or an open access journal. We believe that open access journals are going to have many of the same technology requirements as their traditional online brethren.

## **Is Open Access the Solution?**

Prof Charles Oppenheim, *Professor of Information Science, Loughborough University*

**Charles Oppenheim** has been Professor of Information Science at Loughborough University since 1998. Prior to that, he has held a variety of posts in academia and the electronic publishing industry. He has been involved in legal issues in information work since the mid 1970s. He is author of "The Legal and Regulatory Environment for Electronic Information" (Infonortics, 2001) and the regular "Lislex" column in the Journal of Information Science. His publishable hobbies include collecting interesting T shirts.

### **Synopsis**

Open Access – both in the form of journals and in the form of Institutional or Subject-based Repositories – has been widely touted as a possible solution to the so-called "serials crisis", i.e., the squaring of the circle between ever rising journal subscription costs and library budgets that barely grow over time. However, Open Access is not simply an intriguing response to the serials crisis; in the eyes of many of its proponents, it also has a moral imperative, as it allows – in principle – free access to the world's research literature for millions of people around the world who have Internet access but do not have ready access to hard currency.

The talk challenges both of these assumptions – that it will solve the serials crisis and that it democratizes electronic information for all. This is not to say that I am opposed to the Open Access movement – quite the reverse, I strongly favour it, in particular because it will result in more readers for any given article (and therefore greater impact) than publication of that article in subscription-based journals will achieve. But I do feel that managerial and financial problems associated with Open Access mean that it will do little to alleviate the serials crisis, and that the vast majority of those who would like access to the world's scholarly literature but cannot afford it also cannot afford the necessary hardware and software to access Open Access collections.



## **SESSION 2: Easily Accessible Content and Linking**

Moderator – Barry Mahon, *Executive Director, ICSTI*

**Barry Mahon** holds an M.Sc. in Information Science. He ran an information service for industrial users in Ireland before being seconded to the EU in 1978 to manage the first telecommunications network dedicated to online information. From 1985 to 1991 he set up and managed one of the first email services in Europe and supervised EU research projects. From 1991 to 1996 he was Executive Director of Eusidic, the European Association of Information Services.

Following two years as a volunteer development worker in West Africa in 1997/98. He is the Executive Director of ICSTI, the International Council for Scientific and Technical Information and also an Associate Consultant at TFPL, London.

### **Session Synopsis**

With more material being published on more sites the problems of a) identifying and b) linking materials become problematical.

There is a great future for A&I services in this new world, but how can they be sure that they are a) identifying where the material has been published b) having found it, is it the latest - definitive version.

The issues associated with these challenges will be dealt with in this session, from a number of points of view.

### **Links Add Value to Research Publications**

Tim Ingoldsby, *Director of Business Development, American Institute of Physics*

**Tim Ingoldsby** has been instrumental in the development of Scitation, the online hosting service of the AIP. He is a member of the Executive Board of the International Association of Scientific, Technical, and Medical Publishers, and chairs the STM Innovations Committee. He was also active in the founding of CrossRef and serves as Chair of the CrossRef Membership and Fees Committee.

### **Synopsis**

As both a learned society publisher and a provider of online publishing services to other publishers, the American Institute of Physics has evolved an online hosting service (Scitation(tm)) that translates AIP's decade of experience with electronic publishing and linking into a feature-rich platform offering a broad array of linking services. Do readers appreciate (i.e., actually use) these services? Linking services will be described, and usage data presented, that suggest the answer is definitely "yes."

## **The Role of Bibliographic Databases in the Resource Discovery and Linking Process**

*Andrea Powell, Product Development Director, CABI Publishing*

**Andrea Powell** has been with CABI for 13 years, initially in Marketing before moving into product development. She is now responsible for all aspects of production and electronic product development, including CABI's proprietary online platform, CAB Direct. Prior to joining CABI, she worked at Reuters as a Marketing Executive, and holds a degree in Russian & French from Cambridge University. She is currently the Chair of ALPSP.

### **Synopsis**

Secondary (or bibliographic) databases play a very important role in the process of resource discovery, providing a comprehensive index of all relevant material in a given subject area. This material is consistently indexed, typically using a controlled vocabulary or Thesaurus, and is selected according to the subject and quality criteria established by the database producer. The CAB Abstracts database contains approximately 4.5 million references to literature in the applied life sciences, and the 240,000 new records added each year are carefully selected and processed by subject specialists, who ensure that terminology is standardised and that appropriate classification terms are added to each record.

Such databases have typically been available electronically since the mid-1970's and have latterly migrated to the Internet with relative ease. Since so much scholarly content is now also available online, it seems logical that the link between the bibliographic reference and its corresponding full-text should be made automatic, so that what was once a laborious process in the print-on-paper world should be a one-click action, taking the end-user almost magically to their chosen destination.

This is the theory, but the practice has revealed many obstacles in the way of such seamless linkage between secondary and primary content. My presentation explains some of these obstacles and describes how database publishers like CABI are working hard to improve the resource discovery experience of our customers.

## **CrossRef: Virtual Integration for Scholarly Content**

Ed Pentz, *Executive Director, CrossRef*

**Ed Pentz** is Executive Director of Publishers International Linking Association, Inc (PILA), the membership organization setup in January 2000 to run the CrossRef service. Before joining CrossRef Ed was Electronic Business Development Manager at Academic Press and worked on online journals and reference works, linking strategy and DOI implementation. Prior to that he held editorial and electronic publishing positions at Academic Press and Harcourt in the UK. Ed was the Chair of the NISO DOI Syntax Committee and is on the board of directors of the International DOI Foundation.

### **Synopsis**

CrossRef is an independent membership association for building shared technologies. It has an unusual mission: to improve access to scholarly content for users. To do this, CrossRef enables collective agreement and collaboration among competitors in scholarly and professional publishing. In the three years since CrossRef launched its cross-publisher reference linking service, it has become financially self-sustaining and has achieved critical mass. CrossRef focuses on the technology and leaves business practices up to individual publishers. CrossRef's linking system is a form of virtual integration; the publisher deposits a minimal set of metadata required, including a Digital Object Identifier (DOI) which is a unique, persistent, actionable identifier. The content itself remains at the publisher's site. There are many interesting areas where CrossRef is investigating new services to build on the concept of virtual integration to improve access to scholarly content - CrossRef is going live with "Forward Linking" (providing "cited by" links for articles) later in 2004 and CrossRef is investigating how searching and DOIs can interact to make it easier to get to scholarly content.

**Digital Identification – the new ISBN**

Shane O'Neill, *Managing Director, m Parliaments, Assemblies & Official Publishing Edivision TSO (The Stationery Office)*

**Shane O'Neill** has held several senior management positions in the world of professional and B2B publishing (EMAP, Macmillan, Reed-Elsevier). At present he is in charge of the core official publishing of the privatised TSO (The Stationery Office) and leading their drive into the world of multiple media delivery and network publishing.

Shane was formerly Managing Director of RR Bowker, the US based ISBN Agency, and was responsible for TSO becoming the first European Registration Agency for Digital Object Identifiers (DOIs). He sees the adoption of Digital Identifiers as essential for the development of online communities, and Government being a key driver in the growth of professional "trading exchanges"

**Synopsis**

SON will argue that the dissemination of official information across networks - whether for public free or commercial re-use - requires the adoption of agreed system of Persistent Identification similar to the adoption of the ISBN system which revolutionised e-trading of books nearly forty years ago. He will present an update on what has been happening within Government to address this and related issues and reflect on their impact on the private sector.

## **Full Text Linking at Loughborough University Library– a User Perspective**

Chris Bigger, *Academic Services Manager (Engineering), Loughborough University*

**Chris Bigger** has managed the Engineering Faculty Team at Loughborough University Library since 2001. His previous career in information work includes health promotion in the NHS, the engineering industry for Marconi and the Institution of Electrical Engineers.

### **Synopsis**

Over the last three years Loughborough University library has introduced Aleph, Metalib and SFX. All three help to provide users with a seamless access route to physical library stock and electronic resources. Aleph provides an OPAC, Metalib provides a subject access route to databases and cross searching of some databases, and SFX deals with linking to full text sources.

Even with these developments and the work being done to make full text links available, from the user perspective there is often no consistency and a need to learn multiple systems.

This paper will show briefly how the Loughborough systems look to users and will highlight some concerns with training, user expectations, jargon and branding.

### **SESSION 3: Archiving, Content Preservation and Long Term Access**

Moderator – Bernard Dumouchel, *Director General, National Research Council Canada (NRC-CNRC)*

**Bernard Dumouchel** is Director General of the National Research Council's Canada Institute for Scientific and Technical Information (CISTI) since 1998. He came to CISTI in 1987 where he has occupied a number of senior management positions. Mr. Dumouchel is a career librarian and information specialist since 1970. Bernard Dumouchel worked previously as a community college librarian and as Director, Technical Services Branch of the Library of Parliament., Parliament of Canada. He is the President, OCLC Canada Advisory Council, Vice-chair, Council of Federal Libraries (Canada), and Treasurer, International Council for Scientific and Technical Information.

#### **Session Synopsis**

The opportunities offered by digital STM information resources also carry challenges for their archiving, preservation and long term access. The STM content community has recognized these challenges and the associated threats of lost of access to significant digital content if no actions are undertaken. This community has progressed beyond awareness building and is involved in a number of projects, initiatives or activities that demonstrate the necessity, feasibility and sustainability of content preservation and long term access. This session highlights some of these initiatives that have created new opportunities through digitisation of past content by content owners and other strategies in libraries.

### **The Past is a Different Database – They do things differently there**

Jeff Pache, *Inspec Electronic Product and Service Development Manager, The IEE*

**Jeff Pache** has worked at the IEE for 30 years in a number of roles, including an indexer for the Inspec Database, an information officer in the IEE Library and product manager for the Inspec electronic products and services. He currently manages the team responsible for Inspec's product development activities.

### **Synopsis**

The title of this session "*Archiving, Content Preservation and Long Term Access*" tends to make one think in terms of future-proofing access to today's scientific record. This presentation will mainly discuss present-proofing access to yesterday's scientific record by looking at Inspec's archival back-file project. This project set out to produce an electronic version of the printed *Science Abstracts* journals from 1898 to 1968 as a back-file to the Inspec Database which was established in 1969. One of the challenges that this project faced was to interpret the past and translate its data into a format as similar to current practices as possible. There was also the challenge of structuring the unstructured, i.e. translating a whole variety of styles and esoteric approaches into a data structure compatible with current data processing practices. As well as being of interest to the potential users, this should be informative to those planning to undertake similar projects and to the consideration of keeping today's literature accessible in the future.



### **An archive of Physics: 130 years of scientific research online**

Tony O'Rourke, *Assistant Director, Journals, Institute of Physics Publishing Ltd. Bristol, UK*

**Tony O'Rourke** is Assistant Director of Journals and Database Marketing at the Institute of Physics Publishing in Bristol. He admits to being "addicted to publishing" and has spent his entire working life within various sectors of the industry. After getting his degree from a business school in Germany, he started work for a division of the Dutch publisher, VNU where he learned his trade in books, trade magazines and newsletter publishing. Prior to joining IoPP in 2000, Tony spent eight years working for Chadwyck-Healey, the international electronic publisher, where he was Head of Sales and Business Development.

### **Synopsis**

Institute of Physics Publishing has digitised its entire journal archive. The Institute's journal publishing has its origins dating back to the late 19th century and today publishes some of the world's most important titles for Physics research. Published authors include some of the world's (now) famous figures in Physics such as Rutherford, Logie-Baird and Dirac. The presentation will look at the technical and commercial realities of digitising over 125 years of scientific publishing - both the opportunities and the challenges.

## **Digital Archiving at Elsevier**

Joep Verheggen, *Managing Director, ScienceDirect*

**Joep Verheggen** graduated in 1989 at the University of Utrecht (Department of Earth Sciences) in the Netherlands, he joined Elsevier in 1991 and was selected to enter the Elsevier Science management traineeship. From 1992 to 1995 he held publishing positions in the Bibliographic Database department and the Physics publishing department. Early 1996 he was appointed project manager for the Miami project; the predecessor of ScienceDirect. From 1998 – 2000 he was stationed in London as Business Development manager for the Life Sciences Business Unit. From 2000-2002, he was Publishing Director with Reed Business in the Netherlands and returned to Elsevier in 2003 to take on the management of ScienceDirect.

### **Synopsis**

The presentation “Digital archiving at Elsevier” provides a brief overview of Elsevier’s position with regard to archiving of electronic journal content. It further describes the actions that Elsevier has taken to deliver on its commitment, and the way Elsevier intends to continue to provide e-access to the journal content it published in the past and will publish in the future. The presentation also briefly describes Elsevier’s project to retro-digitise all its journal content.

**Archives, Repositories, and the Effects of Library Time**  
David Seaman, *Executive Director, Digital Library Federation*

**David Seaman** was the founding director of the Electronic Text Center at the University of Virginia Library from 1992-2002. Since 2002 he has served as the Executive Director of the Digital Library Federation. He speaks and writes frequently on various aspects of humanities computing and digital libraries.

**Synopsis**

Preservation, archiving, and the long-term curation of intellectual content are core competencies of the analogue and digital library worlds, as is a deep and abiding ability to collaborate on standards and common infrastructures. We are beginning to see the first real large-scale initiatives aimed at long-term retention of digital data: the National Digital Information Infrastructure and Preservation Program in the US; The Digital Curation Centre in the UK; metadata schema at the National Library of New Zealand, and so on. More than this, we have 10-15 years of experience ourselves as producers of content and metadata, which has taught us much about the need to build an awareness of preservation and archiving needs into the initial creation of our content. Standards such as XML go a long way to making data that is malleable, easily re-purposed into other expressions of itself in the short-term, and simultaneously nimble enough to move easily through the various emulations and migrations that are a part of our assumptions about long-term data retention.

In all this, libraries are aided by a natural tendency to think in terms of decades and centuries in our curation of our collections, and to look to sustain an object for the length of its intellectual life rather than its period of economic viability. Such a viewpoint is distinctly different to that of a publisher in many respects, and it heightens the need for these two components in the scholarly communication chain to work much more closely together to create a shared confidence in our ability to select, describe, retain, and re-use digital content for coming generations of scholars.