

何嘉荪 主编

办公自动化系统与电子档案管理

**Proceedings of
OA System and Archival
Electronic Records Management**

OA System

浙江大學出版社

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A Brief Introduction to authors

1. **The author of the first paper** "Can Office Automation Systems Produce Electronic Evidence"

Mr. David Bearman is the President of Archives & Museum Informatics, USA.

2. **The author of the second paper** "On Application of Principle of Provenance in OA System"

Mr. He Jiasun is the Director of Institute for Information Resources Management of Zhejiang University and Professor of Archival Science, College of Humanities at Zhejiang University, China.

3. **The authors of the third paper** "E-Power Electronic Official Business Solution", **Miss Wu Kankan** is an Engineer and General Technical Manager of E-Power Software Ltd. Co.. **Mr. Li Shubin** is an Engineer and President of E-Power Software Ltd. Co., China.

4. **The authors of the fourth paper** "Studies and Practices on the Integrated Management of Documents and Archives in Government Organizations"

Mr. Zhou Sijiong is the Director of Information Processing Center at Hangzhou Municipal Government; **Ms. Ji Damin** is the Head of In-

spection Section of Municipal Archives Bureau of Hangzhou; **Mr. Liu Xiaozhou** is the Head of R & D Group of Information Processing Center of Hangzhou Municipal Government, China.

5. **The author of the fifth paper** "An Archival Description Standard Applied to Electronic Archives"

Mr. Michael Cook is a Research Fellow of Centre for Archive Studies at University of Liverpool, UK.

6. **The author of the sixth paper** "Developing Towards Descriptive Standard of Archival Electronic Records in China"

Mr. Zhang Zhengqiang is a Professor of Information Management Department at Shanghai Political University, China.

7. **The author of the seventh paper** "An Overview of the Records Continuum Model and the Implications for Managing Electronic Records towards Best Practice"

Ms. An Xiaomi is an Associate Professor of the Archives College at Renmin University of China. She holds a Ph. D. Degree in records and archives management from the University of Liverpool, UK.

8. **The authors of the eighth paper** "A New Classification of E-records Lifecycle"

Ms. Li Fujun, Master, is an Associate Professor of Information Industry Department at Tianjin University. **Ms. Feng Xiangjun** is a graduate student of Information Industry Department at Tianjin Normal University, China.

9. **The author of the ninth paper** "The Value of Electronic Records as Evidence"

Ms. Lian Zhiying, Master, is a Lecturer of History Department at Shanghai Normal University, China.

10. **The author of the tenth paper** "Study on Digitizing Archival Resources"

Mr. Zhang Zhaoyu, Doctor, is a Professor and Vice Dean of Archival Science Department at Soochow University, China.

11. **The author of the eleventh paper** "Ponencia Sobre Documentos

Electrónicos al Servicio de una Política Archivística”

Mr. Manuel Vázquez is the Professor of Archival School at National Córdoba University, Argentina.

12. **The authors of the twelfth paper** “On the Filing of the Electronic Records in the Network Environment”

Mr. Sang Yuyu is an Associate Professor, the Head of Archival Specialty, Economics and Management College at Tianjin Normal University. **Ms. Guo Naihong** is an Archivist of Tianjin Conservatory of Music, China.

13. **The author of the thirteenth paper** “Digital Preservation from the Perspective of the National Archives of Sweden”

Mr. Magnus Geber is the Head of the Unit for Preservation of Electronic Records at the Division of State Archives, National Archives of Sweden.

14. **The authors of the fourteenth paper** “Management of Records in Workflow—The Theory and Practice of Information Security”

Mr. Li Jindong is a Professor of Information Management Department at Zhejiang Wanli College. **Ms. Feng Jixuan** is a Senior Engineer and Teacher of Computer Department at Zhejiang Wanli College, China.

15. **The author of the fifteenth paper** “An Imagination of Constructing a Bedded Security System about Electronic Records”

Ms. Yu Yingxiang, Master, is an Associate Professor of Archival Science Department at Shanghai University.

16. **The author of the sixteenth paper** “The Safety of OA System and Audit Role of Windows NT/2000”

Ms. Xiang Wenxin, Master, is an Associate Professor of Archival Science Department of Soochow University, China.

17. **The author of the seventeenth paper** “On the Standardization Management of Archival Electronic Records”

Ms. Guo Jianping is an Associate Professor of History Department at Liaoning University, China.

前 言

一位计算机软件工程师曾经非常感慨地说：“任何计算机信息系统如果没有考虑档案管理问题，肯定是一个不完善的系统。”

确实，计算机在办公领域和其他领域的运用，导致产生了大量电子文件。这些电子文件无疑也是人类社会实践活动的真实历史记录，应该作为人们工作、生产、生活必不可少的工具和珍贵的社会记忆予以妥善而科学地保管起来，使之长久可读并便于利用。然而这并非易事，有一系列与此相关的问题需要研究和思考。这些问题既涉及档案学基础理论，又与一些具体的计算机技术、网络通讯技术和档案管理方法问题有关。

近年来，我也投身到一些办公自动化系统的研制工作中，尤其是具体参加了由杭州意能(E-power)电力技术公司承担的浙江电力公司 OA 系统的研制工作，担任其档案管理问题的顾问。在实践中，我们虽然对一些理论问题有了新的认识，也解决了一些技术上和管理上的难题，但是仍然有不少问题值得进一步研讨。鉴于这些问题是全世界共有的，由我担任所长的浙江大学信息资源管理研究所和杭州意能电力技术公司因此萌生了举办一次国际学术研讨会的念头。无独有偶，杭州市档案局在参与研制杭州市政府办公自动化系统时，对上述问题也有同感，故也参与协办此一研讨会。

2001 年 11 月 11 日至 13 日，在丹桂飘香的金秋季节里，由浙江大学信息资源管理研究所主办，杭州意能电力技术公司和杭州市档案局协办的“OA 系统与电子档案管理——理论与实践”国际学术研讨会在美丽的西子湖畔隆重召开了。荣幸的是，包括国际知名的电子文件管理权威和档案学学者——美国的戴维·比尔曼先生、英国利物浦大学的迈克尔·库克先生和阿根廷国立科尔多瓦大学档案学院的曼奴埃尔·巴斯克斯教授等人在内的来自世界和我国各地的档案学者三十余人，应邀出席了研讨会。国家档案局副局长杨冬权研究员、浙江大学党委副书记庞学铨教授、浙江省档案局局长关继南等有关领导到会表示祝贺。

来自中国、美国、英国、瑞典、阿根廷等国的学者向本次研讨会提交了

论文,其内容涉及广泛,既有关于电子文件管理基础理论的(比如文件连续体理论和文件生命周期理论),也有关于档案学理论(比如来源原则)在OA系统中的具体应用问题的;有关于电子文件管理中的具体问题(比如归档和安全性问题)的,也有关于电子文件著录标准问题的。会上还演示了杭州意能(E-power)电力技术公司在浙江大学信息资源管理研究所协助下研制的浙江电力公司OA系统,以及杭州市政府信息中心在杭州市档案局协助下研制的办公自动化系统。

整个研讨会气氛热烈,学者们各抒己见,对某些问题的看法甚至有很大的出入。比如世界著名的电子文件管理权威——美国的戴维·比尔曼先生在题为“办公自动化系统能否产生电子证据”的发言中提出,在OA系统中形成并维护档案化电子文件,从根本上说比纸质档案文件更容易,然而档案部门要对电子信息系统施加影响、进行控制却是一件很困难的事情。他认为,指导办公自动化系统的原则与指导档案管理的原则“在本质上是冲突的”,再加上OA系统将不断更新,而档案管理系统却要求相对稳定,所以几乎不可能把档案管理的功能结合进OA系统之中。如果档案工作者希望确保电子文件作为档案存在,就必须围绕OA系统构建一个适当的、相对独立的,因而可以相对稳定地存放电子文件的环境和范围。

然而,会议东道主研制的浙江电力公司OA系统(这是一个由软件开发商、系统用户和档案管理人员、档案学学者共同合作研制开发的系统),恰恰就是一个把档案管理要求嵌入其中的系统。这个系统的最大特点,是把对文件价值的鉴定程序以及对电子文件元数据(尤其是对背景信息中的来源信息)的著录程序,直接融入了OA系统之中,且其价值鉴定和对来源信息进行著录的特定步骤是由办公业务人员(也就是OA系统的主要用户)在半自觉、半自动的情况下完成的(档案人员同时在网上对此进行监审)。这样做,在实践中受到了用户(办公业务人员)的热烈欢迎。当然,在该系统中,实际贮存电子文件的档案数据仓库是相对独立的,档案管理子系统捕获电子文件,也就是电子文件逻辑实时归档的位置和时机,则在某种程度上类似戴维·比尔曼先生的建议(但又不完全相同)。我想这个系统的情况之所以与戴维·比尔曼先生论述的情况不同,主要是我国的国情与西方国家不同,档案概念也不同(我们中国人所指的OA系统中的档案,仅仅相当于美国保存在文件中心里的文件)。而且,我们做到了

使软件开发商、用户和档案人员三方的利益和要求协调一致,这在西方国家是不可能的。

总之,研讨会成果甚巨,东方和西方的档案学者在一起广泛地交换了意见,交流了信息,也在不少问题上达成了共识。为使这一成果能为更多的人共享,我们特结集出版这本论文集。由于编者水平有限,本书的缺点错误在所难免,欢迎广大读者批评指正。

参与本论文集中文编辑的工作的还有绍兴文理学院文秘专业的何宝梅老师,参与外文编辑工作的则为浙江万里学院管理系李劲东教授、中国人民大学档案学院安小米副教授、天津师范大学信息产业系李福君副教授、浙江大学信息资源管理研究所方新德副教授以及瑞典国家档案馆电子文件处的鞠毅美女士(Mrs. Yimei Ju Öfverström)。在此,谨向他们致以深切的谢意!

何嘉荪

2002年3月9日于浙江大学

Foreword

Once an engineer in computer software said, with emotion, that any computer information system, without considering its archival management, would be far from perfect.

It is true that the application of computer in such field as office or others will inevitably give rise to huge amounts of electronic records. As truthful and historical recordings of human social activities and indispensable tools in our life, production and work as well as valuable memories of the society, these documents shall be kept appropriately and scientifically. However, easier said than done. Many a problem related entails research and reflections in the light of not only basic theories of archival science, but also computer technology, network communication technology and its methods in archival management.

In the recent years, I have been devoting my efforts to the research and development of the office automation system, especially as consultant for archival management in the research project of OA system of Zhejiang Provincial Electric Power Corporation undertaken by Hangzhou E-power Electrical Technology Company. During the practice of the work, we have gained a deeper insight into some theoretical issues, and also solved some snags in technology and management. Yet there are problems that call for further research. In view of the fact that these problems are universal, we, Institute for Information Resources Management of Zhejiang University headed by myself and Hangzhou E-power Electrical Technology Company, thus struck an idea of hosting an international symposium to be jointly hosted by Hangzhou Municipal Archives Bureau who shared the same problems in their research on the office automation system of Hangzhou Municipal Government.

Thus from 11—13, November, 2001, time of aromatic orange osmanthus in golden autumn, the International Symposium on OA System and Archival Electronic Management—Theories and Practice was held by the West Lake in Hangzhou as hosted by the Institute for Information Resources Management of Zhejiang University and assisted by Hangzhou E-power Electrical Technology Company and Hangzhou Municipal Archives Bureau. It was our honor that more than 30 guests from Europe, North America, South America, China and Macao of China participated our meeting. Among them were some well-known authorities on management of electronic records and scholars in archives, such as Mr. David Bearman from the United States, Dr. Michael Cook from the University of Liverpool of Great Britain and Prof. Manuel Vazquez from the Archives School of the National Córdoba University of Argentina. Besides, Mr. Yang Dong-quan, Fellow and Deputy Director of State Archives Bureau, Prof. Pang Xue-quan, Deputy President of Zhejiang University and Mr. Guan Ji-nan, Director of Zhejiang Provincial Archives Bureau also attended the conference with congratulations.

Scholars from China, USA, Britain, Sweden and Argentina presented to the symposium their papers covering a variety of subjects including basic theories of electronic records management among which are theories of records continuum and those of records life-cycle and the application of archival theory, say, principle of provenance, in the OA system as well as concrete problems such as filing and information security and the descriptive standards of electronic records. At the conference, two systems were demonstrated including the OA system of Zhejiang Electric Power Corporation developed by Hangzhou E-power Electrical Technology Company assisted by the Institute for Information Resources Management of Zhejiang University and the office automation system developed by the Information Processing Center of Hangzhou Municipal Government assisted by Hangzhou Municipal Archives Bureau.

Throughout the symposium the scholars aired their viewpoints freely amid a friendly atmosphere although they might differ greatly in some of

the issues. What Mr. David Bearman, well-known expert on electronic records management, said in his paper entitled "Can Office Automation Systems Produce Electronic Evidence?" is a case in point. He stated that it is fundamentally easier than paper archives to develop and preserve archival electronic records in the OA system; nevertheless, it is not an easy job for the archival department to influence and control electronic information system. He held that the principle that guides office automation system contradicts, in essence, with that of archival management. Besides, the OA system will undergo many changes whereas the archival management system is relatively stable. Therefore it is well nigh impossible to integrate the functions of archival management into the OA system. If the archivist would like to preserve the electronic records as archives, they should establish an appropriate, relatively independent and stable surroundings and scope to store electronic records concerning the OA system.

However, the OA system of Zhejiang Electric Power Corporation, developed by the host, a system masterminded by software developers, system users, archival managerial personnel and scholars in archives, is the system that has taken into account the requirements of archival management. The system features, most markedly, the integration of the program to evaluate the values of documents and the descriptive program of metadata for electronic records, especially the provenance information of background information, into the OA system and such work as evaluating the value of special procedures and descriptive the source information is to be done by the office clerks, main users of OA system, in the sub-conscious and semi-automatic state as examined on-line by archive personnel, which is much welcomed by the users and clerks. Yet the archival databank that has stored electronic records is relatively independent and the way the subsystems of archival management attain electronic records, i. e. , the position and the opportunity of logical and real-time filing of electronic records, is similar, in some way but not completely, to what Mr. David Bearman proposed. In my opinion, what accounts for

the differences between the system and what Mr. David Bearman stated is the differences between the Western countries and our country and in the way we view archives in that we tend to see archives in the OA system as similar to those kept in the US records center. Moreover, we have coordinated the interests and requirements of the three parties including the software developers, users and the archive personnel.

All in all, we have achieved a lot from the symposium in that the archive scholars and experts, Western and Eastern, gathered together to exchange the views and information and reached an understanding in many issues. To share the achievements with others, we intend to publish this collection. Yet owing to the limitation of the editors' academic level, the book is, unmistakably, not flawless. Therefore, any criticism and suggestions are cordially welcomed.

Some colleagues have been voluntarily dedicated in editing the Proceedings. Mrs. He Baomei, the teacher from Department of Chinese at Shaoxing College of Arts & Science, has been involved in Chinese edit. For English, there are Professor Li Jindong from Zhejiang Wanli College, Associate Professor An Xiaomi from College of Archives at Renmin University of China, Associate Professor Li Fujun from Department of Information Industry at Tianjin Normal University, Associate Professor Fang Xinde from Institute for Information Resources Management at Zhejiang University and Mrs. Yimei Ju Ö fverström from National Archives of Sweden being involved in editing. Great thanks are given to all of them.

He Jiasun

9 March, 2002 in Zhejiang University

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办公自动化系统能否产生电子证据

戴维·比尔曼^①

【摘 要】 如果档案工作者选择在办公自动化系统中对电子文件进行档案化管理,他们面对的是已被设计为去达到完全不同目标的系统和那些反对档案管理介入的用户。所以,很难把档案管理功能强行结合进电子信息系统之中。如果办公自动化系统设置在一个能在物理存储(工作站与中央系统、中央系统与外界)之间捕获事务处理的通信环境之中,档案工作就能发挥必要的控制力去确保捕获档案文件。为此,必须围绕办公自动化系统构建一个环境,划出适宜的工作范围,并妥善选择档案化电子文件管理应在何处进行;与此同时,还要理解办公自动化系统的功能和档案化电子文件系统的要求,和预测技术的长期发展趋势及由此带来的影响。

【关键词】 办公自动化系统 档案管理系统 元数据 系统功能

引 言

何嘉荪教授在邀请我参加这次研讨会时,要我就办公自动化系统产生和收到的档案化电子文件(archival electronic records)能否被作为档案

^① 编者注:戴维·比尔曼(David Aaron Bearman),男,美国人,毕业于美国布朗大学(Brown University)和宾夕法尼亚大学(University of Pennsylvania),国际知名的电子文件管理权威,美国《档案馆博物馆信息学》杂志主编;出版发表著作、论文百余部(篇),其中专著《电子证据——当代机构文件管理战略》已经译成中文,由中国人民大学出版社于2000年10月出版。

捕获和保存这个问题发言。^②我很乐意直接回答这一问题,但首先请允许我回顾一下所涉及到的系统的必要功能要求及其实实现的问题,只有这样才能发现,对这个问题的答案可能是令人吃惊的,即办公自动化系统可以捕获电子文件,但我们或许不应该设计办公自动化系统去保存电子档案。

形成和保存档案化电子文件基本上比形成、保存纸质档案文件要来得容易,因为这可以在系统内设置必要的功能,而不必一直依赖人工的参与协助。可是档案工作者已经发现,把档案管理功能强行结合进电子信息系统中却要困难得多,有时甚至是不可能实现的。这一方面是因为很少有档案工作者既能对这些系统有必要的理解,同时又有力量去影响它们的设计,另一方面也是因为软件厂商所制造和信息技术组织所推荐使用的办公自动化系统往往界定了自己的工作范围,这使得档案工作者很难形成具有长期保存可能的真实可靠文件。如果档案工作者希望能保护档案化电子文件,就必须围绕办公自动化系统构建一个环境,划出适宜的工作范围,并在构建时要作出档案化电子文件管理应在何处进行的妥善选择,同时还要求我们理解办公自动化系统的功能和档案化电子文件系统的要求,以及去预测技术的长期发展趋势与由此带来的影响。

关于电子文件形成的基础知识

人与人之间、人和机器之间、机器与机器之间的任何电子事务处理(transaction)都能够形成电子文件。要进行事务处理,就必须进行通信(communication),而电子事务处理的通信必须在软件间应用某种传输信息的路径来进行。典型地说,这些事务处理在一个工作组中通过局域网进行,并通过与本组织机构主干网相联接或通过广域网或电信来与工作组外的其他人进行通信。当访问某个系统的外界源(source)与该系统进行事务处理通信时,会发生一种特殊情况,比如一个数据库中的文件被利用

^② 我很感谢能被邀请在杭州的电子文件和办公自动化系统研讨会上阐述自己的意见,同时也感谢会上各种颇具洞察力的提问和精彩讨论,使我能进一步完善本文的观点。