

For updates and more information about
The 2003 OCLC Environmental Scan: Pattern Recognition
please visit:
www.oclc.org/membership/escan/



OCLC Online Computer Library Center, Inc.
6565 Frantz Road
Dublin, Ohio 43017-3395
1-800-848-5878 +1-614-764-6000
Fax: +1-614-764-6096
www.oclc.org

ISO 9001 Certified

ISBN: 1-55653-351-9
MAN8001 0401/11458-4M, B&S

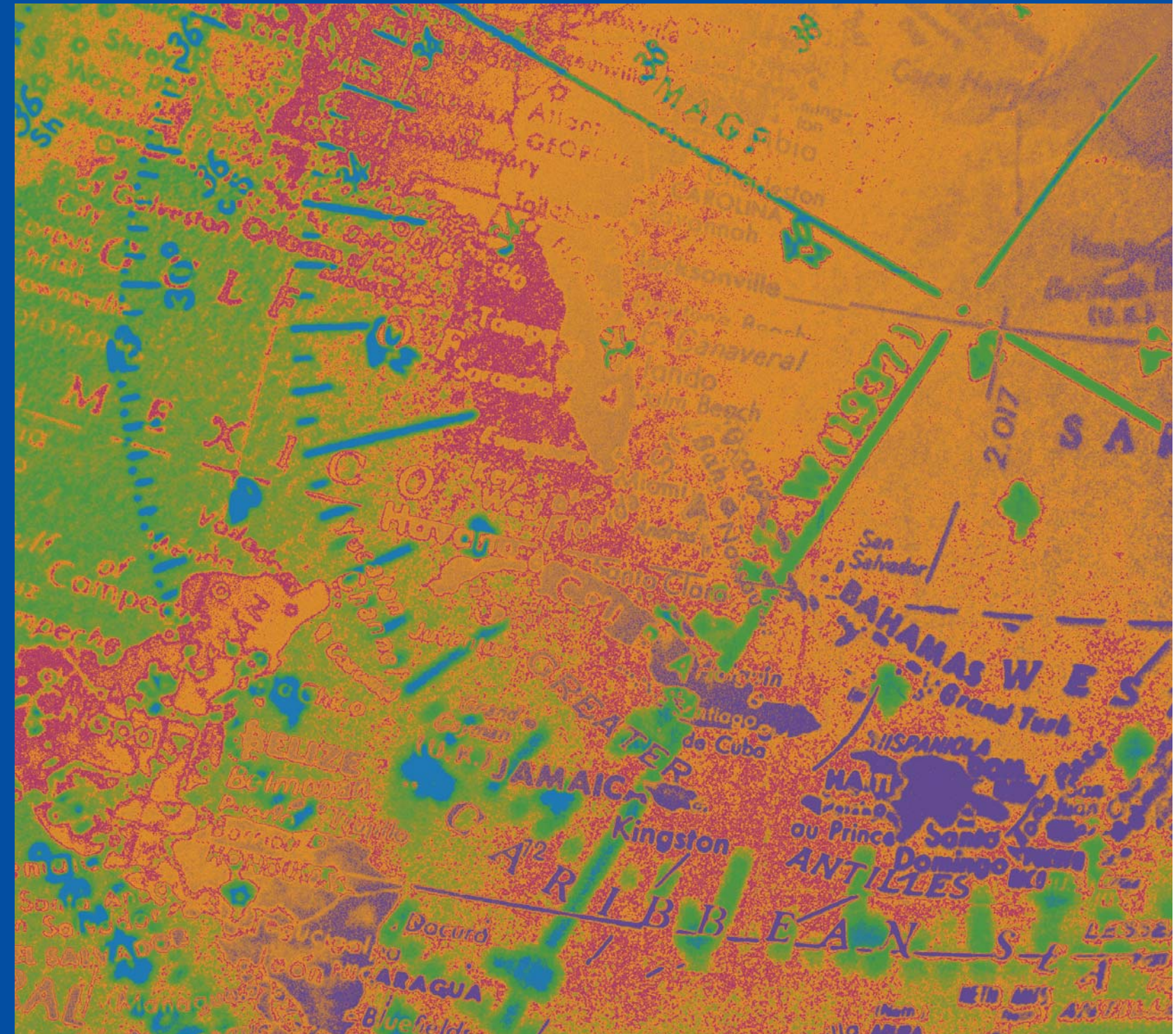


The 2003 OCLC Environmental Scan: Pattern Recognition

A report to the OCLC Membership

The 2003 OCLC Environmental Scan: Pattern Recognition

OCLC



The 2003 OCLC Environmental Scan: Pattern Recognition

A report to the OCLC Membership



The 2003 OCLC Environmental Scan: Pattern Recognition

A report to the OCLC Membership

Principal contributors:

Cathy De Rosa

Lorcan Dempsey

Alane Wilson

Editor:

Alane Wilson

Graphics and layout:

Rick Limes

Linda Shepard

Copyright © 2004, OCLC Online Computer Library Center, Inc.
6565 Frantz Road
Dublin, Ohio 43017-3395

ALL RIGHTS RESERVED. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying or otherwise, without prior written permission of the copyright holder.

Further details may be obtained from the OCLC Library & Information Center at: information_center@oclc.org

Printed in the United States of America

Cataloged in WorldCat® on December 19, 2003
OCLC Control Number: 53934212

ISBN: 1-55653-351-9

0 9 0 8 0 7 0 6 0 5 0 4 1 2 3 4 5 6

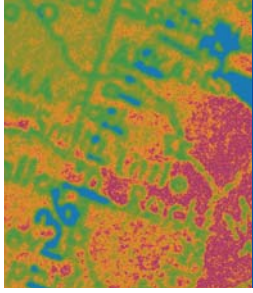
Thanks to the many OCLC staff
who contributed in a wide variety of capacities,
from research to editing to interviewing
for this report.



Contents

Page

| | |
|------------|---------------------------------------|
| vii | The Landscape: Overview |
| 1 | Purpose, Scope & Notes on Methodology |
| 3 | The Social Landscape |
| 15 | The Economic Landscape |
| 33 | The Technology Landscape |
| 53 | The Research & Learning Landscape |
| 69 | The Library Landscape |
| 97 | Future Frameworks |
| 107 | Appendices |
| 109 | OCLC |
| 113 | Glossary |
| 125 | Collections Grid |
| 127 | People Consulted |
| 133 | Readings & Sources |
| 149 | Notes & Ideas |



The Landscape: Overview

“...[W]hat we conceive about our business is not sufficient to fully understand all the effects that are actually happening in and around our business...[W]e are completely unable to perceive of all the dynamics of our business environment because our conception limits our perception. Our accumulation of, and intense focus on, our knowledge controls what we believe. And, what we believe controls what we are able to see. What haven’t you noticed lately?”¹

Change has become a cliché, a worn-out concept that has lost its power to inform. At the same time change continues to be a constant—and, indeed, what would be the alternative?

Nevertheless, we are sure that rapid transformations, particularly in the technological sphere of the public world, are more profound and more frequent than at any other time in humanity’s history. Whatever occupation we hold, the day-to-day reality of our workplaces is change. But “change” is made up of so many events, inventions, ideas, replacements, introductions, alterations and modifications that the complexity of the environment overwhelms vocabulary. We are reduced to clichés and, in attempting to identify and understand all changes as they affect our environment, become less able to notice what we haven’t noticed.

Let us accept, then, that change is profound, accelerating, transforming and unpredictable. And let us also accept that, absent the talents of the Oracle of Delphi, any person or organization is unlikely to be able to make meaningful predictions that are helpful for charting directions for an indefinable future.

An example close to home will suffice: Arthur D. Little wrote a 90-page environmental scan for OCLC and the OCLC Board of Trustees in 2000. There is not one mention of the phenomenon that profoundly changed the “infosphere” because this phenomenon had just entered that space. In the subsequent three years, Google has become ubiquitous, the major player in search technologies, and often a substitute for a visit to the local library’s reference desk.

*Google is
disintermediating
the library.*

Content Vendor

1. Mark Federman, Chief Strategist, McLuhan Program in Culture and Technology, University of Toronto, *Information Highways Conference 2003*, Keynote Speech delivered March 25, 2003, www.mcluhan.utoronto.ca/EnterpriseAwarenessMcLuhanThinking.pdf.

Trying, then, to grasp the essence of the changes that impact the complex, interrelated set of organizations that make up OCLC's world is like fractal geometry. The closer the analysis, the greater the complexity of the overall picture. In other words, it is easy to become bogged down in analyses of what libraries, archives, museums and allied organizations might need to do and become and so, then extrapolate what OCLC needs to do and become. The sheer volume of large, significant changes to the environment overwhelms, and inertia or endless discussion can be the result. However, the appearance of the next "Google" in a month will twist the lens of the kaleidoscope and the image under examination will change completely.

OCLC's beginnings and subsequent successes were predicated on an understanding of the environment of the time, and on the bold, not minor or incremental, introduction of a service that many librarians did not even see a need for. OCLC created and led a revolution based on the inspired linking of technology with collaboration in the early 1970s.

Profound as this was, the introduction of shared cataloging was a revolution inside the walls of the library. The immediate effect on the users of libraries was not large, especially before the introduction of automated interlibrary loan (another inspired linking of technology with collaboration). The use of highly structured, standardized metadata to organize content and inventory organizational assets did not migrate much beyond the library. Indeed, it did not migrate in any significant way into the sister organizations of archives and museums.

At the same time that Fred Kilgour was developing his idea for a shared, computerized catalog, "Lick" Licklider, at the U.S. Department of Defense's Advanced Research Projects Agency, demonstrated 40 computers connected together in a network called ARPANET. He predicted that by the year 2000 millions of people would be online connected to one another and to information by a global network. He called it the Galactic Network.

In 1984, William Gibson's novel *Neuromancer* was published and introduced the terms "cyberspace" and "matrix" to refer to "a consensual hallucination experienced daily by billions [...] A graphical representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding..."² In 1990 Tim Berners-Lee developed a program that allowed a real world matrix to develop. He called it the WorldWideWeb.³

It might not be overstating the case to say, only 13 years later, that the Web has become the most significant engine driving changes that impact OCLC and its member and participant institutions. It would be hard to find a person working at OCLC or in a member organization whose professional and personal life had not been affected by the Web.

Whatever the benefits to personal lives, the ubiquity and ever-present nature of the Web and the billions of pages of content accessible in this matrix of information are both boon and bane. There is a subdued sense of having lost control of what used to be a tidy, well-defined universe evident among those

*"Are we automating
nineteenth-century
librarianship?"*

Fred Kilgour, 1977

2. William Gibson *Neuromancer* (New York: Ace Books, 1984): 51.

3. Tim Berners-Lee, *WorldWideWeb: proposal for a hypertext project*, November 12, 1990, www.w3.org/Proposal.html.

who work in this information environment. Many are pessimistic, some are optimistic, but one theme persists: The landscape has changed and the maps have not been published yet.

It has become increasingly difficult to characterize and describe the purpose of and the experience of using libraries and other allied organizations. The traditional notions of “library,” “collection,” “patron” and “archive” have changed and continue to change. The relationships among the information professional, the user and the content have changed and continue to change.

What has not changed is the implicit assumption among most librarians that the order and rationality that libraries represent is necessary and a public good. So there is a persistent and somewhat testy tone to much that is written about the changed information landscape by those in the information community: Why don’t “they” get it that libraries and librarians are useful, relevant and important in the age of Google?

*This too shall pass.
The constant
questioning of a
library’s reason for
existing is a very
good thing. Libraries
have continued to
evolve to find
their appropriate
function—their core
service. They will
continue to get
funded and continue
to exist.*

Director, OCLC Network

Simplistically, libraries and archives came into being to provide a central location for hard-to-find, scarce, expensive or unique material. Scarcity of information is the basis for the modern library. In countries where information continues to be scarce, a library’s role is still unambiguous. In some countries where access to information is now akin to access to electricity or water, the reason to have freestanding storehouses of a subset of all information is harder to articulate. Libraries in such countries can provide access to more information than any user could want or need. Ranganathan’s rule “For every reader, his or her book,” might be now redefined as “for every reader, huge amounts of free-floating content, anywhere, anytime.”

The library itself has long been a metaphor for order and rationality. The process of searching for information within a library is done within highly structured systems and information is exposed and knowledge gained as a result of successfully navigating these preexisting structures. Because this is a complicated process, the librarian helps guide and navigate a system where every piece of content has a preordained place.

Contrast this world with the anarchy of the Web. The Web is free-associating, unrestricted and disorderly. Searching is secondary to finding and the process by which things are found is unimportant. “Collections” are temporary and subjective where a blog entry may be as valuable to the individual as an “unpublished” paper as are six pages of a book made available by Amazon. The individual searches alone without expert help and, not knowing what is undiscovered, is satisfied.

The two worlds appear to be incompatible. One represents order, one chaos. The challenge is great for organizations occupying the interstice between these two worlds. Let us call the interstice “the twilight zone.”

Rod Serling used the term “twilight zone” in the 1950s and 60s to refer to his fictional TV world where things were not as they seemed and strange things happened to ordinary people. And indeed, many information professionals think strange things are happening in their world.

x The Landscape: Overview

But twilight itself is not inherently strange. The term refers to the light in the sky between full night and sunrise, or the light in the sky between sunset and full night. Light is low and the world seems indistinct. What is familiar in full light loses clarity and is ill-defined. However, the world in all its messy, complicated, rich detail is still there. It is just the lack of light being beamed to human eyeballs that makes the landscape of the perceivable world ill-defined and difficult to navigate.

As we make our way through the twilight zone, we seek familiar objects, shapes and routes, relying on what we know to guide us. We must look not for the details that are hard to see, but instead seek to discern patterns in the environment that will help us determine where we are and where we should go.

This report seeks to discern patterns in the twilight zone and to serve as a tour guide through the landscape that chaos and order inhabit together. The tour stops at major attractions, overlooking many minor ones not because they are uninteresting but because there are so many. The report is divided into five landscape sections. All are highly interconnected and trends in one section show up in others, viewed through a different lens—a different twist of the kaleidoscope that makes a new pattern. The final section attempts to identify the main patterns in the landscape and suggest some implications of this effort at pattern recognition.

*“We have no future
because our present
is too volatile.
We have only risk
management.
The spinning of the
given moment’s
scenarios.”*

William Gibson⁴

4. William Gibson, *Pattern Recognition* (New York: G.P. Putnam’s Sons, 2003).