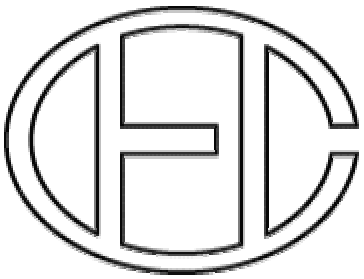


THE INTERNATIONAL MATHEMATICAL UNION (IMU)

Committee on Electronic Information and Communication (CEIC)

Recommendations on Information and Communication

COMMITTEE ON ELECTRONIC INFORMATION AND COMMUNICATION

Recommendations on Information and Communication

e-mail:ceic@ceic.math.ca

August 2002

Table of Contents

Preface

Information and Communication have become an increasingly important component of our research and teaching, and likewise, electronic forms of publication, distribution, and archiving have begun to play a dominant role. Progress in communication technology brings many benefits to mathematics, but there is no doubt that the mathematical community also needs an excellent organizational infrastructure to make best use of the new technologies for its own advancement. We mathematicians have to play an active role in this development in order to ensure that the new technological environment meets our needs. Thousands of mathematicians and mathematical institutions the world over are experimenting with the possibilities of modern technology, at many levels and with varying degree of cooperation. There is a clear need for support and for international coordination of these activities, and especially, for guidelines for best practice.

For this reason the Executive Committee (EC) of the International Mathematical Union (IMU) has, based on an enabling resolution of the 1998 IMU General Assembly in Dresden, established the Committee on Electronic Information and Communication (CEIC) at the International Congress of Mathematicians in Berlin. CEIC's Terms of Reference and the list of its members are given in chapter 1.

This booklet collects CEIC's current recommendations on various aspects of electronic information and communication. These recommendations have been drafted by CEIC members and finalized in open discussions during CEIC's 1998 – 2002 term. They have been endorsed by the IMU Executive Committee.

CEIC and the EC urge the adhering organizations of IMU to disseminate these recommendations in their national mathematical communities widely and take an active part in the development of community-driven good practice. Fostering the current evolution of our information and publication systems will continue to be a major task for the foreseeable future. CEIC aims to be a spearhead in this movement, but to succeed it needs the support of all mathematicians. We have to work together on a broad international basis to define the goals and solve the problems.

This booklet is also electronically available at http://www.ceic.math.ca/recommendations

Shanghai, August 2002 IMU Committee on Electronic Information and Communication

CEIC – Terms of Reference

1

Terms of Reference

Building on the enabling resolution passed by the General Assembly (GA) in Dresden on August 16, 1998, the Executive Committee of the International Mathematical Union establishes a "Committee on Electronic Information and Communication" (CEIC) with the following terms of reference:

a. The CEIC shall be a standing committee of the Executive Committee (EC) of the IMU, to be reviewed every four years by the EC at its meeting preceding that of the GA. Members will be appointed for four year terms by procedures similar to those for Commissions of the IMU. The Executive Committee will appoint one of its members to serve on the CEIC.

b. The CEIC may meet as necessary in each four year period, review the development of Electronic Information and Communication as it impacts the international mathematical community, and submit a report to the EC.

c. The CEIC may organize or sponsor international meetings or forums to bring together representatives of all interested parties, including societies, publishers, libraries, and researchers. It may publish and otherwise disseminate proceedings, reviews of recent developments, and technical surveys for the use of the mathematical community.

d. The CEIC may recommend international standards on issues related to electronic communication. Such recommendations should be reviewed by the EC and, if approved, may be published and promoted in the name of the IMU.

e. During its first 4 year term, the CEIC is specifically asked to address the coordination of world-wide efforts to establish web-based servers for mathematical papers, preprints, journals, and books. This includes issues of uniformizing metadata, document identifiers and supported formats, promoting mirroring and the development of search engines for mathematical material and coordination of existing servers. It should publish its findings with the goal of making the use of these servers universally understood and usable by the whole mathematical community. It is also asked to consider transferring the World Directory of Mathematicians to an electronic freely accessible form.

f. Membership (1998 – 2002):

- Peter Michor (chair),
  University of Vienna, Vienna, Austria;
  e-mail: Peter.Michor@esi.ac.at

- Jonathan Borwein,
  Simon Fraser University, Burnaby, Canada;
  e-mail: jborwein@cecm.sfu.ca

- John Ewing,
  American Mathematical Society, Providence, USA;
  e-mail: jhe@ams.org

- Jonas Gomes,
  IMPA, Rio de Janeiro, Brazil;
  e-mail: jonas@impa.br

- Martin Grötschel (EC member)
  Konrad-Zuse-Zentrum, Berlin, Germany;
  e-mail: groetschel@zib.de

- Wilfrid Hodges,
  Queen Mary, University of London, UK;
  e-mail: w.hodges@qmul.ac.uk

- David Morrison,
  Duke University, Durham, USA;
  e-mail: drm@math.duke.edu

- Kapil Paranjape,
  Institute of Mathematical Sciences, Chennai, India;
  e-mail: kapil@imsc.ernet.in

- Alfred J (Alf) van der Poorten,
  Macquarie University, Sydney, Australia,
  e-mail: alf@math.mq.edu.au

- Alexei Zhizhchenko,
  Russian Academy of Sciences, Moscow, Russia;
  e-mail: abz@ipsun.ras.ru

- Qing Zhou,
  East China Normal University, Shanghai, China;
  e-mail: qzhou@math.ecnu.edu.cn

CEIC–Best Practices

2

Best Current Practices: Recommendations on Electronic Information Communication (2002)

Endorsed by the IMU Executive Committee on April 13, 2002 in its 69th session in Paris, France

Communication of mathematical research and scholarship is undergoing profound change as new technology creates new ways to disseminate and access the literature. More than technology is changing, however, the culture and practices of those who create, disseminate, and archive the mathematical literature are changing as well. For the sake of present and future mathematicians, we should shape those changes to make them suit the needs of the discipline.

For this reason, we have identified a number of *best practices* for those involved with the mathematical literature -- mathematicians, librarians, and publishers. Many of these are practices that apply to other academic disciplines as well. Although we focus primarily on mathematics, we recognize that we can learn from each other as we move forward, and that no single discipline should act in isolation.

Our advice is meant to guide practice as it changes rather than to set forth a collection of firm rules and admonitions. The recommendations concern all forms of scholarly publishing and do not promote any particular form. Indeed, the authors of this document hold many differing views on the future of scholarly publishing. The common principle used to formulate our recommendations is that those who write, disseminate, and store mathematical literature should act in ways that serve the interests of mathematics, first and foremost.

This is advice that is meant to ease the transition in scholarly communication for present mathematicians. Most importantly, however, it is advice aimed at protecting mathematicians in the future.

FOR MATHEMATICIANS

1. Structure and Format. Logically structured documents correctly reflect the content of a mathematician's work, setting forth results, arguments, and explanations to make them understandable to readers. But a logical structure also makes it possible to retrieve and eventually to update the document. Identifying the constituent parts of an electronic document is essential in order to move from one format to another without human intervention. Authoring documents should be more than setting down mathematical research in a pleasing format.

Authors are encouraged to provide the structure necessary to use their documents now and in the future. The aim is to create a master file from which the various other formats can be derived. (In mathematics, LaTeX is a congenial and accessible way to give documents some structure without adding unreasonable burdens on the author.)

2. Linking and Enrichment. An electronic publication can offer much more than a print publication. Electronic publication gives the user the ability to move effortlessly among the various parts of a paper or even from one paper to another. In order to make this possible, however, someone must add the necessary information to establish links in the electronic version.

Adding links is easier when authors provide the information necessary to establish them. (Correct cross-referencing and citation in LaTeX transforms readily into hyperlinks, yielding enriched electronic versions of one's work. Hyperlinks may be used in PDF files as well.)

Moreover, electronic publication is not restricted by the constraints of the traditional print medium. This provides an opportunity to detail material that might otherwise be dismissed as "well known" and to add explanatory appendices. A little less easily, whenever appropriate, one may include graphic enhancements, animations, extensive data, tools to analyze that data, or even active examples that may be varied by the reader.

3. Versions. Online publication can lead to severe problems in citation, because the posted paper can be updated continuously until it bears little resemblance to the original, as an author corrects, adds, and deletes material without indicating that changes were made. As the mathematical literature grows, references to non-existent papers and results will eventually jeopardize its coherence.

To avoid this problem, papers that have achieved a sufficiently final state should be stored in an immutable form. This includes any paper to which others may make reference, whether published in refereed journals or posted as a preprint. If revisions subsequently are necessary, each released version should be clearly labeled with its own version number and old versions should remain available.

4. Personal Homepages. Mathematical communication is more than merely posting or publishing papers. Information about the mathematical community and its activities is valuable to all mathematicians, and it is now easier than ever to circulate and to find such material.

Mathematicians are encouraged to have their own homepage. Ideally, basic data on such a page (or on a "secondary" homepage) should be presented in standard form to allow ready automatic compilation into databases.

(Material found at http://www.math-net.org/Math-Net_Page_Help.html describes the Math-Net project, which provides standardized homepages for departments and institutes.)

5. Personal Collected Works. Mathematics ages slowly. Access to older literature is important for most mathematicians, and yet much of the older literature is likely to remain unavailable in electronic form in the immediate future. Mathematicians can change that by taking collective action.

Whenever legally and technically possible, mathematicians are encouraged to scan their old (pre-TeX) papers and post them on their homepages, making their "collected work" readily available to all. This relatively small effort on the part of every mathematician will provide enormous benefit to the entire community.

The *Call to Mathematicians* found at http://www.mathunion.org/ provides further information.

6. Preprints and archives. Mathematical writing is ineffective if it is not communicated. A generation ago, the photocopier made it easy to send preprints to one's peers. Today, as a substitute, we have departmental servers, homepages, and public archives. (The arXiv http://www.arxiv.org/ is one prominent example.)

It is a good practice to place one's preprints both on a homepage and in an appropriate archive. Either copy serves to communicate the mathematics to one's peers, but the public archive will make it more likely that others can reference your work in the future.

7. Copyright. While copyright is a complex subject that is far removed from mathematics, copyright law and policy can profoundly affect the ways in which mathematics is disseminated and used. Copyright is important for mathematicians.

Authors should be aware of the basic principles of copyright law and custom. Decisions about copyright for one's own work should be made thoughtfully.

The material found at http://www.ceic.math.ca/ serves as a good reference.

FOR LIBRARIANS AND MATHEMATICIANS

8. Journal Price and Policy. Libraries have limited budgets, which often grow more slowly than the prices of journals, forcing libraries to cancel subscriptions. The cumulative effect of cancellations goes beyond individual institutions because it shifts costs to an ever smaller number of subscribers, accelerating the process of price increase and cancellation. Journal prices matter to all mathematicians.

When deciding where to submit a paper an author may choose to be aware of a journal's standing and impact, but an author also should take account of a journal's price (as well as its general policies, including archiving). In addition, one might consider a journal's price and policies when considering whether to referee or serve on an editorial board.

9. Validation. Publication and peer review processes are increasingly detached. The emergence of overlay journals, archival preprint servers, and other new structures of publication raise new and pressing questions about the appropriate forms of validation. These are important issues for all scholarship, but even more important for mathematics since it is essential to know which parts of the mathematical literature are valid.

Both mathematicians and decision makers need to be alert to the distinction between posting and providing validation. Editorial boards should be explicit about the form and the level of validation they provide for papers and make this information plain to all users.

10. Statistics. Electronic delivery of information has changed the nature of statistics available to assess the usage and the 'value' of academic literature. Gathering statistics from the Internet is

notoriously complicated, and even those who are knowledgeable about the pitfalls can be inadvertently or intentionally misled. As librarians and other decision makers increasingly rely on web statistics (such as the number of hits, page accesses or downloads) it is important to be informed about the nature of such measurements and the difficulty in gathering and interpreting them. Moreover, the value of a particular resource is often not best measured by simply counting the number of times it is currently used in some way. This is especially true in a field like mathematics in which current research continues to play such a significant role far into the future.

Given that statistics, while subject to misuse, are valuable and will be used, it is important that mathematics researchers and research librarians are alert to these rapidly changing issues and are prepared to make appropriate arguments for mathematics.

FOR PUBLISHERS AND MATHEMATICIANS

11. Partial Access. Many journals restrict access to (paying) subscribers. As the web of mathematical literature grows, however, it will be increasingly important for all mathematicians to navigate that web, whether or not they have access to complete articles. This allows mathematicians to learn basic information about an article, even when they do not belong to institutions that have the financial resources to support the journal. It is especially advantageous to mathematicians from the developing world.

Journals should provide unrestricted access to tables of contents, abstracts of papers, and other data, such as keywords. Where practical, journals should also provide unrestricted access to reference lists with links, allowing all mathematicians to navigate the web of literature, even when they don't have access to the full-text of some parts of that web.

12. Eventual Free Access. The scholarly enterprise rests on the free exchange of ideas, and scholars need to have easy access to those ideas. Many journals, however, rely on subscriptions to recover costs and to provide an incentive to publish, forcing them to limit access to subscribers. Access should be a balance between those two needs, of scholars and of publishers.

Limiting access to subscribers for a fixed period of time after publication may be necessary for many journals. In order to ensure appropriate accessibility for the electronic literature, we encourage all journals to grant free access after that fixed period of time.

13. Archiving format. Ensuring the success of long-term archiving is more than storing the electronic data on reliable media in multiple locations. As software and formats change in the future, the data will require modification and updating. Not all electronic formats are suitable for these purposes.

In general, electronic documents should be stored in their most primitive format, that is, the format used to derive subsequent formats. Any format in which material is stored should follow an “open standard” that has a detailed public specification. This will increase the likelihood that scholars working decades or centuries from now will be able to use the material.

14. Archiving responsibility. Traditionally, maintaining the older literature has been the responsibility of librarians rather than publishers. Even in the electronic age, scholars and the librarians who represent them have the greatest motivation among all of the affected parties to ensure the preservation of older material.

We recommend that electronic archives of the mathematical literature should ultimately be under the control of the academic community.

15. Licensing and Bundling. Some licensing and bundling arrangements for journals accelerate the transfer of control of our literature away from mathematicians and research librarians. When institutions are forced to accept or reject large collections of scholarly literature covering many different disciplines, the decisions are less likely to be made by scholars. As a consequence, the normal processes that promote the highest quality journals become less effective.

The best protection, as always, comes through staying well informed and alert to these issues. In general, decisions about journal adoptions and cancellations should be made by academics and librarians.

Postscript on Developing Countries. Today, active mathematicians depend on access to electronic information---online journals, databases of reviews, and preprint servers. More than access, research mathematicians need the tools to create and edit documents in standard formats (such as LaTeX, Postscript, and PDF). This is true for mathematicians everywhere, including those in developing countries. Implementing many of the recommendations in the preceding document makes little sense if mathematicians are not connected to the Internet or have no tools to create electronic documents.

National mathematical societies and academies in developing countries need to impress on their governments the need to establish the infrastructure necessary to provide high speed connectivity among academic institutions.

The entire mathematics community should encourage and support specific actions designed to help in this effort, which include:

1. Establishing "mirror" services that provide quick access to users of electronic services within each region.
2. Establishing local help and service centers that spread expertise on the use of common standards (for example, LaTeX).
3. Creating small groups who tour the region and demonstrate the use of technology for research and study.

Because scholarly communication is changing rapidly, there is great urgency to begin these efforts.

IMU Committee on Electronic Information and Communication

Remark: The above recommendations have been stated in very general form. Whenever reference to existing formats (e.g., LaTeX, PDF), to archiving systems (e.g., arXiv), or to information and communication systems (e.g., Math-Net) has been made this is meant for illustration and not to promote these formats and systems. The IMU EC has asked CEIC to enhance, whenever appropriate and useful, individual recommendations by adding links to web pages that explain some of the technical issues involved, provide additional information, or contain (possibly controversial) discussions of the topics addressed. These links will be under the responsibility of CEIC and are not subject of the IMU EC recommendations.

Math-Net Charter

3

Math-Net Charter

Approved by the Executive Committee of the IMU, May 16, 2000

The Charter

GENERAL

In the spirit of the centuries-long tradition of open exchange within the mathematical community, this Charter describes an international effort to establish, maintain, and continue to develop a global electronic information and communication system for mathematics. This system, called Math-Net, is intended to organize and enhance the free flow of information within mathematics. The objective is to place efficient access to high quality mathematical information at the fingertips of the user.

The use of Math-Net is free. Information in Math-Net is freely available whenever and wherever possible limited only by technical, legal, and privacy constraints.

Math-Net is supported and fostered by individuals, mathematical organizations and institutions worldwide. Math-Net is organized under the aegis of the International Mathematical Union and is steered by the IMU Committee on Electronic Information and Communication (CEIC). See also the Web server of CEIC http://www.ceic.math.ca/.

PRINCIPLES

Math-Net, from a technical point of view, is a structured, distributed, interoperable, user-friendly, and high quality electronic information and communication system. Math-Net is organized via a user-driven and not-for-profit activity open for all willing to provide mathematical information electronically.

Math-Net is based on voluntary contributions of organizations or individuals. Depending on their role, they are designated as Math-Net Members or as Math-Net Service Providers. Math-Net Members make their information resources electronically available in a standardized fashion. They have full responsibility for the quality, accuracy, timeliness, and appropriateness of the data they contribute. Math-Net Service Providers combine these data into services. These services aim at providing fast and well-structured access to the mathematical resources within Math-Net (and

possibly beyond).
Efforts will be made to facilitate participation in Math-Net for those who have limited financial means.

ORGANIZATION

The organizational structure supporting Math-Net is intended to be light and flexible yet sufficient to coordinate and steer this activity.
The following institutions form the organizational backbone of Math-Net:

- the IMU Committee on Electronic Information and Communication,
- Math-Net Members and their designated Information Coordinators,
- Math-Net Member Associations,
- Math-Net Service Providers,
- the Math-Net Technical Advisory Board (TAB).

Their tasks and responsibilities are as follows:
CEIC steers and coordinates all activities. CEIC, in particular, appoints a Technical Advisory Board (TAB). TAB supports CEIC in the development of technical concepts and their realization.
Any institution, person, or group of persons willing to make its mathematical electronic resources available within the scope of Math-Net may become a Math-Net Member. Each Math-Net Member, represented by its Information Coordinator, participates in the advancement of Math-Net through Math-Net Member Associations.
Services, useful for the mathematical community, will be defined and developed within Math-Net. Each Math-Net Service is established and maintained by a Math-Net Service Provider which may be a single institution, or a group of institutions or volunteers. CEIC will especially draw on the expertise of representatives of Math-Net Service Providers to form the Technical Advisory Board.

STATUS OF THE CHARTER

This Charter forms the basis of the Math-Net activities. It has been accepted by the Executive Committee (EC) of the IMU at its meeting on May 16, 2000. CEIC is asked to report to the EC by May 30, 2002 about the experience with the Charter and the way Math-Net is operating. CEIC is also requested to suggest possible modifications so that the General Assembly of the IMU can decide on (a possibly adapted version of) the Charter at its meeting in August 2002.
CEIC is asked to formulate a supplement to this Charter in which organizational and other issues necessary to implement Math-Net are explained in more detail. This supplement should be made available electronically together with the Charter employing appropriate links. It is expected that the organization of the Math-Net System and the Math-Net activities undergoes an evolutionary process and that changes are reflected in the supplement of the Math-Net Charter whenever necessary.

Supplement

The Math-Net endeavor is specified by its

- aims,
- contents,
- characteristics,
- organization.

AIMS

The general aims of the Math-Net activities are

- to establish a high-quality electronic information and communication (short: i&c) system for mathematics along the lines of the Math-Net Principles,
- to install portals to mathematical information,
- to improve access to mathematical resources.

Math-Net will engage itself to

- structuring, organizing, and standardizing the information offered by Math-Net Members,
- describing and analyzing the contents of objects and links,
- indexing data and metadata,
- archiving material of long-term interest,
- developing and applying high-quality presentation and authoring methods,
- developing enhanced methods for retrieval,
- insuring software interoperability and interdisciplinary compatibility,
- improving scientific information services.

CONTENTS

Math-Net intends to cover the complete range of mathematical information, e.g.,

- preprints, published papers, theses, monographs, and collections of papers such as proceedings and collected works,
- abstract and reviewing services,
- lecture notes, teaching and educational materials,
- information about mathematical departments, institutions, and societies,
- information about research projects and job offers,
- information about special interest groups and other networks of mathematicians,
- professional data of mathematicians,
- announcements of events such as talks, colloquia, workshops, and conferences,
- software and data collections relevant to mathematics,
- visualization, audio, video and other multimedia data of mathematical interest.

CHARACTERISTICS

In order to enable user-friendly access to mathematical information Math-Net intends to develop suitable methods, tools, and standards. Math-Net is

- a structured i&c system:
  Math-Net Members make their local information available according to standardized principles. This is realized via a so-called Math-Net Page and the use of metadata. The Math-Net Page is a special homepage (a "secondary" homepage) for the member institution with a standardized, simple layout and structure. Metadata is an expression for "data about data". Metadata serve to provide information, e.g., about the contents, form, terms, and conditions of a document. They are in particular used for the automatic indexing, processing, and retrieval of large data sets. Metadata sets will be defined for important types of documents within Math-Net following international standards such as Dublin Core or RDF.

- a distributed i&c system:
  The information Math-Net Members contribute to Math-Net is stored and maintained on the servers of the participating institutions. Math-Net Members retain ownership of their data. However, they agree to make metadata available to enable Math-Net Services. Math-Net Services gather and process local information to make them globally accessible in a unified fashion. Math-Net Services are distributed too: They are provided on the servers of the Math-Net Providers who may be spread around the world.

- an interoperable i&c system:
  Interoperability is of high priority. Special efforts will be made to ensure compatibility of Math-Net with similar information systems currently under development in other scientific disciplines.

- a user-friendly i&c system:
  Math-Net will have a simple and intuitive user interface. Powerful retrieval mechanisms will provide easy access to its content. Math-Net will also supply useful tools for robust and simple input of documents and metadata.

- a high-quality i&c system:
  Math-Net Members commit themselves to offer high-quality information only. CEIC may decide to define quality criteria and seek for methods to ensure that these standards are followed.

The Math-Net activity is

- user-driven:
  Math-Net is - under the aegis of the IMU - in fact a grass root activity driven by individuals and institutions with an interest in making mathematics electronically accessible. Math-Net does not only address active mathematicians but also all other persons and institutions interested in mathematics. Math-Net will develop along the needs of its users. The IMU invites every interested institution and individual to participate in this endeavor. CEIC will set up mechanisms to ensure broad participation and to take up and realize suggestions.

- not-for-profit:
  All Math-Net activities are not-for-profit. CEIC acknowledges widespread incertitude about terms and conditions with respect of the use of electronic and electronically distributed information. CEIC will make an effort to define and provide suitable and practicable guidelines.

- open:
  All interested institutions and persons can take part in Math-Net activities. All interested users have access to Math-Net. Math-Net is open for all types of mathematical information. All standards and recommendations developed within Math-Net will be made publicly available in the Web.

ORGANIZATION

Math-Net Membership

To become a Math-Net Member it is necessary:
- to locally offer mathematical information of high quality,
- to structure the information according to the Math-Net Standards and Math-Net Recommendations,
- to appoint an Information Coordinator,
- to accept the Math-Net Charter.

Application for membership has to be directed to CEIC or an institution authorized by CEIC. The CEIC or an authorized institution will advise applicants and decide on membership applications.

Math-Net Member

The Math-Net Members constitute the base of Math-Net. They are, in particular, the prime data providers. Math-Net Members may actively take part in the Math-Net activities.

Tasks
Math-Net Members offer
- metadata of their documents and information resources,
- full versions of their electronic documents - whenever possible.

Information Coordinator

Every Math-Net Member appoints its Information Coordinator who is the Member's official contact person for all Math-Net activities.

Tasks

- The Information Coordinator is responsible for the local information offer.
- The Information Coordinator engages actively in ensuring comprehensive local information of high quality and stays in contact with the Math-Net Service Providers to make sure that the local data can be accessed by the service mechanisms.
- The Information Coordinator participates in the global Math-Net development, e.g., via Math-Net Member Associations.

Math-Net Member Associations

Guided by CEIC, the Math-Net Members organize themselves in Math-Net Member Associations. These associations may arise by regional, national, subject-oriented, or other forms of cooperation. Mathematical societies are requested to engage in forming Math-Net Member Associations and to support their work.

Tasks

- The Math-Net Member Associations take part in the development of Math-Net. They support the communication process within the Math-Net activities.

The Committee on Electronic Information and Communication

The IMU appoints the members of CEIC. CEIC has the final responsibility for all activities within Math-Net. CEIC may form Math-Net Member Associations, appoint subcommittees, a secretariat, boards, or task forces to serve special purposes or to suggest solutions for open problems. All activities proposed by these groups are subject to CEIC approval.

Tasks

Tasks of CEIC are, in particular, to

- define guidelines for the Math-Net activities,
- cooperate with the Math-Net Member Associations,
- organize the communication within Math-Net,
- coordinate the Math-Net activities with the IMU and other professional societies in mathematics,
- define Math-Net Services and conclude agreements with Math-Net Service Providers,
- declare Math-Net Standards and Math-Net Recommendations,
- communicate and cooperate with other initiatives in the field of scholarly communication,
- support Math-Net Members that have limited financial or technical resources.

The Technical Advisory Board (TAB)

TAB is a subcommittee of CEIC. CEIC appoints the members of TAB. Math-Net Service Providers are represented in TAB. TAB may form task forces for the solution of technical problems and may draw on expertise from the Math-Net Member Associations and outside.

Tasks

- The purpose of TAB is to propose methods, standards, and tools for the further technical development of Math-Net. Math-Net uses methods, standards, and tools that should be as simple and robust as possible. TAB should follow the development of emerging and enhanced techniques for the improvement of Math-Net.
- TAB and/or task forces develop and propose Math-Net Standards and Math-Net Recommendations.
- TAB is responsible for the technical aspects of the Math-Net Communication Platform.

Math-Net Services and Math-Net Service Providers

A Math-Net Service is an official predicate awarded by CEIC. Math-Net Services are portals to Math-Net resources. The quality of Math-Net Services is essential for the use and the acceptance of Math-Net. Math-Net Services work independently within the limits of the Math-Net Charter. A Math-Net Services Provider can be a consortium of institutions and/or persons or a single institution and/or person. The Math-Net Service Providers are represented in TAB.

Tasks

- Math-Net Services gather information provided by the Math-Net Members and others, index and process this information (data and particularly metadata) and make it accessible in a user-friendly fashion.

Math-Net Standards and Math-Net Recommendations

Math-Net Standards define minimal criteria and requirements for the structure, the contents, and the design of the local information offered by Math-Net Members. They similarly guide the contributions of Math-Net Services Providers.
Math Net Recommendations are intended to structure enhanced and emerging services or to test future standards. Math-Net Standards and Math-Net Recommendations are essential for the interoperability within Math-Net and the compatibility with other scientific information services.
CEIC together with TAB and the Math-Net Member Associations organize a transparent and open discussion process about Math-Net Standards and Math-Net Recommendations and their development.

Math-Net Communication Platform

The Math-Net Communication Platform ensures the mutual interplay of the institutions participating in Math-Net. The contents of the Math-Net Communication Platform will be defined by CEIC. TAB together with the Math-Net Member Associations organize the Math-Net Communication Platform. Possible forms are, e.g., web servers and newsgroups, mailing lists, electronic newsletters, conferences, workshops, and meetings.

Math-Net Page 4

The Math-Net Page

Call to All Mathematical Institutions to Install Math-Net Pages

Recommended by the Committee on
Electronic Information and Communication (CEIC)
of the IMU on February 17, 2002
(endorsed by the Executive Committee of the IMU on April 12, 2002)

Almost every mathematics department or research institute has a homepage that provides basic information about people and activities in the department. In order to be useful to those outside, the homepage should have an easily recognizable, clear, and intuitive structure. Unfortunately, while many of the current homepages are beautifully designed, they differ dramatically in both structure and content. The IMU wants to improve this situation and help users to find high-quality mathematical information.

The Math-Net Page for departments or research institutes provides a way to standardize the presentation of basic information about the department. The Math-Net Page is not meant to replace a nicely designed homepage, but rather to serve as a "secondary homepage" with a uniform and intuitive structure. The uniform structure allows users to find information easily and reliably.

Based on the recommendation of its Committee on Electronic Information and Communication, IMU asks every mathematics institution throughout the world to create a **Math-Net Page**, to install a prominent link to that page from its primary homepage, and to maintain its Math-Net Page in the future.

The Math-Net Page for mathematics departments and research institutes is the result of an intensive international effort. Further information can be found at Launching the Math-Net Page.

Detailed information about creating and installing a Math-Net Page can be found at http://www.math-net.org/Math-Net_Page_Help.html. For questions and comments, please send e-mail to math-net@zib.de

Launching the Math-Net Page

IMU's ACTIVITIES ON ELECTRONIC INFORMATION AND COMMUNICATION

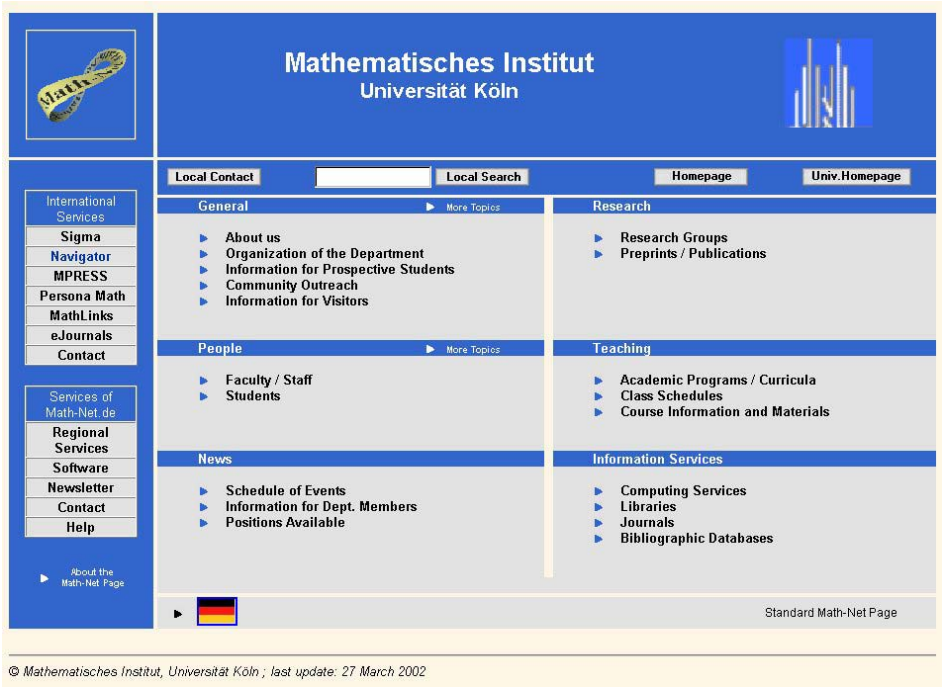
One major aim of the IMU in the field of information and communication is to improve the worldwide access to mathematical information for the mathematical community and, generally, for everybody interested in mathematics. For that reason, the IMU established its Committee on Electronic Information and Communication in 1998. The activities of CEIC comprise all aspects of electronic information and communication in mathematics.
Math-Net Pages are an instrument to make the information of mathematical institutions electronically available in a well-structured way. Additional Math-Net Services facilitate search and access. **The IMU invites all institutions to join the Math-Net activities and to install Math-Net Pages.**

THE HISTORY OF THE MATH-NET PAGE

The concept of Math-Net Pages evolved in the framework of the Math-Net project in Germany that aimed at the creation of a distributed information and communication system for the German mathematical community. This project focussed on:

- the development of a human infrastructure (appointment of information coordinators at all participating institutions)
- recommendations for the institutions to structure their local Web sites (which resulted in the initial concept of the Math-Net Page)
- building up of services, such as
  MPRESS for preprints: http://mathnet.preprints.org/,
  PERSONA MATHEMATICA for information about mathematicians:
  http://www.mi.uni-koeln.de/Math-Net/persona_mathematica,
  NAVIGATOR for Math-Net Page: http://www.math-net.org/navigator)

The Math-Net Pages and the related Math-Net Services have found broad acceptance in Germany. Almost all German mathematical departments and research institutes have installed Math-Net Pages. Under the guidance of CEIC, these concepts have been extended and further developed to meet the needs of the international mathematical community. The current Math-Net page of the University of Cologne, Germany below shows an example of this new international Math-Net Page.



THE IDEA OF THE MATH-NET PAGE

A problem with the existing (sometimes beautifully designed) homepages of mathematical institutions is that many of them differ significantly with respect to structure and contents. Beauty does not necessarily support user-friendly navigation and search. With the Math-Net Page, an attempt is made to standardize the presentation of departmental information so that a user, wherever he or she opens such a page, feels at home immediately. The Math-Net Page, intentionally simple in its design, supports various search mechanisms via the use of metadata. It is not intended to substitute an existing homepage. The Math-Net Page is meant as a useful addition (a secondary homepage), addressing the user looking for simple and intuitive access to local information. The Math-Net Page has a standard version in English. The naming of the entries on the page can be customized, of course, in languages different from English.
An extensive analysis of the material offered by mathematical departments revealed that, in most cases, it can be subdivided into the following six groups: General, People, News, Research, Teaching, and Information Services. These groups and their subgroups, see the example above, form the backbone of the Math-Net Page. In addition, there are links to regional and international Math-Net Services and to local Web pages such as the primary homepage of the department or the homepage of its university.

GENERATING THE MATH-NET PAGE WITH THE MATH-NET PAGE MAKER

The Math-Net Page Maker (http://www.math-net.org/navigator) is a *form based* tool for a quick and easy generation of Math-Net Pages. In addition, the Math-Net Page Maker allows the user to edit existing Math-Net Pages.

DISCLAIMER

The Math-Net Page Maker has been intensively tested. IMU, CEIC, and the developers of the tool, however, will not be liable for the proper functioning of the software. In case of difficulties, please contact math-net@zib.de.

Press Release: Math-Net Page Launched for Mathematics Institutions Worldwide

The IMU has just released **Math-Net,** a worldwide electronic information and communication system for mathematics, see http://www.math-net.org/.

Why is Math-Net needed? Today, almost every mathematics department or research institute offers information on the World Wide Web. But the content, structure, and presentation of these pages vary widely, making it difficult for users to navigate and find information. Math-Net is an alternative way for academic departments and research institutes to present information about themselves and their programs consistently. Math-Net has been designed to facilitate access to high-quality mathematical information worldwide, both by human users and search engines.

A special feature of Math-Net is the **Math-Net Page**, a web portal for mathematics departments and institutes that presents information in a standardized, well-structured, and easy-to-use format.

The Math-Net Page is an additional entry point to institutional information, immediately accessible from the department's homepage, and not meant to replace it. Using this secondary homepage, mathematicians, scientists, students, and the news media can easily find relevant data, such as staff, student programs, colloquia, seminars, and publications.

The Math-Net Page is an enhanced version of a web page that originated in a project in Germany, targeted at establishing a nation-wide information and communication system for mathematics departments. A tool for generating Math-Net Pages as well as assistance is available at no charge at http://www.math-net.org/Math-Net_Page_Help.html. Mathematics departments around the world are currently setting up Math-Net Pages.

The Math-Net Pages are collected by the Math-Net Service NAVIGATOR, see http://www.math-net.org/navigator, that gathers the local information and makes it globally available. Other services of this type are MPRESS, see http://mathnet.preprints.org/, collecting information about mathematical preprints, and PERSONA MATHEMATICA, a search engine for mathematical researchers, see http://www.mi.uni-koeln.de/Math-Net/persona_mathematica.

Math-Net paves the way towards open and free exchange of information within and for the international mathematics community. In May 2000, the IMU adopted the Math-Net Charter, see http://www.math-net.org/Charter/. The IMU Committee on Electronic Information and Communication has issued a recommendation that universities and institutes worldwide install a Math-Net Page.

Contact: Martin Grötschel, Konrad-Zuse-Zentrum, Takustr. 7, D-14195 Berlin, Germany, e-mail: math-net@zib.de.

Call to All Mathe-maticians

5

Call to All Mathematicians to Make Publications Electronically Available

Endorsed by the IMU Executive Committee on May 15, 2001
in its 68th's session in Princeton, NJ.

Open access to the mathematical literature is an important goal. Each of us can contribute to that goal by making available electronically as much of our own work as feasible.
Our recent work is likely already in computer readable form and should be made available variously in TeX source, dvi, pdf (Adobe Acrobat), or PostScript form. Publications from the pre-TeX era can be scanned and/or digitally photographed. Retyping in TeX is not as unthinkable as first appears.
Our action will have greatly enlarged the reservoir of freely available primary mathematical material, particularly helping scientists working without adequate library access.

What do You Want from Your Publisher?

6

CEIC Copyright Recommendations: What do You Want from Your Publisher?

Executive summary for authors of research papers in Journals

The number of mathematical papers that are stored or circulated as electronic files is increasing steadily. It is important that copyright agreements should keep in step with this development, and not inhibit mathematical authors or their publishers from making best use of the electronic medium together with more traditional media. While most mathematicians have no desire to learn the subtleties of copyright law, there are some general principles that they should keep in mind when discussing copyright for research papers with their publishers.

1. A copyright agreement with your publisher is a bargain struck between his interests and yours. You are entitled to look out for your interests. Most journal publishers have a standard copyright form, and may be unwilling to vary it for individual authors. But nothing prevents you from asking, if you see room for improvement. Pressure from authors may lead publishers to change their standard contracts.

2. Three groups of people have an interest in your paper:
    a. Yourself and your employer (who may in some countries be automatically the original copyright holder and hence a party to the copyright agreement);
    b. The journal publisher;
    c. Users of paper who are not parties to the copyright agreement, including readers and libraries.

    One of the main purposes of your copyright agreement is to control how your publisher or you make the paper available to this third group. Publishers will hardly allow individual authors to dictate agreements with libraries. But if you know that a certain journal publisher makes life hard for libraries, you can take this into account when choosing where to submit your paper.

3. There is no ideal copyright agreement for all situations. But in general your agreement should contain the following features:
    a. You allow your publisher to publish the paper, including all required attachments if it is an electronic paper.
    b. You give your publisher rights to authorize other people or institution to copy your paper under reasonable conditions, and to abstract and archive your paper.
    c. Your publisher allows you to make reprints of the paper electronically available in a form that makes it clear where the paper is published.
    d. You promise your publisher that you have taken all reasonable steps to ensure that your paper contains nothing that is libellous or infringes copyright.
    e. Your publisher will authorize reprinting of your paper in collections and will take all reasonable steps to inform you when he does this.

4. Should you grant full copyright to the publisher? In some jurisdictions it is impossible to transfer full copyright from author to publisher; instead the author gives the publisher an exclusive right to do the things that publishers need to do, and these things need to be spelt out in the agreement. This way of proceeding is possible in all jurisdictions, and it has the merit of being clear and honest about what is allowed or required.

The copyright checklist was written by Wilfrid Hodges, was approved and is recommended by the Committee on Electronic Information and Communication of the International Mathematical Union (IMU). The executive summary was endorsed by the Executive Committee of the IMU in its 68th session in Princeton, NJ, May 14–15, 2001.

What do You Want From Your Publisher?
An annotated checklist for mathematical authors

A copyright agreement with your publisher is a signed undertaking that he will do or not do certain things, and you will do or not do certain other things. If you are wondering how to get a fair deal in this agreement, you should start by asking what you want your publisher to do for you, and what you are prepared to let your publisher ask from you. The checklist below may help you to make sure that you have not missed any important points.

The agreement is a bargain struck between your interests and those of your publisher. For example both you and your publisher have a common interest in stopping your work being plagiarised by other people. But if your publisher is expected to take plagiarists to court at his expense, he may well feel entitled to redress the balance by asking you for something else that he wants but you may not.

Changes in the law and technology are continually altering the balance between author and publisher. So you shouldn't feel inhibited about telling your publisher if you feel that some change in the copyright form sent to you by your publisher would make it a fairer deal. (Your publisher is not inhibited about changing his form where he feels it's appropriate.) Because of the costs involved, the publisher is more likely to be willing to discuss the contract for a book than for a journal article; but even for journal articles, pressure from authors may lead a publisher to change his standard contract.

So far as possible, we have avoided legal terminology in the checklist. This is for two reasons. The first is to make the points clearer and more direct. The second is that there are still enormous differences between one legal system and another, though the differences are gradually narrowing under the pressure of international trade. For example 'copyright' in the USA and its nearest equivalent in France, 'droit d'auteur', are really quite different concepts; and the German

and British legal systems make different assumptions about who is the initial owner of a work. Different legal systems have different ways of delivering the balance that you want.

We assume you are a mathematician and not a lawyer. So how can you draft a clause that gets the effect you wanted? You can start from what your publisher proposes, using your common sense. The points in the checklist below all carry notes about things to look out for, and in several cases we point out things that matter in particular countries. We hope these resources will be enough for you; if not, you may need to find a friendly lawyer.

P is Publisher (assumed male).

1. Things you might allow P to do

(a) Publish your work.

Make sure that it's clear what the 'work' is, especially if it involves electronic items.

There is also a question whether it is 'your' work. Of course you will know if you stole it from someone. But even if you wrote the paper entirely on your own, you may not realise that your employer can claim ownership of your mathematical work.

In France and Germany this can't arise. But in any English speaking country you would be wise to check your contract of employment to see what it says about the copyright in works that you wrote as part of your employment, particularly if you are working for a government agency. Be warned also that your contract of employment need not be the end of the story, because the law in different countries makes different assumptions about copyright ownership if your contract of employment is not specific about it. For example in Canada the assumption is that your employer holds the copyright unless your contract of employment says otherwise; though as author you have certain rights over the publication of articles written by you. If you are a US public servant and the work was done as part of your official duties, then there is no copyright in it within the US, though there may be outside the US; if you are in this position you probably know where to seek advice on the matter.

In France it is essential that your copyright agreement says explicitly that P is allowed to publish the work.

(b) Distribute free copies under certain conditions.

This raises no legal problems.

(c) Authorise other people or institutions to publish copies of your work.

For example you probably want to allow offprint services to distribute offprints of your work, and to charge a fee for copies.

(d) Authorise other people or institutions to make copies of your work under certain restricted conditions.

This is a very important clause. Students and researchers need to be able to make photocopies of your written papers or parts of your books. If your work is electronic, then nobody can load it onto their computer or bring it up on their screen without copying it (from disk or Internet to RAM, from RAM to screen); so

for electronic works this clause is absolutely essential.

Usually P takes responsibility for negotiating licences for colleges and libraries; though P may contract this out to an agency. Your contract must give P permission to do this; though P will notice if you ask him to accept a contract that doesn't. You should try to avoid details at this point, because there are many subtleties that you probably aren't aware of. (For example, should electronic access from the college be controlled by password, IP address or domain name?) Librarians and publishers both complain bitterly that the other side often makes unreasonable demands; best you keep out of these fights.

(e) Authorise other people to make derivative uses of your work, such as reviewing or indexing.

For normal scientific reviewing, fair use or equivalent rules will usually allow the small amount of copying that may be involved.
But creating an abstract, or quoting more extensively than is required for purposes of scholarly comment, may fall outside these rules. If you grant P the right to handle such matters, dealing with requests for uses such as these will generally fall to P's "rights and permissions" department.

2. Things you might require P to do

(a) Pay you.

This normally applies only to books. There are some journals and conference proceedings for which you have to pay P.

(b) Anything under 1 above.

It's up to P what he will accept along these lines; but he will not usually accept an obligation to publish without a clause that the work must be of acceptable quality. But in any case you and P have a common interest in having people or libraries buy the work.

(c) Advertise the publication of your work adequately.

This applies to books rather than journal papers. It is not a thing that publishers will normally accept as an obligation. Nevertheless one does meet authors who have a grievance about the way their work was advertised. There is nothing to prevent you asking for such a clause, particularly if P is one of those charming publishers who threaten to give your book less favourable treatment if you don't go along with their other requests on the copyright form.

(d) Let you know when other people ask for or are given permission to republish the work.

You can reasonably ask to be informed if a chapter of your book is going to appear in someone's collection; you can't reasonably ask to be informed every time an offprint is issued.

Also P will be a fool to give you a cast-iron guarantee in this clause. By the time P needs to send you the information, you may have left the country and be impossible to trace. Any clause of this kind should require P only to use 'best endeavours' (or some similar phrase) to get the information to you.

(e) Update the electronic format of electronic material as the advance of technology requires.

You are in uncharted territory here. It is more sensible to require this for electronic material in a standard text format than it is for graphics files that may need some particular software application to run them. P may reasonably insist on a 'best endeavours' clause in any case.
Some publishers say explicitly that they will not patch up your files if these are incompetently written. This is a very reasonable requirement, and you should assume too that P will not sort out the mess if you have used an outdated format (for example an obsolete version of TeX).

(f) Take legal proceedings against plagiarists.

P would be stupid to accept this obligation without very severe restrictions. Legal proceedings are expensive and sometimes the chance of conviction is low. Also as it stands this is an obligation into the indefinite future (or at least until the copyright lapses, which in North America is normally 70 years after the death of the author); why should P lumber himself with this? You should rest in the knowledge that plagiarism is a threat to P as well as to you.
Note that in most countries P will not be in any position to take plagiarists to court if P doesn't have a legal interest in the work. But the details vary from country to country.

3. Things you might require P not to do

(a) Alter your work.

By international agreement you as author have a moral right to claim authorship of your work and to object to any distortion, mutilation or other modification of it which would be prejudicial to your honour or reputation. Like all moral rights, this stays with you for ever and it doesn't need to be stated in the copyright agreement; but different countries have taken different steps to safeguard this right.
In any event the moral right is rather vague. You may want to demand something stricter, for example that no change is made in the text of your paper. Don't be surprised if P puts restrictions. For example P has to protect himself against possible libel or plagiarism by you; he may insist on being able to make alterations that are necessary for legal reasons, and he won't want to be delayed by having to check with you first. (This arises particularly with electronic files that P keeps on his website. He can hardly alter journals already delivered to libraries.)
In return you can reasonably insist that any such emergency alteration is approved by an academic editor.
Don't be surprised either if P insists on being able to make purely electronic or formatting adjustments; this is reasonable.

4. **Things P might want you to do**

(a) Guarantee that the work has not previously been published, and that you are not simultaneously offering it to another publisher.

As it stands, this prevents P from publishing a work of yours which has already been published, even when the person who holds the necessary authority has authorised P to republish. But if P knows that this is the situation and still wants to publish, P will presumably withdraw the clause.
There can be a tricky scenario when the previous publication was on paper, very likely before electronic publication was invented, and the proposed new publication is electronic. Both you and P need to be sure that the previous publisher can't stop you making the new publication. This may depend not only on the text of the earlier copyright agreement, but also on the legal system of the country in question. Unless you are extremely sure of your situation, find the copyright agreement with the previous publisher and show it to a reliable lawyer.

(b) Guarantee that you are legally entitled to give P the rights that you are claiming to give him.

Caution here. Unless you are very sure of the full facts, you should never do more than guarantee that you have taken all reasonable steps to make sure you are entitled.
For example an electronic paper may contain software that some company issued as freeware, but later the company changed its mind and demanded that users of the software should pay for a license. You (and hence P) may still be legally liable, though you may be able to plead in mitigation that you didn't know about the change. This is very uncommon, but the fact that it can happen at all should warn you to take care with a clause like (b).

(c) Guarantee that the work contains no libel or other material that shouldn't be published.

You can agree to this more safely than (b), but you should still be careful, particularly in Britain where the libel laws are stiff.

(d) Include a confidentiality clause, or ask for part of the agreement to be by a verbal understanding rather than a written contract.

There might be a good reason for these, but common sense suggests you should be extremely suspicious. If you do have grounds for suspicion, you might ask for a clause saying that no oral statement should be taken into account apart from the text, which should be taken to constitute the entire agreement.

5. **Things P might want you not to do**

(a) Publish the work yourself.

This includes keeping the work on a public website after P has published it. If you have given somebody else an explicit license to include it in their website, then in general you can't prevent them keeping the work on their site; but usually in such

cases the license is implicit, so that you can write to the owner withdrawing the license, and the owner is then obliged to remove the work from the site.

The legal terminology of most countries allows three possibilities.

(i) If you have given an 'exclusive license' to P, then this prevents you from publishing the work yourself or authorising anyone else to publish it. P on the other hand can do with your work what you license him to do, and nothing more.

(ii) If you give P a 'non-exclusive license', this entitles you to publish the work yourself and authorise other people to publish it; but in this case P may very well ask you to promise not to authorise third parties to publish the work except under strict conditions (see (c) below). Again P can do whatever you license him to do. (Don't be bullied by publishers who warn you that if you opt for this kind of agreement they will be inhibited in disseminating your book. With their agreement, you can license them to do whatever you want them to do.)

(iii) If you have 'assigned copyright' to P, then all authority over the work passes to P. This prevents you from publishing the work yourself or authorising anyone else to publish it; except that P may give you in return a (non-exclusive) license to publish under certain conditions. Recently many publishers have been moving towards this arrangement, that you assign copyright but receive a carefully circumscribed exclusive license, as a way of heading off demands from authors that they should retain copyright. A typical clause of this kind might allow you (1) to make copies for classroom teaching,
(2) to make copies for distribution to colleagues in your own institution,
(3) to use the work in later publications of your own (including lectures),
(4) to keep the work on your own website.

In Germany (iii) is technically impossible, but German publishers sometimes refer to (i) as 'transfer of copyright'.
In the US (where the terminology of (i)–(iii) does apply), your legal rights and those of P don't depend on copyright being registered with the Copyright Office. But if you are a US resident and want to use your copyright as a basis for suing someone, you must have registered; moreover if you want to sue for statutory damages and attorney's fees, you must have registered either before the plagiarism occurred, or within three months of first publication. In cases (i) and(ii), you hold the copyright and you will need to register it yourself. In case (iii), P holds the copyright and may ask you to state in the contract that you allow P to register it.

(b) Authorise someone else to publish or copy the work.

This has become a real problem, where a publisher holds the copyright on a book that is out of print and is unwilling to republish it (or to republish it with changes that you want to make), though other publishers are willing. So in case you should consider insisting on a clause that P will agree to grant a licence to another publisher on reasonable terms if the book goes out of print.
If you insist on being able to authorise further publication or copying yourself, bear in mind that for people who want to publish or copy, P may be much easier to find than you, particularly if P is a famous publishing house. You can make

yourself a little easier to reach by entering into a collective licensing scheme such as those run by the UK Copyright Licensing Agency or the US Copyright Clearance Center, or any similar Collection Society. Some publishers specifically exclude registration with a licensing agency even if you retain copyright; this is a bit of a cheek and you might want to press them on it.

(c) Publish a revised or upgraded version of the work yourself.

This possibility arises very easily if the work is published electronically; you are bound to be tempted to correct false theorems, and maybe to attach relevant programs when they become available. But it can also arise with printed work, for example if you retain copyright, and then later you allow another publisher to include some of the work in a published collection, and you update the work for this new publication.
If you do retain copyright and P is asking for a restriction of this kind, you will need to agree with P a way of drawing a line between the kinds of revised publication that will devalue P's version unacceptably and those that won't. You are on your own here—there are no standard agreed formulations. (But some may emerge as it becomes commoner for authors to retain copyright.)

(d) Publish (or authorise someone else to publish) the work without its including an acknowledgment that the first publication was by P, with a full reference to that publication.

This is a common clause in contracts that allow you to publish the work yourself. It seems very reasonable. Sometimes P will require that the acknowledgment is in a suitably prominent place, for example on the first page.

(e) Revoke the contract.

It's normal to make copyright agreements irrevocable by either party. But if you and the publisher agree, there is nothing in the law to prevent you granting copyright or licence for a limited period or in a restricted area of the world, or simply leaving it open for either party to revoke the contract after first publication.

6. **Other considerations**

(a) Which country's laws apply?

A copyright contract should contain a 'jurisdiction clause' saying what jurisdiction applies; sometimes it does this by saying where the parties can sue. If both publisher and author are in the same country (or the same legal jurisdiction, e.g. a state of the US, or Scotland for example), the law makes the default assumption that the laws of that country or jurisdiction apply. The legal situation is very complicated if publisher and author are in different countries and the contract contains no jurisdiction clause.

(b) Define your terms. There are any number of anecdotes about authors getting caught out by not realising how a word in the contract might be interpreted. For example your contract should probably define what it counts as 'publication', or avoid the word altogether; otherwise you may find in US law that a free

distribution doesn't count as publication. Your definitions don't have to agree with some standard legal definition; they do their job if they make clear what the parties to the contract had in mind.

Acknowledgements. My thanks to Eva Bayer-Fluckiger, John Ewing, Susan Hezlet, Gary Lea, Ulf Rehmann, Laurent Siebenmann and Bernd Wegner, for their comments on an earlier version, though they are not responsible for any mistakes of fact or judgement.

Last revised 5 September 2001.

Wilfrid Hodges, w.hodges@qmul.ac.uk