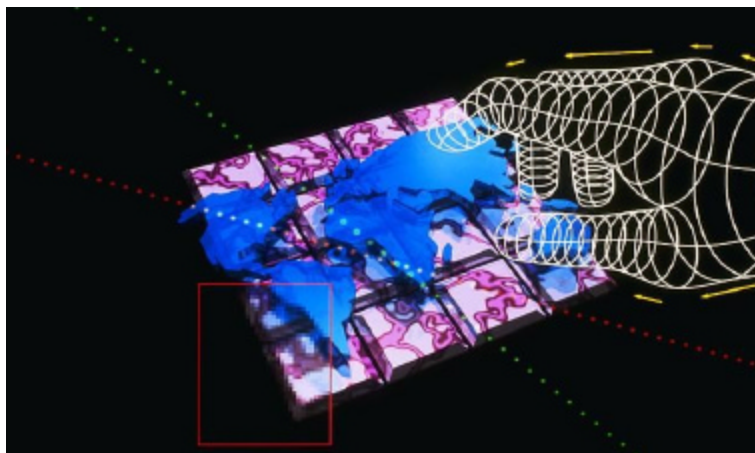

PAHO/WHO
Pan American Health Organization
World Health Organization



Working Session on Health Information and Virtual Media
Congress CRICS VI - BIREME
Puebla - Mexico

May 8, 2003

Organized by
Information Knowledge Management Area IKM, PAHO/WHO

Pan American Health Organization
525 Twenty-third Street, NW
Washington, D.C., 20037



Pan American Health Organization
Division of Health and Human Development
Regional Program on Bioethics PAHO/WHO

SPANISH WEB SITES INQUIRY: AN APPROACH TO BIOETHICS

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Santiago, Chile, March 2003

TABLE OF CONTENTS

	Pag.
INTRODUCTION	
RESEARCH DESIGN	4
APPROACH TO THE ISSUE	4
OBJECTIVE: GENERAL SPECIFIC	4
METHODOLOGY	5
I. – ANTECEDENTS	7
II. – FIELD STUDY	
2.1. – Type of Organization	8
2.2. - Potential destinataries	10
2.3. - Web sites format	10
2.4. - Formal presentation of contents	11
2.5. - Levels of accessibility of Web sites	12
2.6. - Updating of contents	13
2.7. - Resources and services offered	13
2.8. - Publications	14
2.9. - Language options	15
3.0. - Reviewing systems	16
3.1. - Recurrent topics	17
CONCLUSIONS	19
APPENDIXES	

Introduction

Nowadays Internet plays a relevant role in the diffusion and transmission of information at all levels and fields of action for the individual.

Being in this way, media connection has made possible to surpass political and cultural borders, placing us in the globalization era.

Each time we ask ourselves about what is globalization, we must be certain that information is the most powerful resource of our times and it is for this reason that to have access to suitable and truthful information is even a question of maximizing resources.

Our work proposal fits into a bigger project, directed by Ana Lucía Ruggiero, specialist in information sciences in PAHO, which deals with reviewing web sites.

The conjoint objective is to achieve not only to demonstrate how important is internet but also how it can be of utility if we know how to optimize its use.

Therefore, the proposal is, to diagnose the state of certain web sites related to specific topics.

In our case, the topic consists in Bioethics and for this goal we have counted with Dr. Fernando Lolas, Director of the Regional Program on Bioethics PAHO/WHO.

The proposed objective was to establish a guide that allows to characterize a sample of web sites related to Bioethics. This guide was constructed in the light of necessary patrons to characterize how certain web sites operate in searching information, that is, that they are able to: clearly identified the site, have a defined type of format, have a formal presentation of contents, these are updated periodically, counts with resources and services for the visitor to build a bioethics that is involved in social dialogue and has feedback with society. Finally, it has also been important for us to consider the review and statistics of the web site.

To end, it is important to point out the value of exploring web sites contents in emergent and controversial topics such as bioethics.

RESEARCH DESIGN

Topic: Guide of analysis of sources of information in web sites related to bioethics in Spanish, considering internet as base for the study.

Issue: How to establish criteria for categorizing web sites related to bioethics, considering internet as resource base.

General Objective: To elaborate a review of products and services offered by web sites on the topic of bioethics in Latin America and Caribbean countries with the goal of establishing new collaborating relations between suppliers and users of information in the field of bioethics.

Specific objectives:

- 1- To establish quality criteria in relation to web sites contents on bioethics.
- 2- To elaborate a map of products and services available in web sites on bioethics.
- 3- To identify possible gaps between the offering and the demand of information.
- 4- To elaborate profiles of users, products and services of information on bioethics.

Methodology

For the design and elaboration and for starting the following guide of analysis of web sites related to bioethics as sources of information, we have developed the following steps:

Elaboration of the project design. After establishing the issue or topic to study, we address the general and specific objectives; we proceed to elaborate the working guide, which should respond to the topic and objectives proposed.

The working guide was developed in accordance with the following categories:

- a) **To identify the destinataries and/or potential visitors.** This category includes five items: scientists, university professors, university students, general public and others; these items were identified with a representative code in such a way to be able to assign a quantitative value with a percentage.
- b) A second category studied was related to the **format**. This category is associated to the web site style, having in consideration if it presents texts or images or other elements such as animations or multimedia.
- c) Another aspect of interest considered is the **formal presentation of contents**, that is if the web under study presents in its main page: index, emphasized information, summaries of contents, recommendations, suggestions and/or presentation of products or services such as books or journals.
- d) The topic of **accessibility** is also a relevant aspect for navigating in a web site for searching information of interest for the user; this aspect is associated with the web site having a map of the site and if it structures the contents so that it is easier for the user to find needed information, and if the web site counts with menus and sections to facilitate entering in it.
- e) The **updating** of contents is not a minor topic to address. Some web sites offer information about the frequency of actualization, but in many the periodicity of updating is undefined.

Other significant aspect to observe and verify is the services that the site offers to the users and potential users. This item is associated with the web site having a local or remote catalogue, if it counts with service of electronic reference, discussion forum, and in a significant way, if it has a section with publications and how it is presented, if it only offers abstracts of articles, full texts, or if there is possibility of subscription or if the access is restricted or not. Another possibility considered was related to language and/or the possibility of translation of contents to another language, if the web site counts with an editorial board and its requirements for functioning.

- f) Furthermore, it was considered another category associated to the way of reviewing the web site, such as the offering of a visiting record and/or a commentary section, the statistics and the most recurrent bioethical topics.
- g) The composition of the sample was 31 web sites in Spanish, to which it was applied the instrument previously detailed.

Antecedents

In a society that is not characterized by the development of information and communication through new technologies, internet is without doubt the technological phenomenon of greatest importance since it has been transformed into a tool with characteristics and support of information of a global magnitude, able to store and spread information in a dynamic way considering that is needed a great amount of volume and support to circulate the information.

The use of internet is not anymore a novelty, but something so common as the use of the phone or television.

In this landscape, internet has changed our lives linking persons through a computer to a virtual community, place that never stops functioning and that is full of resources such as web pages, access to data bases, electronic books, photographs, maps, music and journals on line. With this platform of interaction and global communication it is necessary to establish criteria that allow to put order for later using the available information in the web of webs.

On the other hand, the development of tools to facilitate the searching of information has been of great utility, due to the great amount of information placed in the web, these make possible the recovery of information considered relevant for the users and/or investigators.

This technological landscape points speedily to the convergence between means and support and the visitors that seek information; in this way it would be of great importance the idea of reviewing the web and establishing certain criteria which will allow offering to the user information referred to a particular topic with a filter which could establish a distinction between information considered relevant from that which could be considered unusable for the user that needs the information; these criteria may offer a guidance to the users, in such a way that it may contribute to cover their specific needs so that they do not get lost in the web.

Internet as resource for communication and transmission of information has great advantages if it is used efficaciously and effectively. But reality indicates that there is some kind of ignorance of its advantages and therefore, it is apparent the lack of services and attractive contents for the development of society

Results of the field study

For the application and analysis of the information extracted of the web sites studied, it was used three searching engines: *Google, Yahoo and Copérnico* and 1 meta searcher: *Todalanet.net*, which was applied specifically to some of the countries of the region.

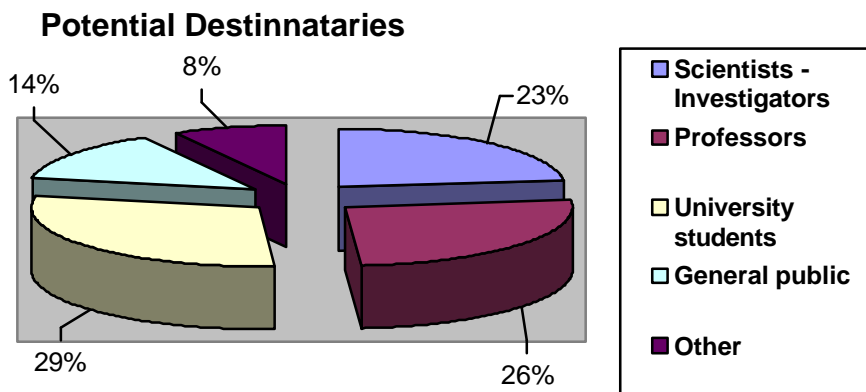
The first item studied was related to the identification of the web site and the type of organization.

Table 1 Type of Organization

Characteristic	Amount in %
Public	9.7%
Private	26%
Academic	48.3%
Private / Academic	16%
Total	100%

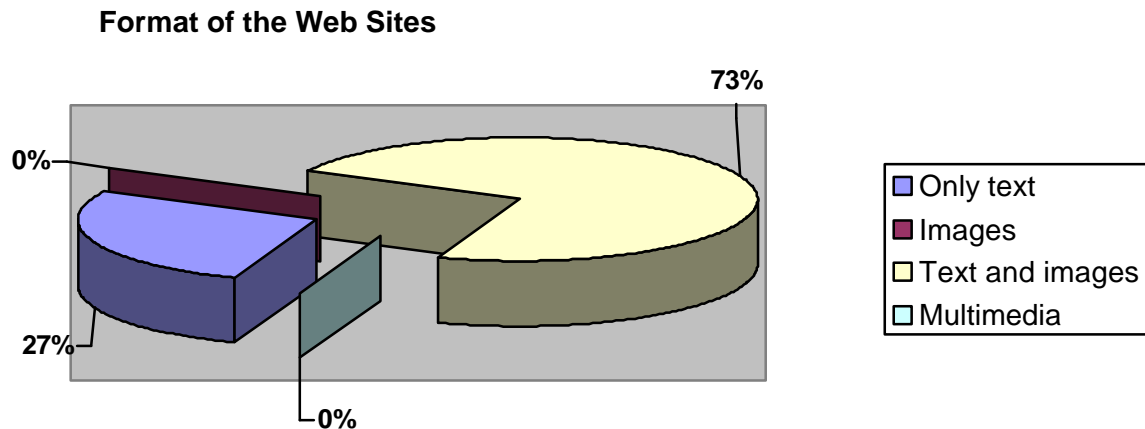
The information presented in table 1 shows a greater percentage of web sites on bioethics developed by academic institutions with a - On the other hand public organisms present less percentage of sites with topics related to bioethics in the web.

Graphic 1



Graphic 1 shows that from the web sites on bioethics subjected to study, **29%** present evidence that their information is addressed to university students. This situation is not unusual since most of the web sites studied correspond to academic institutions. On the other hand, a smaller percentage, **8%**, corresponds to the general public; this category is associated to diverse persons with personal interest for bioethical topics, including children and young high school students. This category studied was thought as means for gaining information with respect to the type of language and of information used to present the contents of bioethics.

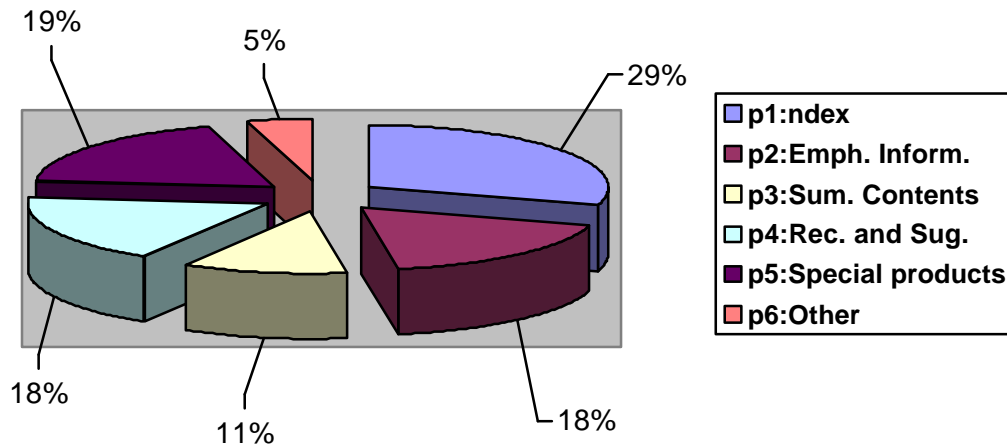
Graphic 2



The characteristics studied associated to the **format of the web pages** that have information on bioethics is also an important topic. Somehow, the way of presenting the information on those web pages makes possible that the user may navigate more effectively in a site that presents a more pleasant viewing which will be able to call the attention of visitors, thus improving the way of giving bioethical contents to a virtual community of persons that have a manifest interest for these topics and to other potential visitors that may navigate and know these topics. With respect to the percentage, the greater one, **73%**, centers in the web sites that have incorporated text and images to deliver information. When we speak of images we refer to those having bioethical content.

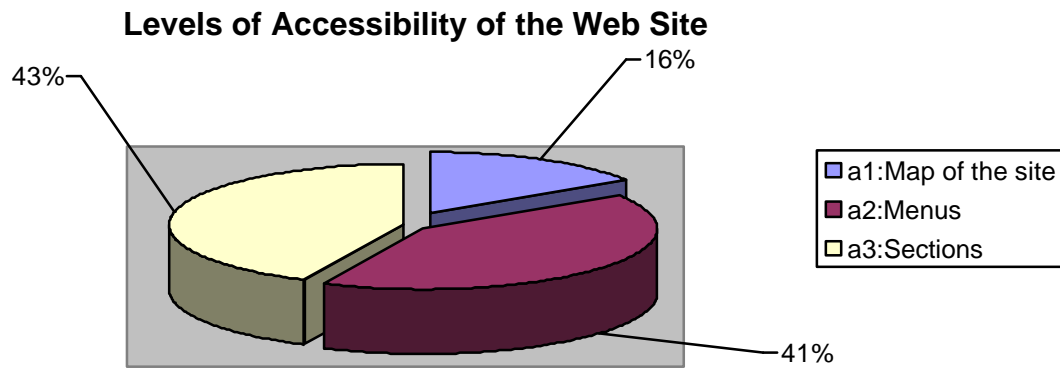
Graphic 3

Formal Presentation of Contents



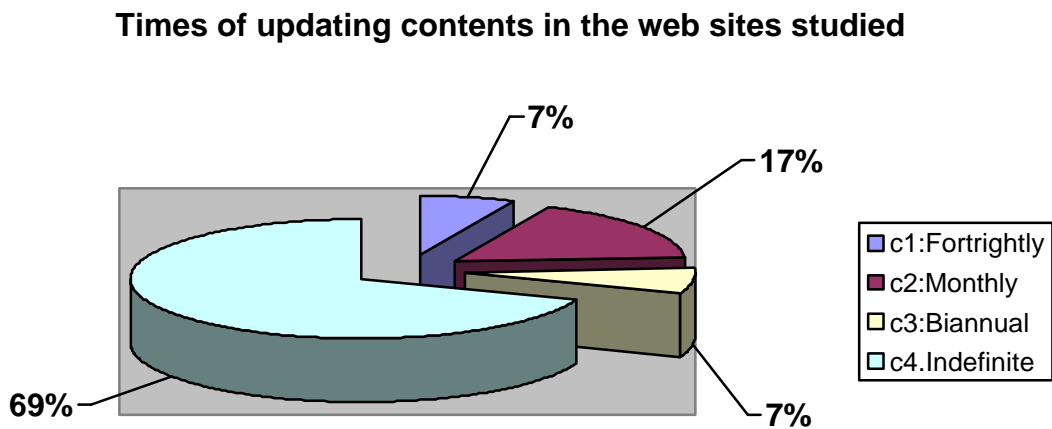
With respect to the formal presentation of web sites' contents studied, the greater percentage, **29%**, centers in sites that include indexes in their main pages. This characteristic is associated to the way these contents are presented, that is to say, sites with contents structured and ordered in a way that offer to the user a navigation with minimal difficulties when trying to find information of their interest, if it is available in the web site. **19%** of the web sites reviewed offer special products in their main pages such as, the cover page of books or journals and in a certain number of cases, they offer access to table of contents and/or summaries of the proposed document as standing product.

Graphic 4



Referring to the topic of accessibility of the reviewed web sites, we found that the greater percentage, **43%**, centers on the presence and visualization of sections clearly identified in the main page of the web site on bioethics, that is to say, it is observed a uniform distribution of the way the contents are presented; these count with an organized structure in the content presentation. When navigating in the site, it is observed that they do not present difficulty, rather they are sites of easy navigation.

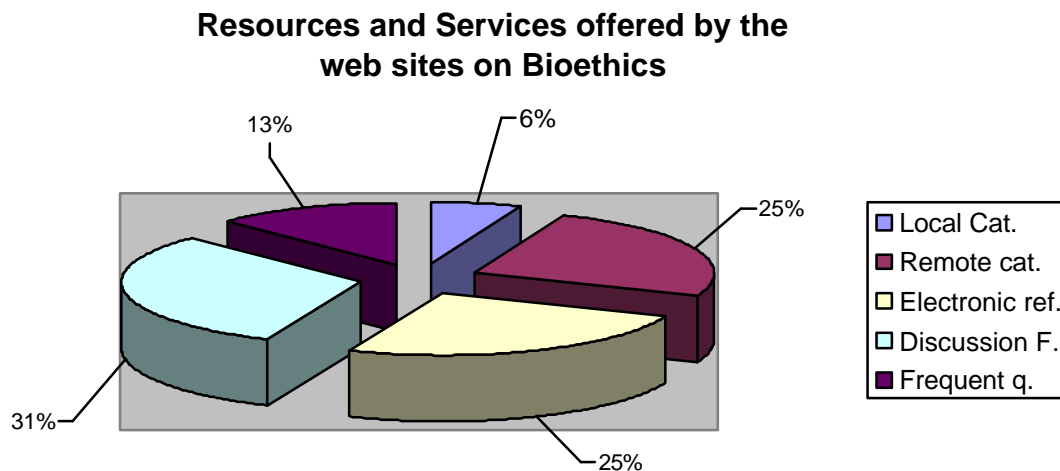
Graphic 5



The updating of contents is a significant topic. We found a high percentage of web sites without the updating content item. On the other hand, in this same item we observe that there are sites with considerable lack of updating, in some cases more than two years.

Nevertheless, it is observed that the contents presented in the web sites without updating belong to sites fed by public organizations and their contents are focus on classic texts, codes, declarations and norms.

Graphic 6

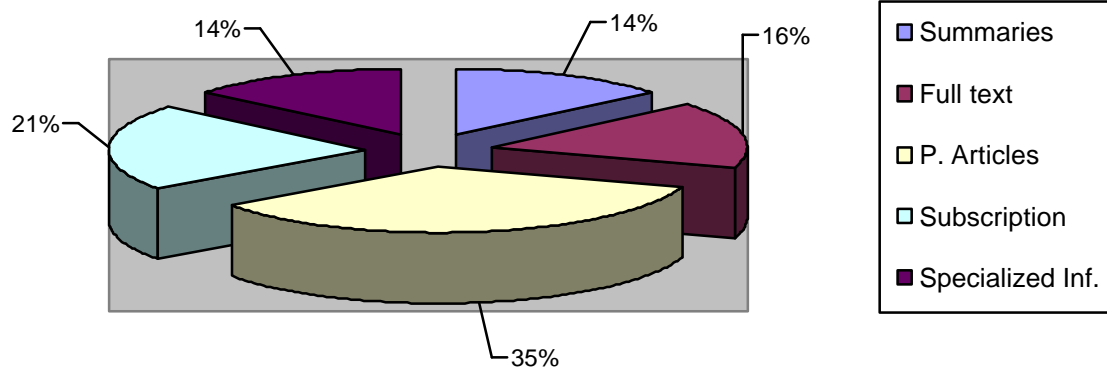


As seen in the previous figure, we have that **6%** of the studied web sites count with access to a local catalogue, **13%** show access to remote catalogues belonging to other institutions. It is shown that **25%** of the sites make available electronic reference service to the visitors; **25%** of the web sites visited present access to discussion forums and another **25%** present an item destined to answer frequent questions.

From the analysis of this information we found that the web sites reviewed on bioethics, in a small percentage count with local catalogue, but the great majority do not count with these resources. This situation could mean that the institutions that fed the web site on bioethics do not count with bibliographical resources and/or with their own information.

Graphic 7

Publications of the web sites studied



From the analysis of the information presented in the previous graphic we deduce that **14%** of the web sites that include publications they do it by offering summaries and that the access to the full document represents a service of restricted access, paid by subscription or by sending the documents; this situation occurs in **21%** of the cases. On the other hand, in **16%** of the web sites studied is possible to view full text documents, which corresponds to specific publications. Another relevant aspect is that **35%** of the sites reviewed offer full text articles, but that do not represent the content of a specific publication. In **14%** of the sites is possible to view information bulletins with specialized information in full text and without restriction, product that is offered mainly in the main page of the web site.

Table 2

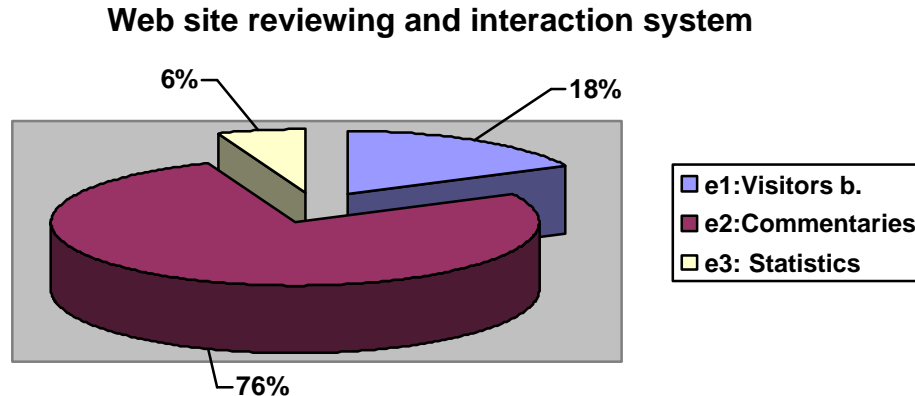
Language options of web sites on bioethics

Language	Amount in %
Spanish	100%
Portuguese	6.4%
English	16.1%
Spanish/Portuguese/English	6.4%

According to the information presented in the previous table we have that:

Of the web sites visited with *language platform in Spanish*, **6.4%** incorporate as language option *Portuguese* and **16.1%** offer the option of *English* in separate way. It is observed that **6.4%** of the web sites studied incorporate *Portuguese and English* as language alternative in viewing the contents.

Graphic 6



When studying the indicators related to **estatistics** and seeing if these sites studied show in the contents of the main pages an item which considers the statistics or a communication form that allows **feedback** between the web site responsible persons and the visitors and/or the users of the web pages, it is observed that 76% of these web sites make available a section of commentaries to the users. This section is offered through an email address. 18% Of the sites make available a visitors book, where the user may register and write commentaries; this information is presented in a structured format for its realization. With respect to the *statistics*, this information refers to the question of if the web site studied counts with a visitor counter; in this particular case, 6% of the sites on bioethics count with this type of mechanism.

Recurrent Topics

The most recurrent topics in the reviewed web sites correspond to topics related to:

- Guidelines, principles and declarations***
- Genetics, gene therapy***
- Organ transplantation***
- Medical ethics***
- Euthanasia***
- AIDS***
- Biotechnology***

The information destined to spread bioethics is emphasized, such as promotion of courses and the offering of masters.

Conclusions of the study

This inquiry, even though it has a preliminary nature, allow us to obtain important information about the format and content of the web sites related to bioethics as well as about their potential users, and also it gives us information about the level of social integration that may have reached these topics in Latin America. As preliminary conclusions we can indicate the following:

1. The amount of sites that have information on bioethics in Latin America is rather limited.
2. The institutions linked to the development of the reviewed sites are mainly academic and they emphasize the promotion of courses and masters.
3. The information contented in these sites is oriented towards mainly university students and professors and in less proportion to the general public.
4. The majority of the sites do not present relevant information about the updating of their contents
5. The majority of the reviewed sites do not have systems to register users of the site or of the topics consulted. There is no feedback that would allow to fit the contents to the type of user.
6. The navigation, even though efficient, is elemental, since the sites in general have little complexity.
7. A very small proportion of sites have the possibility of access to catalogues on line, local or remote.
8. The offer of full texts is scarce, be in the form of bulletins, books or journals.
9. In the sites there are many failures of linkages without destiny.

From all these observations we conclude that it would be very useful for the development of bioethics in the Region to carry out a deeper study of the virtual media which spreads bioethics, in order to reflect about the contents and structures that would be adequate to achieve sites with clearer objectives and with a more definite impact. It is possible that considering the general characteristics of the reviewed sites and the limitations they present this is a good start in the task of optimizing the access to information by the users as well as to obtain the necessary feedback for this social dynamic interaction.

APPENDIXES

APPENDIX I

Design of the Information Analysis Instrument:

1. Identification of the Web Site

- a) Address of the Web Site
- b) Responsible Institution
- c) Type of Organization
 - Public
 - Private
 - Academic

d) Characteristics of the Organization:

e) Country of origin

1. Potencial destinataries

- i) Scientists - Investigators
- ii) University Professors
- iii) University students
- iv) General public
- v) Other

2. Format of the Web Site

- a) Only text
- b) Images
- c) Text and images
- d) Multimedia

3. **Formal presentation of contents**

- a) Index
- b) Emphasized Information
- d) Summaries of contents
- c) Recommendations and suggestions
- e) Presentation of special products (books or journals)
- f). - Other

4. - **Accessibility**

- a) Counts with a Map of the site
- b) Structure of contents
 - i) Menus
 - ii) Sections
 - Easy access
 - Difficult access
 - Other
- c) Counts with a search
 - i) Leads to the information asked
 - ii) Leads to information no specified
 - iii) Easy use
 - iv) Difficult use
 - v) Other

5. **Updating of contents**

- c) Forthrightly
- d) Monthly
- e) Biannual
- g) Indefinite

6. **Resources and Services offered**

- a) Access to a local catalogue
- b) Access to remote catalogues
- c) Service of electronic reference
- d) Lists or discussion forums
- e) Frequent questions
- f) Publications section
 - i) Only summaries
 - ii) Full text
 - iii) Subscription service
 - iv) Bulletins of specialized information
 - v) Restricted service
 - vi) Service without restriction
- g) Languages service
 - i) Spanish
 - ii) Portuguese
 - iii) English
- h) Other

8. Reviewing system of the web site

- a) Offering of the visitors book
- b) Other
- c) Statistics system
 - i) It has
 - ii) It does not have

Appendix 2

Name of the site	Characteristics of the Site																								
	Destinnataries					Format				Presentation						Access			Updating				Review		
	d 1	d 2	d 3	d 4	d 5	f 1	f 2	f3	f 4	p 1	p 2	p 3	p 4	p 5	p 6	a 1	a 2	a 3	a 1	a 2	a 3	a 4	e1	e2	e3
Problemas deontológicos			1	1		1				1					1		1	1				1			
Asociación Científica Española	1	1	1	1				1		1	1		1	1			1	1			1				1
Universidad Nacional de Colombia	1	1	1					1		1	1		1	1		1	1	1	1						1
Instituto peruano de Bioética	1	1	1	1		1							1	1											1
Instituto de Bioética, Derechos Humanos y G. Brasil	1	1	1			1				1	1		1	1			1	1					1		1
Núcleo interinstitucional en bioética de Brasil	1	1	1					1		1	1		1	1			1	1			1				1
Diariomedico	1	1	1	1				1		1	1					1	1	1					1	1	1
Ins. bioética facultad postgrado P.U. Católica argentina			1	1	1			1		1	1			1	1	1	1	1					1		
Asociación Española de Bioética y Ética Médica	1	1	1	1				1		1	1	1	1	1			1	1					1		1
Universidad Pontificia Comillas – Catedra de Bioética	1	1	1					1		1				1			1	1					1		
Programa Regional de Bioética OPS/OMS			1	1	1			1		1	1	1	1	1		1	1	1					1	1	1
Instituto de Bioética y Humanidades Médicas	1	1	1					1			1							1							1
Instituto de Bioética – U. Católica Boliviana San Pablo	1	1	1					1		1			1				1	1			1				
Universidad Anahuac	1	1	1					1		1	1						1				1				
Comisión nacional de Bioética	1	1	1					1		1		1		1			1	1					1		
Analítica.com. venezuela					1			1		1	1	1	1	1			1	1					1		
Bioética en la Web						1				1	1	1		1			1	1					1	1	
Instituto Borja de Bioética	1	1	1	1				1		1						1	1	1	1				1		

Format:
f1: Only text
f2: Images
f3: Text and images
f4: Multimedia
Presentation:
p1: index
p2: emphasized information
p3: summaries of content
p4: recommendations and suggestions
p5: presentation of special products (books or journals)
p6: Other
Accessibility:
a1: map of the site
a2: menus
a3: division of the site in sections
Updating of contents: Refers to the frequency with which the sites present updated and relevant information
c1: fortnightly
c2: monthly
c3: biannual
c4: indefinite
Review: Refers to the statistical indicators that present the site with respect to its competitiveness in the virtual market
e1: offering of the visitors book
e2: Commentaries section

APPENDIX III

Resources and services offered						
	Local catalogue	Remote catalogue	Electronic reference	Lists or discussion forums	Frequent questions	Publications
Sites						
Problemas deontológicos						
Asociación Científica Española						
Universidad Nacional de Colombia						
Instituto peruano de Bioética						
Instituto de Bioética, Derechos Humanos y G. Brasil						
Núcleo interinstitucional en bioética de Brasil						
Diariomedico						
Ins. bioética facultad postgrado P.U. Católica argentina						
Asociación Española de Bioética y Ética Médica						
Universidad Pontificia Comillas – Catedra de Bioética						
Programa Regional de Bioética OPS/OMS						
Instituto de Bioética y Humanidades Médicas						
Instituto de Bioética – U. Católica Boliviana San Pablo						
Universidad Anahuac						
Comisión nacional de Bioética						
Analítica.com. venezuela						
Bioética en la Web						
Instituto Borja de Bioética						
Hospital San Juan de Dios – Comité de Bioética						

ebioetica.net						
Sociedad Internacional de Bioética						
Enlaces a Bioética y Biotecnología						
Centro Interdisciplinario de Bioetica - U.de Chile						
FELAIBE (Federación Latinoamericana de Biética)						
Asociación Argentina de Bioética						
instituto de bioética de las ciencias de la salud						
Cuadernos de Bioética						
Universidad Javeriana – Instituto de Bioética						
Universidad la Salle (Academia de Bioética)						
Universidad Central de Venezuela SIDEP						
Totals						

APPENDIX IV

Publications							
	Only summar y	Full text	Subscriptio n service	Bulletins of specialized information	Lists or discussion forums	Restricted service	Service without restriction
Sites							
Problemas deontológicos							
Asociación Científica Española							
Universidad Nacional de Colombia							
Instituto peruano de Bioética							
Instituto de Bioética, Derechos Humanos y G. Brasil							
Núcleo interinstitucional en bioética de Brasil							
Diariomedico							

Ins. bioética facultad postgrado P.U. Católica argentina							
Asociación Española de Bioética y Ética Médica							
Universidad Pontificia Comillas – Catedra de Bioética							
Programa Regional de Bioética OPS/OMS							
Instituto de Bioética y Humanidades Médicas							
Instituto de Bioética – U. Católica Boliviana San Pablo							
Universidad Anahuac							
Comisión nacional de Bioética							
Analítica.com. venezuela							
Bioética en la Web							
Instituto Borja de Bioética							
Hospital San Juan de Dios – Comité de Bioética							
ebioetica.net							
Sociedad Internacional de Bioética							
Enlaces a Bioética y Biotecnología							
Centro Interdisciplinario de Bioética - U.de Chile							
FELAIBE (Federación Latinoamericana de Biética)							
Asociación Argentina de Bioética							
instituto de bioética de las ciencias de la salud							
Cuadernos de Bioética							
Universidad Javeriana – Instituto de Bioética							
Universidad la Salle (Academia de Bioética)							
Universidad Central de Venezuela SIDEPA							
Totals							