



S&T, Web and Information Society Indicators: Building a new scenario

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Advantages

- Websites can reflect the output of academic and research activities better than traditional paper publications
 - The future of informal scholarly communication
 - Web size exceeds 15,000 million pages
 - Rich and media files and raw data
- The audience of the Web is far larger than that of other means of scientific communication
 - Millions instead of hundreds
 - Access is universal and cheap
 - "Open access" initiatives
- Hypertext nature of the Web allows the discovery of new patterns
 - Cyber-science-techno-econo-metrics

Not only papers

- Contents of the R&D and academic Websites
 - Institutional information
 - Courses material
 - Info about academic activities
 - Electronic journals
 - Document repositories
 - Informal and draft
 - R&D results databases
 - Raw data
 - Media and software
 - Vitae and other personal info
 - Cultural, social and economic relationships

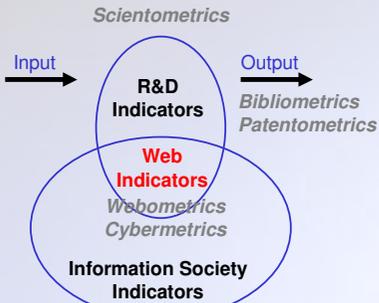
Cybermetric Indicators

Category	Indicator	Application Level
INFRASTRUCTURE	Physical: Number of resolvers	International, country, domain, subdomain, institutional domain
	Demography: Number of sites	International, country, domain, subdomain, institutional domain
	Logon: Number of domains	International, country, domain, subdomain, institutional domain
	Logon: Number of sites	International, country, domain, subdomain, institutional domain
S&A	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
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	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain	
QUALITY	Accessibility: Percentage of accessible pages	International, country, domain, subdomain, institutional domain, website, domain
	Compatibility: Percentage of compatible tags	International, country, domain, subdomain, institutional domain, website, domain
	Interactivity: Percentage of interactive tags	International, country, domain, subdomain, institutional domain, website, domain
	Link quality: Percentage of valid links	International, country, domain, subdomain, institutional domain, website, domain
	Navigation: Percentage of navigation tags	International, country, domain, subdomain, institutional domain, website, domain
	Structure: Percentage of structural tags	International, country, domain, subdomain, institutional domain, website, domain
	Visual quality: Percentage of visual tags	International, country, domain, subdomain, institutional domain, website, domain
	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
	Webometrics: No. of web pages	International, country, NUTS, web, subdomain, institutional domain, website, domain
CONNECTIVITY	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
	Connectivity: Total number of links	International, country, domain, subdomain, institutional domain, website, domain
VISIBILITY	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
	Visibility: Number of external links	International, country, domain, subdomain, institutional domain, website, domain
IMPACT	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
	Impact: Number of citations	International, country, domain, subdomain, institutional domain, website, domain
POPULARITY	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
	Popularity: Number of hits	International, country, domain, subdomain, institutional domain, website, domain
DIVERSITY	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain
	Diversity: Number of domains	International, country, domain, subdomain, institutional domain, website, domain

Units

COUNTRY	DOMAINS
FRANCE	fr 477
GERMANY	de 360
UNITED KINGDOM	uk 215
DENMARK	dk 160
POLAND	pl 160
SPAIN	es 159
ITALY	it 112
PORTUGAL	pt 108
NETHERLAND	nl 102
GREECE	gr 57
BELGIUM	be 78
SWEDEN	se 53
CZECH R.	cz 52
AUSTRIA	at 50
FINLAND	fi 50
HUNGARY	hu 48
IRELAND	ie 43
LITHUANIA	lt 37
ESTONIA	ee 36
LATVIA	lv 30
SLOVAKIA	sk 25
LUXEMBOURG	lu 13
CYPRUS	cy 6
SLOVENIA	si 6
MALTA	mt 1

- EU Universities
- Institutional webdomains
- 25 countries
- 2443 domains



Results (I)

INSTITUTION	DOMAIN	NO. WEBSITES	NO. PAGES	NO. LINKS	NO. EXTERNAL LINKS
UNIVERSITY OF CAMBRIDGE	uk.ac.uk	10000	100000	1	1
UNIVERSITY OF OXFORD	uk.ac.uk	12000	120000	1	1
LONDON SCHOOL OF ECONOMICS	uk.ac.uk	14000	140000	1	1
UNIVERSITY COLLEGE LONDON	uk.ac.uk	15000	150000	1	1
UNIVERSITY OF LONDON	uk.ac.uk	17000	170000	1	1
UNIVERSITY OF MANCHESTER	uk.ac.uk	18000	180000	1	1
UNIVERSITY OF HELSINKI	fi.fi	19000	190000	1	1
UNIVERSITY OF VIENNA	at.ac.at	20000	200000	1	1
FRIBOURG UNIVERSITY	ch.ch	21000	210000	1	1
UNIVERSITY OF BRISBANE	au.au	22000	220000	1	1
UNIVERSITY OF TORONTO	ca.ca	23000	230000	1	1
UNIVERSITY OF SYDNEY	au.au	24000	240000	1	1
UNIVERSITY OF MELBOURNE	au.au	25000	250000	1	1
UNIVERSITY OF ADELAIDE	au.au	26000	260000	1	1
UNIVERSITY OF QUEENSLAND	au.au	27000	270000	1	1
UNIVERSITY OF WESTERN AUSTRALIA	au.au	28000	280000	1	1
UNIVERSITY OF SAUTHERN QUEENSLAND	au.au	29000	290000	1	1
UNIVERSITY OF NEWCASTLE	au.au	30000	300000	1	1
UNIVERSITY OF WATSON	au.au	31000	310000	1	1
UNIVERSITY OF WYOMING	us.us	32000	320000	1	1
UNIVERSITY OF CALIFORNIA	us.us	33000	330000	1	1
UNIVERSITY OF TEXAS	us.us	34000	340000	1	1
UNIVERSITY OF MICHIGAN	us.us	35000	350000	1	1
UNIVERSITY OF ILLINOIS	us.us	36000	360000	1	1
UNIVERSITY OF INDIANA	us.us	37000	370000	1	1
UNIVERSITY OF MARYLAND	us.us	38000	380000	1	1
UNIVERSITY OF VIRGINIA	us.us	39000	390000	1	1
UNIVERSITY OF NORTH CAROLINA	us.us	40000	400000	1	1
UNIVERSITY OF PENNSYLVANIA	us.us	41000	410000	1	1
UNIVERSITY OF WISCONSIN	us.us	42000	420000	1	1
UNIVERSITY OF MINNESOTA	us.us	43000	430000	1	1
UNIVERSITY OF IOWA	us.us	44000	440000	1	1
UNIVERSITY OF KANSAS	us.us	45000	450000	1	1
UNIVERSITY OF MISSOURI	us.us	46000	460000	1	1
UNIVERSITY OF ARIZONA	us.us	47000	470000	1	1
UNIVERSITY OF CALIFORNIA SAN DIEGO	us.us	48000	480000	1	1
UNIVERSITY OF CALIFORNIA BERKELEY	us.us	49000	490000	1	1
UNIVERSITY OF CALIFORNIA DAVIS	us.us	50000	500000	1	1
UNIVERSITY OF CALIFORNIA IRVINE	us.us	51000	510000	1	1
UNIVERSITY OF CALIFORNIA MERCED	us.us	52000	520000	1	1
UNIVERSITY OF CALIFORNIA RIVERSIDE	us.us	53000	530000	1	1
UNIVERSITY OF CALIFORNIA SANTA BARBARA	us.us	54000	540000	1	1
UNIVERSITY OF CALIFORNIA SANTA CRUZ	us.us	55000	550000	1	1
UNIVERSITY OF CALIFORNIA SAN DIEGO	us.us	56000	560000	1	1
UNIVERSITY OF CALIFORNIA SAN DIEGO	us.us	57000	570000	1	1
UNIVERSITY OF CALIFORNIA SAN DIEGO	us.us	58000	580000	1	1
UNIVERSITY OF CALIFORNIA SAN DIEGO	us.us	59000	590000	1	1
UNIVERSITY OF CALIFORNIA SAN DIEGO	us.us	60000	600000	1	1

Results (II)

INSTITUTION	DOMAIN	NO. WEBSITES	NO. PAGES	NO. LINKS	NO. EXTERNAL LINKS
TECHNISCHE UNIVERSITÄT CHEMNITZ	de	20000	200000	1	1
UNIVERSITÄT BOLOGNA	it	21000	210000	1	1
UNIVERSITÄT TRIESTE	it	22000	220000	1	1
UNIVERSITÄT ROMA	it	23000	230000	1	1
UNIVERSITÄT TORINO	it	24000	240000	1	1
UNIVERSITÄT PADOVA	it	25000	250000	1	1
UNIVERSITÄT VERONA	it	26000	260000	1	1
UNIVERSITÄT MILANO	it	27000	270000	1	1
UNIVERSITÄT BARI	it	28000	280000	1	1
UNIVERSITÄT CATANIA	it	29000	290000	1	1
UNIVERSITÄT PALERMO	it	30000	300000	1	1
UNIVERSITÄT NAPOLI	it	31000	310000	1	1
UNIVERSITÄT SIENNA	it	32000	320000	1	1
UNIVERSITÄT PERUGIA	it	33000	330000	1	1
UNIVERSITÄT ANCONA	it	34000	340000	1	1
UNIVERSITÄT BOLOGNA	it	35000	350000	1	1
UNIVERSITÄT TRIESTE	it	36000	360000	1	1
UNIVERSITÄT ROMA	it	37000	370000	1	1
UNIVERSITÄT TORINO	it	38000	380000	1	1
UNIVERSITÄT PADOVA	it	39000	390000	1	1
UNIVERSITÄT VERONA	it	40000	400000	1	1
UNIVERSITÄT MILANO	it	41000	410000	1	1
UNIVERSITÄT BARI	it	42000	420000	1	1
UNIVERSITÄT CATANIA	it	43000	430000	1	1
UNIVERSITÄT PALERMO	it	44000	440000	1	1
UNIVERSITÄT NAPOLI	it	45000	450000	1	1
UNIVERSITÄT SIENNA	it	46000	460000	1	1
UNIVERSITÄT PERUGIA	it	47000	470000	1	1
UNIVERSITÄT ANCONA	it	48000	480000	1	1
UNIVERSITÄT BOLOGNA	it	49000	490000	1	1
UNIVERSITÄT TRIESTE	it	50000	500000	1	1
UNIVERSITÄT ROMA	it	51000	510000	1	1
UNIVERSITÄT TORINO	it	52000	520000	1	1
UNIVERSITÄT PADOVA	it	53000	530000	1	1
UNIVERSITÄT VERONA	it	54000	540000	1	1
UNIVERSITÄT MILANO	it	55000	550000	1	1
UNIVERSITÄT BARI	it	56000	560000	1	1
UNIVERSITÄT CATANIA	it	57000	570000	1	1
UNIVERSITÄT PALERMO	it	58000	580000	1	1
UNIVERSITÄT NAPOLI	it	59000	590000	1	1
UNIVERSITÄT SIENNA	it	60000	600000	1	1

Results by country (I)

COUNTRY	NO. WEBSITES	NO. PAGES	NO. LINKS	NO. EXTERNAL LINKS
FRANCE	10000	100000	1	1
GERMANY	12000	120000	1	1
UNITED KINGDOM	14000	140000	1	1
DENMARK	15000	150000	1	1
POLAND	16000	160000	1	1
SPAIN	17000	170000	1	1
ITALY	18000	180000	1	1
NETHERLANDS	19000	190000	1	1
GREECE	20000	200000	1	1
BELGIUM	21000	210000	1	1
SWEDEN	22000	220000	1	1
CZECH REPUBLIC	23000	230000	1	1
AUSTRIA	24000	240000	1	1
FINLAND	25000	250000	1	1
HUNGARY	26000	260000	1	1
IRELAND	27000	270000	1	1
LITHUANIA	28000	280000	1	1
ESTONIA	29000	290000	1	1
LATVIA	30000	300000	1	1
SLOVAKIA	31000	310000	1	1
LUXEMBOURG	32000	320000	1	1
CYPRUS	33000	330000	1	1
SLOVENIA	34000	340000	1	1
MALTA	35000	350000	1	1

Results by country (II)

COUNTRY	NO. WEBSITES	NO. PAGES	NO. LINKS	NO. EXTERNAL LINKS
FRANCE	10000	100000	1	1
GERMANY	12000	120000	1	1
UNITED KINGDOM	14000	140000	1	1
DENMARK	15000	150000	1	1
POLAND	16000	160000	1	1
SPAIN	17000	170000	1	1
ITALY	18000	180000	1	1
NETHERLANDS	19000	190000	1	1
GREECE	20000	200000	1	1
BELGIUM	21000	210000	1	1
SWEDEN	22000	220000	1	1
CZECH REPUBLIC	23000	230000	1	1
AUSTRIA	24000	240000	1	1
FINLAND	25000	250000	1	1</