

Web Communication Impact Model and Its Application in the Analysis of Media's Web Sites

H. T. HE & Z.P. HUANG

National University of Defense Science and Technology, Changsha, Hunan, PRC

G.L. XU*

**Corresponding Author, Hunan Mass Media Vocational College, Changsha, Hunan, PRC*

ABSTRACT: In the era of Internet, continuous appeal to audience has become a very important concern for traditional media like TV and newspaper. The web impact of the new media is a key factor when media owners make investment and advertisement plan. This paper first reviews previous studies on web impact, then proposes a Web Communication Impact Model to quantify the impact of media website. In addition, it analyzes the web impact of CBCPC(Chinese Bridge Chinese Proficiency Competition) website by comparing similar websites and finally gives suggestions to increase the overseas impact of CBCPC.

KEYWORD: Web Communication Impact, JIF, WIF, Web Metrics, New Media

1 INTRODUCTION

With the advent of new media on the Internet, maintaining continuous appeal to audience has become a challenge for traditional media. Just as radio technology has not brought about the extinction of newspaper, traditional media will still survive in the company of new media and even enhance each other[1]. Nevertheless, as traditional media inevitably expanding service on the Internet, substantially investment has been made in media websites. Therefore, it is important to refer to a quantitative model to measure the impact of the media websites so as to convince their investors and advertisers of their value. This research is an experimental attempt to establish a such model with web traffic data.

In Part 2, several studies on website impact are reviewed. In Part 3, a quantitative model to evaluate website communication impact is proposed. By instantiating and applying the model to websites for singing and language competitions and other mass media, communication impacts of these websites are compared and analyzed in Part 4. Suggestions to enhance overseas communication impact of CBCPC are given in the last part.

2 PREVIOUS STUDIES

In all previous related studies to website impact, their research methods fall into two categories:

qualitative and quantitative methods[2].

With the qualitative method, researchers investigate the web impact elements and their interactions with each other. Although quantitative web impact is the most desired, the interactions between these elements are so complicated that it is very difficult to establish an analytic model for web impact. As an alternative to the analytic model, researchers first digitized all the elements above first, then allow a weight coefficient to every element and calculate a numeric result as web impact. China Television Director Committee initiated the research to evaluate the influence of television channels in China on the Internet with qualitative method[3].

Researchers expected to establish an analytic model to measure website influence with the quantitative method first and then calculate the web impact with the model, in which the raw data is collected by the internet crawler or search engine. According to classification of the characteristic of the raw data, the quantitative method can be categorized into visibility analysis approach, link analysis approach and network traffic analysis approach. In one study, Yang based his research on the click and re-post rate of the news item with information retrieving statistical technology and adopted visibility analysis approach[4].

Many other quantitative research methods adopted research results of literature metrology whose basis is Web Impact Factor(WIF, Web Impact Factor). Peter Ingwersen proposed the concept of

WIF[6] and an analytic model similar to JIF(Journal Impact Factor)[5] for website influence. WIF is calculated with formula (1)[6].

$$WIF = \frac{InnerLinks + OutLinks}{TotalPages} \quad (1)$$

WIF was originally used to evaluate the influence of journal's website[6] and was later applied to evaluate the online influence of university's academic journal by many researchers in China. One of such research by Qiu Jun-ping [7] concluded that WIF of university's academic journal is positively correlated to the reputation of the university and the journal itself. WIF is measured by the number of specific websites links and it is regarded a quality index of the websites the pages. However, the number of visitors can not be deduced from WIF. Both the owners and advertisers of the mass media concern about the number of visitors more than the links of media website. Therefore, WIF has obvious defects in evaluating influence of mass media website.

Alexa company provides the most widely used Internet traffic data[8]. Alexa company installs Alexa tool bar into internet user's computer on large scale. Alexa tool bar will report Alexa company's host about the IP and the internet traffic data of user's computer. Therefore, website's ranking could be figured out via the rates of computers with the Alexa tool bar and Internet traffic data collected. Website's ranking roughly tells the website influence degree, but fails to accurately quantify the influence.

Traditional mass media's influence, such as television channels, is usually measured by the number of audiences rather than the JIF calculated from number of the media citations, because the television audience seldom cite information of television channels or interact with television channels. So the influence of the mass media websites should be measured in a similar way as TV rates. The web communication impact model based on web metrics data is proposed and explained in the following part.

3 WEB COMMUNICATION IMPACT MODEL

This part discusses the construction of the Web Communication Impact Model measuring the influence of media website, which consists of two essential indexes: Media Communication Equivalent and Media Communication Impact Factor. This model is based on Alexa internet traffic data. Alexa tool bar estimated traffic data of some websites. Certified metrics are available with Alexa Pro plans, which gives traffic data accurately by the code installed in the server of the website.

Given a website's IP address, Alexa's Competitive Intelligence toolkit can show the

website's traffic data including daily unique visitors(UV) and daily page views per visit(PV) in its service pages. UV multiplying PV approximates the daily total pages delivered to the audience for a website.

UV indicates wide coverage of users that the website reaches and PV indicates depth that the users access the website information. When comparing watching TV with browsing website, UV of the website is like the number of audience and PV is like average watching time length.

The principle of Web Communication Impact Model used to measure the media impact is described as follows: first, define Media Communication Equivalent C-Equivalent(W) to quantify the information delivered to the audience of the media website W, then choose a well-known media website R as reference, then define quotient of dividing C-Equivalent(W) by C-Equivalent(R) as CIF(Communication Impact Factor).

$$C-Equivalent(W) = \sqrt{UV(W) * PV(W)} \quad (2)$$

UV(W) and PV(W) are the traffic data of website W provided by Alexa or other web metrics facilities. UV(W) is the average number of daily unique visitors and PV(W) is average daily pages viewed per visitor for website W. Then, C-Equivalent(W) is an index to measure the scale of the information delivered to the audience of website W, rather than the accurate amount of information, thus called equivalent.

The communication equivalent of a media website is not intuitively sufficient to understand the impact of the media on the Internet. So with formula (3), CIF is defined as quotient of communication equivalent of the media website W and communication equivalent of reference media web W. Taking a famous media like CCTV as reference to measure a web's the influence, CIF indicates how many referenced websites with the same communication capability as referenced one.

$$CIF(W) = \frac{C - Equivalent(W)}{C - Equivalent(W')} \quad (3)$$

Table 1. Web metrics and rank

Web site	Ranking	UV	UV Ranking	Total Page Views	PV Ranking	PV
Jiangsu TV	5322	189	8614	38.15	1569	21.4
CCTV	657	1,882	631	58.3	531	3.28

Table 1 includes the network traffic data of Jiangsu TV and CCTV(China Central Television), whose communication equivalent is calculated as follows:

$$C-Equivalent(Jiangsu TV) = \sqrt{189 * 38.2} = 84.9$$

Similar to television rate in different areas published by TV survey organization, web metrics also has area-based data and the area-based web metrics may be quite different from web metrics as a whole. In Table 2, P_u is used to denote percentage of daily unique visitors of the website in area C and P_p refers to the average daily page views per unique visitor. With P_u and P_p , formula (2) is expanded to calculate media communication equivalent in area C for website W.

$$C\text{-Equivalent}_c(W) = \sqrt{UV(W) * P_u * PV(W) * P_p} \quad (4)$$

Taking web metrics of Jiangsu TV in Thailand as an example, by extracting network traffic data from Table 1, communication equivalent for Jiangsu TV in Thailand can be calculated with formula (3) as follows:

$$C\text{-Equivalent}_{\text{Thailand}}(\text{Jiangsu TV})$$

$$= \sqrt{189 * 1.0\% * 38.2 * 0.6\%}$$

$$= 0.66$$

With the same steps, all Column C-Equivalent_c(W) in Table 2 are filled. The total sum of Column C-Equivalent_c(W) is 84.6 and it is slightly different from C-Equivalent(Jiangsu TV), communication equivalent of Jiangsu TV as whole, which is calculated previously.

Table 2. Country-based web metrics for Jiangsu TV

Country	Ranking	P_u (%)	P_p (%)	P_c (%)	C-Equivalent _c (W)	C-Equivalent _c (W)
Thailand	8965	1.0	0.6	0.8	0.66	0.68
US	15397	8.7	6.9	7.8	6.58	6.62
Hong Kong	269	12.9	7.0	9.95	8.07	8.45
Korean	1858	4.1	3.6	3.85	3.26	3.27
China	404	70.5	79.5	75	63.57	63.68
Other		2.8	2.4	2.6	2.12	2.21
Total		100	100	100	84.26	84.91

Table 3. Country-based web metrics for CCTV

Country	Ranking	P_u (%)	P_p (%)	P_c (%)	C-Equivalent _c (W)	C-Equivalent _c (W)
Taiwan	1341	0.3	0.5	0.4	1.28	1.32
US	6760	1.6	2.1	1.85	6.07	6.13
Hong Kong	290	0.6	1.1	0.85	2.69	2.82
Korea	631	1.1	1.3	1.2	3.96	3.97
Japan	2485	1.0	1.4	1.25	3.92	4.14
China	54	93.1	90.3	91.7	303.71	303.75
Other		2.2	3.2	2.7	8.79	9.11
Total		100	100	100	330.42	331.24

Generally, the holistic communication equivalent of website should be equal to the sum of the communication equivalents in all sub-regions. However, when all data in Column C-Equivalent_c(W) added together, the sum is not equal to C-Equivalent(W). This is because website visitors in different areas have different behavior, so it makes P_u different from P_p . If we take average of P_u and P_p as percentage of daily unique visitors P_c and daily page views per unique visitor and calculate

adjusted communication equivalent with formula (4) for sub regions, the conflict described above could be resolved.

$$C\text{-Equivalent}_c(W) = \sqrt{UV(W) * PV(W) * P_c} \quad (5)$$

After calculating adjusted communication equivalent in all the countries for Jiangsu TV and filling in the column of C-Equivalent_c(W), the total sum of C-Equivalent_c(W) is equal to total communication equivalent of Jiangsu TV.

Table 4. CIF of Jiangsu TV

Country	Thailand	US	Hong Kong	Korean	China	Other	Total
CIF	-	0.925	3.00	0.82	0.21	0.20	0.26

Taking CCTV as reference, country-based CIF of Jiangsu TV is calculated and filled in the Table 4, where their influence on the Internet could be explained as: Jiangsu TV has much less influence than CCTV in China as a whole, but their influence in US and Korean is roughly close and Jiangsu TV has greater influence than CCTV in Hong Kong. The CIFs in Table 4 indicate that communication equivalent of five Jiangsu TV-like websites is approximately equal to that of CCTV in China and communication equivalent of three CCTV-like websites is approximately equal to that of Jiangsu TV in Hong Kong.

4 APPLICATION OF WEB COMMUNICATION MODEL

This part analyses the communication impact of CBCPC website, by comparing it with similar websites as an application of Communication Impact Model.

The research is conducted in the following steps: 1) collect and analyze the previous communication of CBCPC, especially its overseas communication activities and influence; 2) instantiate the Web Communication Model for comparing the communication impacts of a group of designated media websites; 3) discuss the research result and give suggestions to improve the overseas communication impact of CBCPC.

4.1 Background of CBCPC

CBCPC is an international language competition sponsored by Confucius Institute Headquarters, whose preliminaries have been held by Confucius Institute and supported by the local Chinese Embassies or Consulates the world over. All the winners in the preliminary rounds will be invited to Changsha, Hunan, China to participate in semi-final and final competition.

In its thirteen-year history, one challenge for CBCPC's publicity department has always been how to measure its influence on the Internet especially on the part of its overseas users. Therefore, this study of CBCPC's impact on the Internet was conducted and Web Communication Model has been proposed under this background.

4.2 Methodology

The purpose of the application research of Web Communication Model is to locate the problem of overseas communication of CBCPC.

This research goes as follows: first choose a few similar web sites successful in promoting large-scale cultural activities; then calculate communication equivalents based on countries and CIFs with CCTV as reference media, so the communication impact of Confucius Institute Online(CIO) website and other similar websites chosen could be compared on the basis of countries; finally, calculate CIFs of the chosen websites in 2012 and 2013 to check the variations of their impact, both geographical and chronological.

The preliminaries of CBCPC are held in tens of different cities and the competition news coverage is made by local Confucius Institute, local newspapers or radios, reporters of CRI(China Radio International). CIO will re-post all these news items. In the semi-final and final stage, the CBCPC Committee and Hunan Provincial Government invites journalists from tens of professional media to report the competition on large scale. Hunan TV produces special TV programs for CBCPC. The reason why China Daily website is chosen for the comparison with CBCPC is that its budget is very close to that of Confucius Institute Headquarters. Meanwhile, the websites of Phoenix network,

CCTV, Hunan TV, Fox are also chosen to be compared with CIO.

Although the Speech Competition held by French League and British Council are also famous international language competitions, their websites are not on the same basis because of lack of performing and entertaining elements more than language skills. Websites of Eurovision for Europe Singing Contest is the ideal to be compared with web site of CBCPC.

4.3 Data Analysis

The country-based web metrics for all the chosen media is listed in Table 5. The explanation to the data is given in Table 5. Because CIO mainly dedicates to Chinese learning and competition, its ranking lags behind other mass media websites. Phoenix's higher ranking than that of CCTV and Hunan TV reflects Phoenix's firm attitude to its Internet strategy and large scale investment in the construction of its website. The ranking of CCTV is higher than the ranking of Hunan TV in China and the difference of their ranking in Japan and Korea is not so great as that in China. In US, CCTV ranking also overtakes Hunan TV, but lags far behind the ranking of Phoenix and Fox. Ranking of Phoenix is very close to ranking of Fox in US. The Budget of Confucius Institute Headquarters and China Daily is close and ranking of CIO is much higher than ranking of China Daily in 2012. This means investing in Confucius Institute is more efficient than in China Daily. European countries, especially the country that held the final of the Europe Singing Contest, cover the large part of web traffic of Eurovision. There is very little web traffic to access Eurovision in US because US does not participate in the contest.

Table 5. Ranking of the TV Websites

	Phoenix		CCTV		HNTV		China Daily		Confucius Inst		Fox		Eurovision	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
China	10	96.8	70	89.4	644	39.1	18586	76.7	12720	63.6	25489	1.6	—	—
Korean	128	0.4	411	2.5	3074	1.5	—	—	—	—	6576	0.7	—	—
Japan	518	0.9	1718	3.4	26934	58.3	—	—	—	—	43281	0.3	—	—
US	1684	0.6	7817	1.6	42314	0.5	296382	3.4	190417	4.8	978	39.9	76911	5.4
Russia	—	—	—	—	—	—	—	—	90228	1.5	18699	0.6	42112	2.9
UK	—	—	—	—	—	—	—	—	111201	1.3	7461	0.9	10384	7.1
Belgium	—	—	—	—	—	—	—	—	10517	5.7	—	—	10221	2.7
France	—	—	—	—	—	—	—	—	—	—	19690	0.4	48662	2.3
German	—	—	—	—	—	—	—	—	—	—	19410	0.5	20780	5.0
India	—	—	—	—	—	—	—	—	264697	0.8	27898	0.7	—	—
Argentina	—	—	—	—	—	—	—	—	—	—	481	45.8	—	—
Azerbaijan	—	—	—	—	—	—	—	—	—	—	—	—	305	21.1
Other	—	1.2	—	3.0	—	0.5	—	19.9	—	27.2	—	8.6	—	53.5
Total Part Rank	56		402		3275		114202		59569		2498		20279	

Note 1 URL of the websites

Phoenix: <http://www.ifeng.com>

CCTV: <http://www.cctv.cn>

HNTV: <http://www.hunantv.com>

China Daily: <http://www.chinadaily.com>

Confucius Inst: <http://www.chinese.cn>

Fox: <http://www.fox.com>

Eurovision: <http://www.eurovision.tv>

Note 2: left blank if the percentage of access in the country is less than 0.1%

Note 3: The data in this table is acquired with Alexa on Apr 17, 2012

Table 6. Web metrics of under domain of CIO

IP	Percentage of UV	Percentage of PV	PV
http://www.chinese.cn	27.61%	25.1%	2.6
http://shizi.chinese.cn	5.81%	11.86	6
http://my.chinese.cn	15.72%	9.25%	1.7
http://english.chinese.cn	5.86%	3.99%	2
http://college.chinese.cn	10.55%	3.97%	1.1
http://jxzy.chinese.cn	2.61%	2.04%	2.3
http://people.chinese.cn	1.91%	1.31%	2
http://russia.chinese.cn	2.37%	1.23%	1.5
http://kid.chinese.cn	1.75%	1.02%	1.7
http://bridge.chinese.cn	1.38%	0.70%	1.5
other	0	39.62%	0

Note: Domain of Confucius Institute Online is <http://chinese.cn> in 2012, now it is shifted to <http://www.chinesecio.com>

The Final of Europe Singing Contest 2012 was held in Baku, so the Internet traffic of Eurovision in Azerbaijan is much greater than that in other countries. The ranking of Eurovision in the country that did not held the final varies very little from 2012 to 2013.

From the perspective of websites ranking, the difference of the website impact of CIO and Eurovision is not great. However, when using Google search with the key words “Eurovision 2012” and “Chinese Bridge 2012”, the first key word brings out much more matched items under the category of news than the latter, which indicates the great difference between the website impact of CIO and Eurovision is great. This conflict means website ranking is not enough to reflect their web impact.

With communication equivalent in the Web Communication Impact Model, the difference of influence on the Internet of Chinese Bridge and Eurovision could be explained in a more reasonable way. Using web traffic data in Table 5 and Table 6 and formula (3) for calculating, the communication equivalents of different countries are obtained and filled in Column C.E.(communication equivalent) of Table 7.

Table 7 is filled with the web metrics in 2012 of CIO and Eurovision. The communication equivalent of Eurovision website is 14.3, approximately 3 times of that of CIO. As web metrics for Chinese Bridge is only 1.38%(or 1/70 approximately) of total traffic to access website of CIO, the real communication of Chinese Bridge is about 210 times less than that of Eurovision at least. The communication equivalent of the competition varies in different countries. In Russia and UK, the communication equivalent of Chinese Bridge is about 1/6 of that of Eurovision; in Chinese Bridge is well organized and popular in Belgium, the local communication equivalent of

Chinese Bridge is about 70% of that of Eurovision; in US the communication equivalent of Chinese Bridge is about 1/3 of that of Eurovision as Americans do not participate in Europe Singing Contest and Confucius Institute Headquarter invested more to the preliminaries in US, thus making it more influential than in other countries.

By taking CCTV as the reference media, CIFs of all the media chosen in this research are calculated and filled in Table 8 with communication equivalents in Table 7 and formula (3). The media website’s CIF, based on total web traffic in foreign countries, is taken as the index of its influence in overseas countries, so overseas CIF and domestic CIF is filled separately in Table 8. As Eurovision is not hosted by fixed country, all its web traffic is regarded as overseas traffic. Fox’s web traffic in US is considered as domestic traffic and all other Fox’s web traffic is considered as overseas traffic. Phoenix is registered in Hong Kong and most of its audience is from China, so Phoenix TV is treated as other Chinese media in the same way. Thus, the overseas impacts of the media websites chosen could be compared with the data in Table 8. Overseas CIF of Phoenix is 4 which means it has 4 times of impact in overseas countries when compared with CCTV. Overseas CIF of Hunan TV is 0.12. Overseas CIF of CIO is 0.03. Overseas CIF of Eurovision is 0.25. Overseas CIF of Fox is 1.1, which means the influence on the Internet of Fox is close to that of CCTV.

Many websites’ traffic varies seasonally, for example, the Internet traffic of RenRen, Weibo and Facebook drops a lot in summer vacations because most of their users of these websites are college students, who are occupied by intern or other plans, and thus spend less time on these social network applications[9,10]. In order to examine the media web’s varying CIFs along time axis, comparison is made in Table 9 for web metrics in 2012 and 2013. From Table 11 and Table 12, all the communication equivalents for the chosen media’s websites in 2103 dropped considerably when compared to that in 2012. It is reasonable that web traffic drops in 2013 because smart cell phones sold on the market increase at large scale and many users shifted from PC to cell phone to access websites with App. It is inevitable for traditional Internet whose website traffic drawn away by mobile internet.

Table 11 and Table 8 is used compare CIFs of the chosen media websites in 2012 and 2013. By comparing CIFs in 2012 and 2013, CIF of Fox increased to 1.3 from 1.1 and Eurovision decreased to 0.17 from 0.25. CIO maintains the same CIF in 2013 as that in 2012. CIF of China Daily increased five times overtaking that of CIO, which indicates that operation of China Daily’s websites improve greatly in 2013.

Table 7. Communication Equivalent of Media's Websites in 2012

	Phoenix		CCTV		HNTV		China Daily		Confucius Institute		Fox		Eurovision	
	%	C.E.	%	C.E.	%	C.E.	%	C.E.	%	C.E.	%	C.E.	%	C.E.
China	96.8	4995	89.4	468	39.1	35.0	76.7	2.09	63.6	3.17	1.6	1.62	-	-
Korea	0.4	20.6	2.5	13.1	1.5	1.34	-	-	-	-	0.7	0.71	-	-
Japan	0.9	46.4	3.4	17.8	58.3	52.2	-	-	-	-	0.3	0.30	-	-
US	0.6	31.0	1.6	8.37	0.5	0.45	3.4	0.09	4.8	0.24	39.9	40.3	5.4	0.77
Russia	-	-	-	-	-	-	-	-	1.5	0.07	0.6	0.61	2.9	0.41
UK	-	-	-	-	-	-	-	-	1.3	0.06	0.9	0.91	7.1	1.02
Belgium	-	-	-	-	-	-	-	-	5.7	0.28			2.7	0.39
France	-	-	-	-	-	-	-	-	-	-	0.4	0.4	2.3	0.33
German	-	-	-	-	-	-	-	-	-	-	0.5	0.51	5.0	0.72
India	-	-	-	-	-	-	-	-	0.8	0.04	0.7	0.71	-	-
Argentina	-	-	-	-	-	-	-	-	-	-	45.8	46.3	-	-
Azerbaijan	-	-	-	-	-	-	-	-	-	-	-	-	21.1	3.02
Other	1.2	61.9	3.0	15.7	0.5	0.45	19.9	0.54	27.2	1.36	8.6	8.69	53.5	7.65
Total		5160		523		89.6		2.73		4.99		101		14.3

Table 8: Media Website's Communication Equivalent and CIF in 2012

Website	Rank	UV	Rank of UV	PV	Total PV Rank	Domestic (%)	Overseas (%)	Overseas CIF	Overseas C.E.	CIF	Total C.E.
Phoenix	56	14,620	68	1,867.1	33	95.8	4.2	4.0	219.4	10.0	5224.6
CCTV	402	2,910	376	94.1	606	89.4	10.6	1.0	55.5	1.0	523.3
HNTV	3275	373	3781	21.5	2971	92.6	7.4	0.12	6.6	0.17	89.5
China Daily	114202	13.6	124360	0.55	124685	76.7	23.3	0.01	0.6	0.005	2.7
CIO	59569	30	58261	0.83	84244	63.6	36.4	0.03	1.8	0.010	5.0
Fox	2498	550	2437	18.73	3461	39.9	60.1	1.10	61.0	0.19	101.5
Eurovision	20279	84	19766	2.44	28234	0	100	0.25	14	0.027	14

Note CIO: Confucius Institute Online

Table 9. Comparison of web metrics of the websites in 2012 and 2013

	I(2012.4.17)			II(2013.11.29)		
	Rank	UV	PV	Rank	UV	PV
Phoenix	56	6992000	100405120	97	5419750	43683185
CCTV	402	1401250	4792275	657	1106750	4039637
HNTV	3275	122075	598167	5711	98325	1002914
China Daily	114202	7125	28500	163388	2660	9842
C.I.O.	59569	14725	42702	180620	3657	9509
Fox	2498	212800	880991	4672	142025	455900
Eurovision	20279	29450	100130	142278	6650	11305

Table 10. Communication Equivalent of related websites in 2013

	Phoenix		CCTV		HNTV		China Daily		Confucius Inst Online		Fox		Eurovision	
	%	E.C.	%	E.C.	%	E.C.	%	E.C.	%	E.C.	%	E.C.	%	E.C.
China	95.8	2511	93.1	308	94.5	58.2	31.2	0.63	48.8	0.72	-	-	-	-
Korea	-	-	1.1	3.64	-	-	-	-	-	-	-	-	-	-
Japan	-	-	1.0	3.31	0.2	0.12	-	-	-	-	-	-	-	-
US	1.2	31.5	1.6	5.30	1.9	1.17	18.9	0.38	-	-	48.7	27.7	14.5	0.25
Russia	-	-	-	-	-	-	-	-	-	-	-	-	4.5	0.08
UK	-	-	-	-	-	-	-	-	-	-	1.5	0.85	21.4	0.37
France	-	-	-	-	-	-	-	-	-	-	1.1	0.63	-	-
German	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	11.7	0.24	-	-	0.8	0.46	-	-
Argentina	-	-	-	-	-	-	-	-	-	-	37.9	21.6	-	-
Other	3	78.6	3.2	10.6	3.3	2.03	43.8	0.88	51.2	0.75	10	5.69	59.5	1.04
Total		2621		331		61.6		2.02		1.47		56.9		1.74

Table 11. CIFs and communication equivalent of related websites in 2013

Website	Ranking	UV	Ranking of UV	PV	Ranking of PV	Domestic (%)	Overseas (%)	Overseas CIF	Overseas C.E.	CIF	C.E.
Phoenix	97	9,160	113	750.5	85	96.8	3.2	4.8	110.1	7.9	2621.9
CCTV	657	14,260	631	58.3	997	93.1	6.9	1	22.9	1.0	331.2
HNTV	5711	211	7574	18	3526	94.5	5.5	0.148	3.4	0.19	61.6
China Daily	163388	7.7	201951	0.53	122733	31.2	68.8	0.06	1.4	0.006	2.0
CIO	180620	8.6	181061	0.25	236102	48.8	52.2	0.03	0.7	0.005	1.5
Fox	4672	331	4522	9.79	6690	48.7	52.3%	1.3	29.77	0.17	56.9
Eurovision	142278	13.2	122277	0.23	257469	0	100%	0.13	1.7	0.005	1.7

5 CONCLUSION AND DISCUSSION

By analyzing the web traffic data with Web Communication Impact Model proposed in Part 2, the communication equivalent of Eurovision website is 210 times greater than that of website of Chinese Bridge and their difference is even greater in terms of overseas impact on the Internet. There are few advertisements in the Eurovision website and this reflects the low commercialization of Eurovision website. CBCPC, a Chinese government-sponsored competition, is believed to have a much larger budget for CIO website than that of the Eurovision website. Thus, the CIO has great potentiality to increase its influence on the Internet, even exceeding Eurovision in the aspect of web impact.

According to author's experience of participating in media relation affairs of CBCPC and research described above, here are the suggestions for Confucius Institute Headquarters to enhance Chinese Bridge's overseas influence on the Internet:

1. Invite foreign media to report the final competition, especially the mainstream media of the countries whose citizens joined the final or semi-final, which may bring more web traffic of Chinese Bridge in those countries.
2. As the Internet users usually spend more than 20% of their network hours in social network, more web traffic could be expected when the CBCPC news is to released on the mainstream international social network media such as Twitter and Facebook.
3. Encourage the Confucius Institute to cooperate with foreign universities to produce more up-to-date news about preliminary.
4. Reconstruct the website of CIO by adopting similar information structure and user service facilities as website of Eurovision. Current website of Confucius Institute Online

It is expected with the huge investment and many volunteers' effort in promoting CBCPC, its web communication impact will be increased considerably in the future.

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REFERENCES

- [1] Tali Salman, Faridah Ibrahim, Mohd Yusof Hj. Abdullah, Normah Mustaffa & Maizatul Haizan Mahbob. The Impact of New Media on Traditional Mainstream Mass Media[J]The Innovation Journal: The Public Sector Innovation Journal, Vol. 16(3), 2011.
- [2] GUO Yan, LIU Chunyang, YU Zhihua, ZHANG Jin and DAI Yuan. Research on the Impact Evaluation of Web Information Sources of Public Opinion. *Journal of Chinese Information Processing*, 2011, 25(3): 64-71.
- [3] Joanne Cantor, Rating Systems for Media. *Encyclopedia of International Media and Communications*, 2003, Pages 47-57.
- [4] YANG Wei-Jie, DAI Ru-Wei, CUI Xia, Model for Internet News Force Evaluation Based on Information Retrieval Technologies. *Journal of software*, 2009, 20(9): 2397-2406.
- [5] Hjortgaard Christensen, F. and Ingwersen, P., Online citation analysis: a methodological approach. *Scientometrics*, 37, 1996, 39-62.
- [6] Peter Ingwersen, The calculation of web impact factors. *Journal of Documentation*, Vol. 54, No. 2, March 1998.
- [7] Qiu Jun-ping, CHENG Ni, Study on evaluation of web influence of key university in China. *Studies in science of science*, 2009, 27(2).
- [8] Dai Wei-Ming, Recognition of Credibility of Media in the Age of "King of the Internet": the Appraisal Index and Methods of the Internet Media, *Library and information service*, 2004, 48(1): 33-38.
- [9] Nielsen State of Media: The Social Media Report 2012 [Online Doc] <http://www.nielsen.com/us/en/reports/2012/state-of-the-media-the-social-media-report-2012.html>.
- [10] LIU Cheng, AN Ran, News Propagation of Confucius Institutes' Websites: A Case Study of American. *Journal of Wuhan University of Technology (Social Sciences Edition)*, 2012, 25(4).