INTERNATIONAL PUBLIC ASSOCIATION IETF AS ACTOR OF INTERNET GOVERNANCE

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The article is a result of research of role played by an international public association "Internet Engineering Task Force" in international Internet governance system. The object of the research is a process of construction of a system of institutions which coordinate development of Internet. In the article, potential of nongovernmental actors in this area is assessed. The article highlights causes and possible effects of IETF activities as the most highly respected nongovernmental associations which try to solve one of the urgent problems of world politics – transformation of an existing approach to Internet governance. IETF approach is compared with approaches of other nongovernmental organizations and public associations such as ICANN, W3C and WaSP. The conclusion is made that authority of IETF in the community of Internet projects developers enables this public association to define the key characteristics of technological policy in Internet evolution. Thus, IETF is considered as one of the key actors of international system of Internet governance. Also, the importance of IETF-like associations has been underestimated by governmental actors yet. This underestimation determines Russian, Chinese and Iranian attacks on ICANN. These states support a project of full internationalization of Internet governance and consider ICANN as an organization which controls the Internet for the benefit of the United States of America.

Keywords: nongovernmental actors of world politics, international public associations, Internet governance, IETF, ICANN.

МЕЖДУНАРОДНОЕ ОБЩЕСТВЕННОЕ ОБЪЕДИНЕНИЕ IETF
КАК АКТОР УПРАВЛЕНИЯ ИНТЕРНЕТОМ

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Статья является результатом исследования роли международного общественного объединения «Целевая группа по конструированию интернета» в системе международного управления интернетом. Объектом исследования является процесс становления системы институтов, координирующих развитие интернета. Оценивается потенциал негосударственных акторов в данной сфере. Выявляются причины и возможные последствия участия IETF как наиболее авторитетного из таких акторов в решении одной из актуальных проблем мировой политики — трансформации сложившегося подхода к управлению интернетом. Подход IETF к управлению интернетом сравнивается с подходами других международных неправительственных организаций и общественных движений: ICANN, W3C и WaSP. Делается вывод о том, что авторитет IETF в среде разработчиков интернет-проектов даёт возможность этому общественному объединению определять ключевые черты технологической политики в сфере развития интернета, являясь одним из основных акторов международного управления интернетом. При этом значение сообществ, подобных IETF, пока недооценивается государственными акторами. Именно этим обусловлены нападки России, КНР и Ирана, выступающих за полную передачу управления интернетом международному сообществу, на ICANN, воспринимаемую этими государствами как организацию, управляющую интернетом в интересах Соединённых Штатов Америки.

Ключевые слова: негосударственные акторы мировой политики, международные общественные объединения, управление интернетом, IETF, ICANN.

Nowadays the international arena is a field representing such non-governmental participants (or actors) as multinational corporations, regions, mass media, NGO etc. Non-governmental and partly governmental actors keep affecting world political processes more and more actively. Thus, according to the data of the World Bank, there are more than 75 000 multinational corporations existing at present. The number of international NGOs existing in the modern world is estimated at over 7 000. Other non-governmental actors possess analogous showing. All of them are active in the outside world; they dynamically interact with public and intergovernmental organizations. Yet, unlike the governmental bodies, they appear to be almost non-researched within the academic discourse of world politics and international relations. The matter is that the researchers focus on studying either the states and interstate interaction, or political processes in the modern world. However, non-governmental actors are actively studied within other academic disciplines as world economy, international private law, etc. Therefore studying the activity of non-governmental actors is an important scientific and practical task within political science.

There is a few number of the works covering this range of problems. Among them, there are works by R. Keohane and J. Nye[23], R. Mansbakh, I. Ferguson and D. Lampert[12;13], T. Risse[7, p. 255-274], B. Renalda[22, p. 3-18], M. Lebedeva and other experts of MGIMO[15], within the field there is a number of detached articles and PhD theses as well.

Meanwhile, there are new non-governmental actors entering the world arena. They are informal network associations, emerging around the projects connected with the digital information environment. The role of online communities already became an object to be researched within world politics (especially after "the Arab spring"). Conversely, the role of communities of their developers unfairly remains unaddressed. Whereas they also possess a certain political potential, hold political interests and resources of influencing the world politics.

At the first stage of computer networks becoming spread globally, the existence of informal associations of developers of Internet projects became a significant factor of the international cooperation in the IT sphere.[21] Today such associations, along with commercial companies and online communities, are gaining absolutely special political value. The notorious WikiLeaks project is a good example of it. Being created and promoted by informal efforts, the project attains a remarkable success.

Commercial IT companies exert a great influence on world politics thanks to considerable financial resources and skills in political lobbying. While online communities become political force by virtue of its mass scale of involvement (it's an automation of processes and extreme simplification of the mechanisms which allow the ideas to spread among the users). Associations of developers do not possess sufficiently those resources. Nevertheless, they successfully participate in political life.

Informal associations of network technologies developers acted simultaneously with the Advanced Research Projects Agency of the USA Ministry of Defence (DARPA). They also strongly influenced the progress in technologies developed by American government for defense purposes. The Internet was based on those technologies. Joseph Licklider - the author of "a galactic network" concept and first director of DARPA computer network project was a scholar not connected to military environment. He shared the data on his carried on works with all the interested scientific community.

From here originates the tradition of RFC documents (Request for comments). It formats discussions on technical specifications, which claim to become a standard for the Internet up to nowadays. A certain technological project is sent to the colleagues of the project developer; the message contains a request to state comments and offers on its improvement. Thereby the discussion of the idea is boosted among the wide community of interested specialists. During the process, the project gets definite outlines satisfying each participant of discussion and is generally accepted as a standard on the basis of

consensus.[2]

A discussion concerning RFC documents became the first regulation pattern of general computer networks' development. According to the definition of the United Nations Working group it's called "Internet governance"). It is significant that this pattern in fact represented a spontaneous self-regulation process, in which any interested person could take part and could discuss scientific discoveries, inventions and suggestions upon improvement in the field of computer networks design. Thus final technological standards de facto became a public domain. An open discussion became the natural basis of open standards, and of inadmissibility of proprietary approach. That is why alternative concepts of intellectual property are mostly prevalent in the Internet community. Today its development becomes one of the most significant problems of world politics.

The first institutionalized community of computer networks developers - the Network Working Group within ARPANET project – was originated from such debating groups with network structure. At a later date the Network Working Group evolved in the Internet Working Group[8].

Self-regulation was rather successful. However, it deprived DARPA of control upon the development of computer networks. For this reason, Vinton Cerf, the inventor of TCP and IP protocols, who directed the DARPA Internetworking Program, established International Cooperation Board (ICB), Internet Research Group and Internet Configuration Control Board (ICCB).

ICB supervised the cooperation with a number of European countries, Internet Research group created the environment for exchanging the information of general character, and ICCB was to help Cerf to operate the increasing activity of computer network users.[1]

A serious organizational structure, allowing supervision of international activity for Internet development, came to the international arena. It happened under the auspices

of authoritative governmental agency of the USA, and had to bring to interception of initiative by formal supervising bodies from informal communities of developers. It also had to deprive communities of developers of interested public's support. For some period the initiative of decision-making in international cooperation on Internet development passed to the structures created by Cerf. However, objective premises prevented this tendency from being fixed.

The matter is that the Internet as a defense venture had to become a national project of the USA. There are four objective reasons contributing to the international cooperation on the project. First of all, it's the development of technologies itself. The technological base of computer network interaction was becoming more and more complicated. It resulted in the preference of those technologies being adopted from outside the USA, rather than inventing them within the DARPA programs. For instance, it's known that the success of the Internet itself was determined by the packet switching technology. At the moment of being published in the USA in 1967, this technology had already been developing in the British National Physical Laboratory by a team led by Donald Davies and Roger Scantlebury. Thanks to this elaboration, the initial speed of data exchange in the projected at that time network called ARPANET was more than twenty times increased – up to 50 kbps.[6, p. 25]

Westfall system of international relations establishes the sovereignty of the states upon all the objects located on their territories. Therefore, the necessity of exploitation and administration of the complicated, potentially global infrastructure of computer networks became an objective factor of international cooperation. Social and political significance of such networks could profoundly increase. In that case such administration couldn't be implemented without the participation of all the sovereign states, on which territories the networks would be situated.

Thirdly, a potential commercialization of such developments facilitated international participants' involvement into the cooperation on development of computer

networks.

The first and the third factors contributed to the establishing of both models of international cooperation (the network model, and the model of state controlled organizations). The second factor even made the second model more preferable in the long term. It would happen in case the governments understood the social and political importance of computer networks.

And the fourth factor existed also and was extremely significant both in the 70s of the 20th century (when the international cooperation in the field of Internet development was at the establishing stage), and today. This factor is the attractiveness of "Internet people" who work together on technologies, on their development and implementation. It's much more interesting and easy to join such a wide-open community, than to become a member of formal closed organizations. Owing to this fact, associations of developers were able to keep its significance.

One can see that of all the coordinating bodies established by Vinton Cerf, the most dubious independent developers' appointment was at ICCB. As a result, this council was abolished in 1983. Instead it, Cerf created so called Task Forces. Directors of the Task Forces formed the Internet Activities Board (IAB). It should be noted that the staff of the disbanded ICCB and newly created IAB was almost identical.[1]

We can state that the changes in the coordination of computer networks development led by DARPA, were a mere formality. In fact, everything remained unaltered. However, the new structure was able to employ the communities of developers.

Internet Engineering Task Force (IETF) was the one to stand out of created Task Forces. This group wasn't a closed organization as well as other Task Forces. It represented (and does it presently) an analogue of ARPANET Network Working Group, meaning that it is an open discussion community. Moreover, the IETF has adopted one of the main communication models used by its predecessor. It is the model of technical

issues discussion based on the RFC documents. That's why an outstanding number of professionals interested in various aspects of interconnected networks were always present at IETF meetings.To this point, a substructure of groups appeared within the IETF.

Since 1985, when the defense project was actually completed and implemented in a computer network MilNet, DARPA activity in support of further implementation of computer networks sharply decreased. Thus IAB, a formal coordinating body, remained in fact without the main sponsor; however this fact strengthened its leadership and has not caused it any serious damage. The transition of public NSFNet to the joint protocol TCP/IP enabled Stephen Wolf, the director of NSFNet, to set about an implementation of a global network infrastructure for the needs of the broad academic community. This network infrastructure had to be maximally independent of direct federal funding. Under the circumstances of the DARPA activity decline , such kind of independence became just what was needed.[5]

However, the communities of developers had the trumps of their own. They were revealed during the first InterOp trade fair held in 1988. The event was attended by a great amount of potential customers among which there were fifty companies and five thousand engineers from different organizations. Potential clients were pleasantly surprised that the producers aspired to ensure interoperability of their solutions with all the other products, even with those presented by their competitors. It was of a great convenience for the commercial enterprises, whose representatives began to attend IETF meetings on regular basis and became its main sponsors. It made this Task Force, being a community of developers per se, more independent of the hierarchical system of coordination established by Cerf. It also made the IETF one of the most important parts of the world research network.[14, p. 157]

As a result of these circumstances, IETF underwent structural changes. It held the clusterization of the working groups according to their function spheres. Each function

sphere was supplied with an appointed director. These directors formed the Internet Engineering Steering Group (IESG). IESG became the main body to review the standardization of network technologies. It was greatly beneficial for the community of developers, as it brought the initiative in directing the development of the Internet back to them.

As a result of being under the pressure of these transformations, the IAB structure changed. Those Task Forces, which were not included in the IETF hierarchy, were combined into Internet Research Task Force (IRTF) and renamed as research groups. Thus, the Internet Activities Board took control over two equal business units which were Research and Engineering sections. Moreover the engineering unit became more autonomous.[20, p. 55]

However, an opportunity for technologies standardization being an unfair and out-of-control process appeared. In fact, the role of supervisory authorities, supported by the government, was neutralized. It left a room for antitrust violations and another forms of unfair economic practices. The Internet Society (ISOC) was established in 1991 in order to implement social control. It was created under the patronage of the Corporation for National Research Initiatives and under Cerf's management.[11] This was another attempt of formal, centralized, state affiliated structures to regain the lost control over the networking technologies development. However, the attempt wasn't successful. The establishment of the ISOC followed reorganization of the Internet coordinating bodies. In 1992, Internet Activities Board was transformed into the Internet Architecture Board under the auspices of the Internet Society. This transformation legitimated the status quo: it stated more equal relationship between the IAB and the IESG. IETF and IESG took upon themselves a big responsibility for standards adoption. The aim of the Internet Society was to provide IETF with optimal conditions for work. [1]

As we can see, the Internet society held a back-seat role. Thus, the mechanisms of computer networks coordination essentially changed along with globalization of theirs.

The regulation of such networks was no longer a prerogative of hierarchical state-governed structures. Manufacturers, industrial and business groups took it up instead.

At the same time another specialized organizations working in monitoring of technology's development were set up. The popularization of the World Wide Web technologies was a boost to a number of governmental and inter-governmental organizations (as DARPA, the European Commission and CERN) to support a project proposed by the inventor of WWW, Tim Berners-Lee. The project was about creating a special organization called the World Wide Web Consortium. Its declared aim was to provide people from all over the world with a maximum availability of web content . In fact, the activity of the organization consisted in regulation of technologies development and in approval of their standards.[24] Main vendors of web-browsers and servers (at the time they were Netscape and Microsoft) didn't take seriously the first consortium standards (HTML 4, PNG, CSS 1 and CSS 2). IETF-like informal communities of web projects developers turned out to be much more effective in promoting common standards for the World Wide Web. One of them was called WaSP and aimed to support the World Wide Web Consortium. WaSP participants carried on an advertising campaign on popular websites owned by them. Besides, the projects which didn't adhere to suggested standards were maliciously criticized by WaSP participants on other websites. Also they were negotiating with software producers. As a result, the fourth version of Opera browser, and the fifth version of Internet Explorer browser met the standards of the World Wide Web Consortium in 2000. In 2001, Macromedia Dreamweaver, which was the most popular program for creating websites at that time, was brought into accordance with those standards.[4] (Probably, Netscape's refusal to follow the standards became the reason for its withdrawal from the market.)

Today the association of web developers and web designers called WaSP no longer plays an important role in promoting the standards of the World Wide Web. As for the regulation of its technological development, it is governed by a specialized

international organization World Wide Web Consortium which unites about 350 organizations from 50 countries and has a developed system of representatives all over the world. In Russia, such representative works in a tight cooperation with government structures, companies of the oil and gas industries, and educational institutions [19] leaving a secondary role for the actual web developers.

Meanwhile, among essential problems of world politics, there is one area of internet developers' interests (including those of IETF) to be considered as the most objective. This is Internet governance. This conclusion is based on a retrospective look at the development of communities of internet developers.

Within the political discourse of the Internet governance, a non-profit organization ICANN is the most frequently mentioned one. Indeed, under the agreement with the U.S. Department of Commerce, ICANN was delegated with authority to ensure a smooth operation of the Internet by implementing functions, known as the IANA (Internet Asigned Numbers Authority). These functions include coordination of development of technical protocol parameters, managing the root domain name system, and distribution of IP addresses blocks. The list of IANA functions is not closed yet. U.S. Department of Commerce may add other functions to this list.[10]

The working group of the United Nations developed a definition of "Internet governance". "Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet."[16, p. 4] Taking into consideration this definition, it is obvious that the list of the functions performed by ICANN not fully covers the possible activities that can be described as the Internet governance. (This, by the way, left the room for a maneuver created under the auspices of the UN Internet Governance Forum, which managed to find a niche for international cooperation in this field. In particular, ICANN didn't covered such aspects as: openness, which was interpreted by the Internet Governance

Forum as "freedom of expression"; free flow of information, ideas and knowledge; security, interpreted as "creation of a climate of trust through cooperation"; variety, interpreted as "strengthening of the multilingualism principle and the growth of local content rate"; and, finally, Internet access, its policy and cost. These very issues, which are not covered by ICANN, are officially declared as the main discussion topics on the Internet Governance Forum.[3]) Besides, ICANN can't perform the given functions independently. The history of the bodies coordinating technological development of the Internet shows us that this issue is much more effectively solved by communities of developers than by formal specialized organizations. (Even when various standards, developed by such organizations, present a higher quality than the independently proposed specifications, formal organizations still don't possess many chances for their widespread introduction. The most notable example is e-mail protocol X.400, developed by the International Telecommunication Union. It is well-known that the commonly used protocol SMTP allows to substitute a real address of a sender with a fictional one, which makes it impossible to identify the sender. The standard of the International Telecommunication Union is more reliable in this respect, that's why it would allow to solve many of the problems associated with spam - one of the most burning issues of the e-mail. However, the abundance of red tape procedures retarded the publication of this standard. It resulted in the refusal of the community of developers to go on it, as another technology was already well established in the Internet as de-facto standards. Because of that, ICANN's role in coordinating the development of technical protocol parameters is rather conventional. In reality, such development is being coordinated by the community of developers - IETF.

According to the official IETF's document RFC4677, IETF is an openly organized group of volunteers, that is the community of Internet projects developers. De jure, IETF doesn't possess any organizational status at all. This is an informal public association. [9]

At the same time, this union possess a well-developed structure composed of

dozens of working groups, engaging the residents of different countries. A considerable proportion of organizational meetings is held in European and Asian countries, however about a half of them is held in North America. However, it does not mean that U.S. members make the majority within the IETF. According to Andrey Robachevskiy, the technical director of the European regional network clearing centre RIPE NCC, even if a meeting of the Task Force takes place in the U.S., the percentage of non-Americans may exceed 50%.[18]

IETF work is organized in the form of working groups which are in fact distant discussion groups. Technically, they are established as electronic mailing lists. Each interested person may take part on their work. All that one needs for this is the subscription to respective mailing list. It's worth noting that decision making in the working groups is based on the consensus principle (which, more precisely, means the absense of principle-based objections).

Overwhealming majority of technical standards generally accepted in the modern Internet, have been approved by the IETF. As of May 27, 2013, IETF has adopted 6963 standards.[17] However, not all of them are technical: among them, one can find the regulations of activities of IETF itself, and even codified rules of behavior in social relations emerging in the Internet communication environment. Of course, all of these standards did not have a legal force, but their political importance can not be underestimated. Credibility to IETF among internet developers is so great that this organization (or, more precisely, this public association, community) identifies the key features of technology policy in the sphere of development of the Internet, being one of the main actors of the international Internet governance.

The value of such associations andcommunities as IETF, is yet underestimated by states and state-based actors of international relations. These misjudgements probably determines attacks on ICANN launched by Russia, China and Iran whose governments advocate the complete transfer of the rights of Internet governance to international

community. ICANN is perceived by these governments as the organization that governs the Internet in the interest of the United States of America today. Meanwhile all the interested people, residents of any country of the world can participate in the activities of IETF which is an open community of developers the Internet standards, and each person can in the course of these activities have an impact on the development of technology platform of the Internet so that the aspects of Internet governance within the competence ICANN (above all, the routing on the root servers of the domain name system, as well as distribution of IP addresses blocks and the administration of top-level domains), would not have such strategic importance which they have now.

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