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A comparison of regional standards collaboration activities of ETSI and ASTAP

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A comparison of regional standards collaboration activities of ETSI and ASTAP

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1. Introduction

Over the past few decades, regional Standards Developing Organisations (SDO) have actively been leading standardisation activities in order to meet the needs of members within the region. They aim to carry out region-specific issues and to foster regional collaboration. They have also been dealing with great amount of work in cooperation with regional groups and study groups of international SDOs such as ITU, ISO, IEC and so on. Although they have a common goal of establishing and amending regional or global standards at their corresponding region, some objectives of SDOs are very much distinguished from one another.

In this paper, two of the most active regional SDOs, ETSI (European Telecommunications Standards Institute) and ASTAP (APT Standardization Program), are introduced. ETSI and ASTAP have a common role to reach a consensus on specific issues respectively within Europe and Asia-Pacific to strengthen the argument and the demand of members. They also try to reinforce the economic ties of regional members for future standardisation works. Apart from these universal purposes coinciding with those of other regional SDOs, major objectives are different from each other. ETSI focuses on establishing global standards, while ASTAP focuses on regional cooperation. Due to these prominent differences, their strategic plan, structure, decision-making process, contributions, and other activities also differ very much.

2. ETSI and ASTAP

2.1 European Telecommunications Standards Institute (ETSI)

ETSI is responsible for Information and Communication Technologies (ICT) standardisation within Europe. Since its establishment in 1988, ETSI has been carrying out standardisation works including telecommunications, broadcasting, intelligent transportation and medical electronics. Its main goal is to establish not only European but also international standards. For example, it is known for standardising GSM cell phone system, TETRA professional mobile radio system, and other commercially available telecommunication systems. ETSI is comprised of 39 full members including the EU member states and more than 700 non-European countries, manufacturers, service providers and so on.

2.2 APT Standardization Program (ASTAP)

ASTAP, on the other hand, is one of the five work programme areas of APT (Asia-Pacific Telecommunity) and it was established in 1998 to harmonize and integrate Asia-Pacific ICT standardisation activities of not only ASTAP but also APT study groups. Its main objective is to foster regional cooperation on standardization and to contribute to global standardization activities by developing input to the relevant correspondence groups. As of March 2013, there are 38 Members, 4 Associate Members, and 130 Affiliate Members. All APT member bodies can participate in ASTAP activities.

3. Comparison of ETSI and ASTAP

Throughout this paper, the comparison of regional standards collaboration activities is comprised of three parts; strategic plan, structure, and other activities. Since their fundamental objectives are different from each other, their organization management and deliverables also have to be different according to each foundation purpose.

3.1 Strategic plan

3.1.1 ETSI

Every autumn, ETSI board reports the ETSI strategy during the general assembly. The strategy was at first administered as “Strategic Guidelines”, but in order to eliminate conceptual vagueness and stipulate concrete working plan, its name was changed to “ETSI Strategy” starting from the 40th general assembly. ETSI strategy provides a high-level strategic document which sets a standards for the activities of ETSI secretariat, board, and technical bodies.

Fig 1. ETSI Strategic plan

Strategic plan (ETSI)
<ol style="list-style-type: none">1. ETSI will be the first point of call for all telecommunications and telecoms related ICT standardization in Europe for its members and for European mandates.2. ETSI will create high quality standards for global use.3. ETSI will stimulate and provide thought leadership for its members’ industries.4. ETSI will be a champion for the environment and develop standards for a sustainable future.5. ETSI will be in tune with the changing nature of the global ICT industry.6. ETSI will be effective and efficient, and recognized as such.

The strategic plan of ETSI envisions innovative and competitive international ICT standards in order to fulfil European and global market demands. The present Long Term Strategy was adopted by the

58th General Assembly of ETSI, in December 2011. The Long Term Strategy serves as the basis for the development of annual business plans and short-term objectives within ETSI and its Secretariat. ETSI aims strengthen its strategic position through the following means.

They make the best use of their work programmes and other activities by improving their visibility and by performing necessary promotion and education in order to ensure they reflect the dynamics of the members' industries. They also hold close partnerships with SDOs, administrations worldwide and they encourage their partners' participation to make their organization more industry-driven, open, and commercial. They concentrate on their strengths and leadership in key areas of standards including mobile and radio technologies, system level architectures, and so on.

Taking everything into account from their strategic plans to endeavours, it is clear that ETSI is increasingly focused on concentration, rationalization, and efficiency in standards development.

3.1.2 ASTAP

Fig 2. ASTAP Strategic Plan

Strategic plan (ASTAP)
1. ASTAP will encourage membership to consider key telecommunication/ICT areas proposed by the Ministerial Meeting to strengthen regional collaboration towards broadband economy.
2. ASTAP will continue to create an environment in which interested parties can work effectively and efficiently together in partnership
3. ASTAP will continue to coordinate and cooperate with other APT work programs in relation to its standardization activities in this region
4. ASTAP will concentrate its efforts in bridging the standardization gap and the digital divide among APT member countries
5. ASTAP will establish appropriate relationship with major standards bodies and enhance efforts to promote the value of ASTAP
6. ASTAP will promote itself as an attractive forum for industry entities to achieve standards development work throughout the region

ASTAP encourages all members to share and promote ICT knowledge and experience in order to establish firm and long-term regional cooperation. The latest ASTAP strategic plan for 2012-2014 was amended and approved at the 19th ASTAP Meeting (ASTAP-19). The strategic plan was designed to provide ASTAP members with high level strategic direction as well as detailed action plan for standardization activities during the given three-year period. In 2009, the prior ASTAP was merged with APT Study Groups in order to harmonize and integrate their works. As a result, the new ASTAP, as a merged ASTAP and APT Study Groups programs, covers not only the aspects of standardization program but also to make use of the experts to deal with the study questions that may arise.

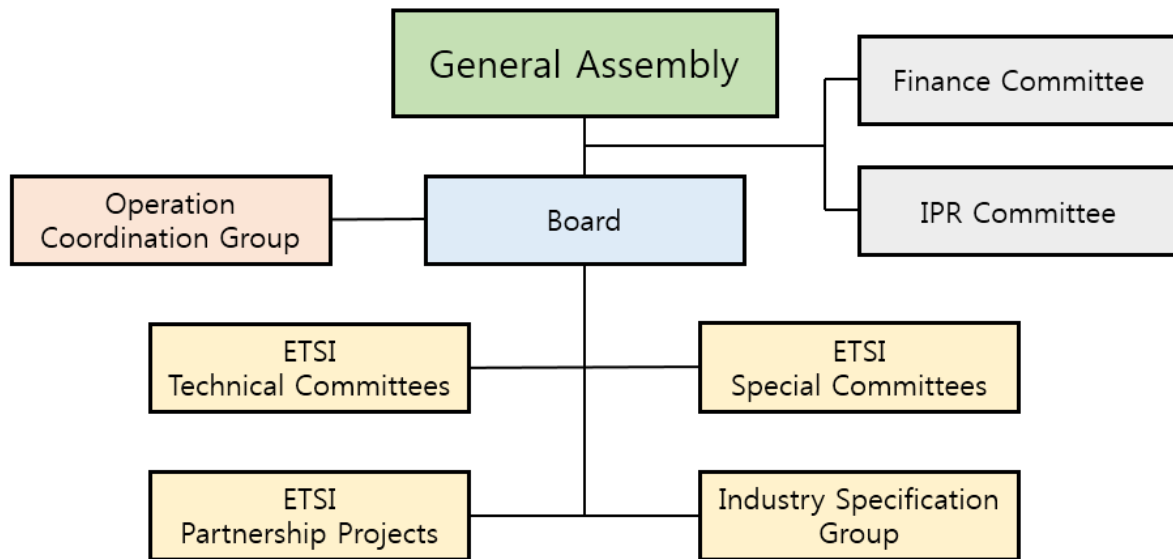
3.2 Structure

Secondly, as for its structure, ETSI is composed of General Assembly, Board, Secretariat, and Technical

Bodies including Technical Committees along with other Projects. ASTAP, on the other hand, consists of the Plenary, Advisory Board, Working and Expert Groups. The authors discussed how different structures influence and result different decision making process.

3.2.1 ETSI

Fig 3. The Structure of ETSI



The General Assembly (GA) is the top decision-making body and it delegates authority to the board. The board administrates Technical Committees (TCs), ETSI Partnership Projects (EPPs), Special Committees, and Industry Specification Groups. TCs cover standardization issues of particular technical fields and EPP facilitates standardization works to the market in collaboration with external organizations. Special Committees carry out additional tasks such as promoting ETSI, discussing and arbitrating TC and other technical issues.

4.2.2 ASTAP

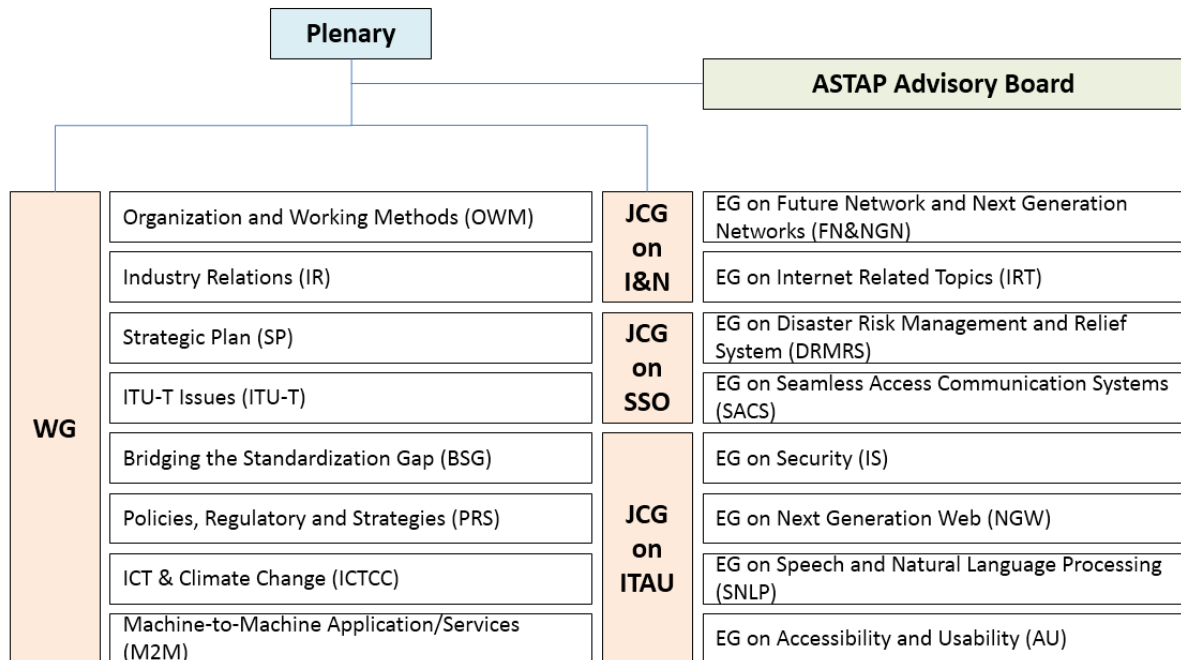
ASTAP is comprised of Working Groups (WGs), and Joint Coordination Groups (JCGs) consisting of a number of Expert Groups (EGs) of technical fields. JCGs covers Infrastructure & Network (I&N), Service & System Operation (SSO), and IT Application & User related Issues (ITAU), all of whose work being carried out by their corresponding EGs.

Meanwhile, the Advisory Board is an advisory group for successful standardization activities and the board consists of former ITU-T/R chairmen, the director of ITU Telecommunication Standardization Bureau (TSB), members of Telecommunication Standardization Advisory Group (TSAG) and Radiocommunication Advisory Group (RAG), and the former chairman of ASTAP Advisory Board.

ASTAP EGs have so far discussed the state-of-the-art technical issues and information but not

standardization development. However, along with other WGs, EGs have an important role of coordinating works such as representing and proposing APT opinions in standardization works.

Fig 4. The Structure of ASTAP



3.3 Contributions and activities

The comparison of organizational structure of these regional SDOs is followed by a number of activities categorized according to the working areas of each SDO. A number of interesting trends of standardization works could be derived from analyzing certain types of categories, and the results were discussed thoroughly in this paper.

3.3.1 ETSI

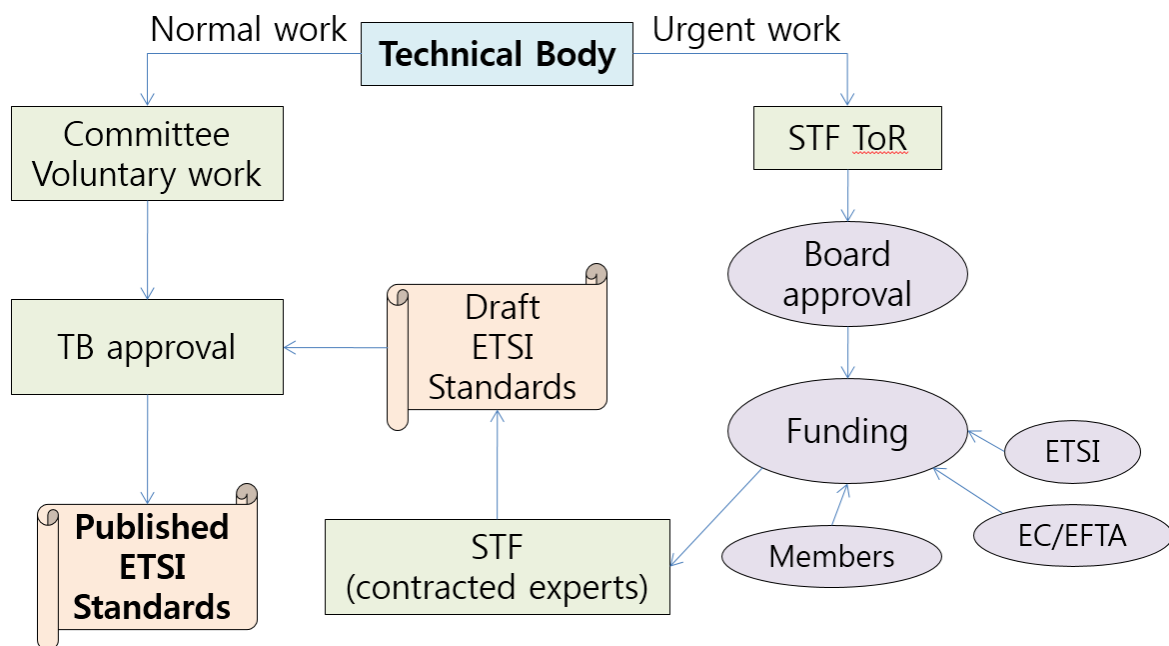
3.3.1.1 STF (Specialist Task Forces)

The STF(Specialist Task Forces) is a professional group which carries out urgent works with regard to the standard drafts, and supports specific technology-oriented organizations for a limited period. Carrying out the 25% of draft works related to standards developed by the ESTI, the STF has been playing a great role in the ETSI works as a whole. The expenses are paid from the funds such as the budget of ETSI, support fund of EC/EFTA and voluntary support fund from member companies. In addition, the activities supported with funding by the ETSI, except for the STF, include the activities of experts in 3GPP, research projects of EC/EFTA, which are called 'Special Projects' and activities of other experts specialized in contracts, who are provided with travel expense by the company.

3.3.1.1.1 Establishment of STF and work procedure

The following figure illustrates the establishment procedure and work procedure of TB. The STF is established only if there are urgent works of TB after preparing relevant ToR and getting approval from the board. The board will make decisions regarding provision of funding for the STF after approving.

Fig 5. Establishment of STF and Work procedure



- **Proposal for establishment of STF:** The TB shall prepare the ToR regarding the proposal for establishment of STF. In the ToR, the definition of task and expected publication shall be presented in order to help clearly understand the sufficient legitimacy of the proposal.
- **Approval of STF establishment:** The ToR proposed by the TB shall be approved by the board. A new proposal for the next year shall be submitted before September 15, and it shall be finally submitted to the secretary-general before October 15 after reviewing at the executive office. The board shall review the ToR and approve the establishment of STF in consideration of ESTI strategies and budget conditions.
- **Experts and leader of STF:** The experts of STF will be hired by the secretary general after discussion with the chairman of TB. And the leader of STF will be appointed from among the experts by the secretary general after discussion with the chairman of TB as well. The leader of STF will be in charge of the administrative cooperation with the executive office and technological cooperation with the chairman of TB. The TB may establish a 'Steering Committee' to prove the STF with work guidance, and the STF is supervised directly by the TB or Working Group.

- Termination of STF: If there is no separate decision made by the board, the STF will be terminated automatically when all the publications prescribed in the ToR are approved and adopted. And then, the leader of STF shall submit a final report to the relevant TB and executive office of the ETSI I containing the summary of activities, spent/unused funds, and bottleneck problems that occurred during the activity.

3.3.1.1.2 Current status of STF activity

Since the introduction of STF system, about 1,200 experts in a total of 400 groups from 34 countries have been working. Through their activities, about 1,800 publications were carried out, and 15~20% of the drafts for ETSI publications were prepared by the STF. In 2007, about 130 members from 27 countries participated in the 47 STF. The total expenses spent on their activities reached 2,600k Euro (3.6 billion KRW), of which about 34% was paid from the membership fee account, 23% from the EC/EFTA support and 3% from donation of member companies, respectively.

3.3.1.2 Plugtests

This terminology had originated from "BAKE-OFF" which was used for the mutual operation test in 1999, and it was established permanently under the name of "Plugtests" in 2001. The 'Plugtests' is the representative program of the ETSI which facilitates quick feedback regarding the development and implementation of standards on sites, where the developer, producer, service provider and users get together.

The "Plugtest" aimed at the service for mutual operation test of ETSI began to be used from 1999. And it is operated usually for 1~5 days 15 times a year in various fields such as VoIP telephone and multimedia, DSL, Bluetooth, IPv6, call quality, SIP, Smartcard, OSA-PARLAY, ebXML, security, power line, ENUM, grid computing, and F-MMS. Enterprises may participate in the 'Plugtests' regardless whether they are member companies of ETSI or not, if they pay the entry fee. According to the regional distribution since 2001, Europe, North America, Asia and Middle East occupy 58%, 24%, 13%, and 5% of the total members, and about 2,500 engineers from 900 enterprises have been participating in the 'Plugtests'.

3.3.1.2.1 Outline and special features

The Plugtest refers to a standard development program which facilitates reduction of standard development period, and it also facilitate quick feedback regarding the defects occurring when developing and implementing standards on sites by allowing the standard developers, producers, service providers, and users to get together at a place in order to participate in the development process for high quality standards. Originally, the Plugtest started under the terminology of Bake-off²⁵). However, the terminology was changed into Plugtest at the 37th General Conference due to the ambiguity problem.

Looking into the basic features of Plugtest, we may know that it is not a process which is separated

from the standard development process and implemented independently, but it is a standard development process at the early stage of the development. So, any enterprises and individual people with a prototype of relevant standard can participate in the event, and the results will be released to the members of ETSI, including non-members. And the period of Plugtest is limited to the shortest, 1~5 days, and it can be operated only in the period of preparation for the draft of standards. The Plugtest may be characterized as an event in which a mutual operation test is carried out prior to the official test. The merits of implementation of Plugtests are as follows.

Firstly, the quality of standards can be improved by finding out errors and ambiguities of standards. Secondly, a quick feedback regarding standards and prototypes can be provided as the service providers and producers may participated in the standard development process. Thirdly, it facilitates understanding the acceptance and recognition degree of standards in the markets through sharing information among the developers, businessmen and producers during the Plugtest process. Fourthly, the Plugtests require cooperation of many participants, so it provides the service that are difficult to be implemented by individual businesses. Therefore, when the ETSI implements such tests, the cost and time of enterprises and industries may be saved. Fifthly, the participants may prepare a standard specification suitable for their actual state at the early stage of standard development. In addition, they can reduce the cost for on-site tests and application required for commercialization of products as they can raise objection regarding the standards which are against their own situation.

3.3.1.2.2 Roles of ETSI

The executive office of ETSI is in charge of organizing the conference, providing administrative support and place for meetings. The ETSI explains the legitimacy that the Plugtest shall be operated within the management of ETSI on the basis of following reasons.

Firstly, the ETSI can establish technical neutrality. The ETSI argues that the technical neutrality can be secured when the Plugtest is operated by the ETSI, in comparison with the Plugtests carried out by the businesses and engineers participating in the Bake-off, who are using their own technology, or realizing their own prototypes and pipe conduits on the individual business level.

Secondly, the ETSI has the rich experience of conference operation and may provide relevant facilities. The budget for Plugtests is based on the cost-neutrality. This implies that the costs (personnel expenses, other expense related to holding an event) required for Plugtests are decided at the same level as the expected earnings (entry fee, or contribution). The budget related to the 2007 Plugtests reached 270k Euro. Even though it was only 1% of the total budget, it had a great effect on the quality improvement of ETSI publications.

3.3.2. ASTAP

3.3.2.1 Working Group on ITU-T Issues (ITU-T)

The ASTAP was organized at the 5th conference (2001, in Australia) as a Correspondence Group(CG) in order to coordinate the positions of countries in the Asia-Pacific Area against the ITU-T, and it was

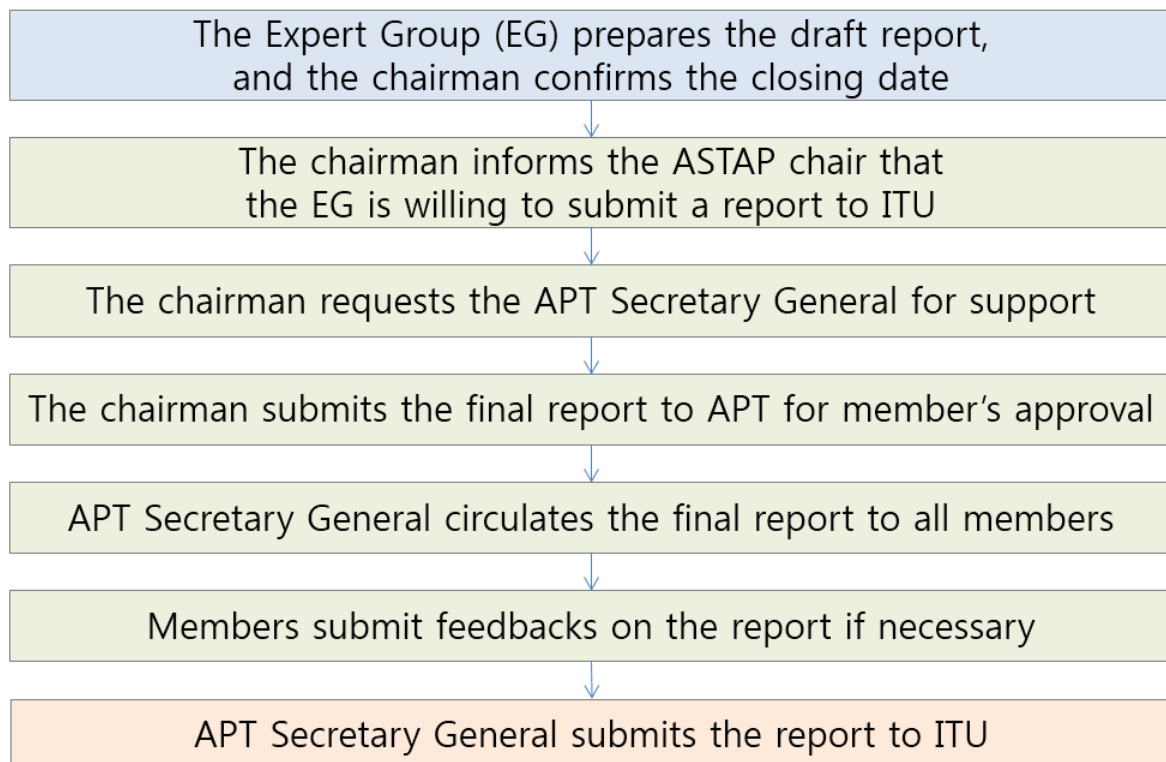
reorganized a regular work team (WG) later. The major roles of the issue groups in the ITU-T is to establish the position of the region against the major policy conference of ITU (plenipotentiary conference, board, WTSA, TSAG and etc.) and take charge of cooperation and coordination regarding the issues of ITU-T. The major purposes of activities are as follows.

- Finding the strategic issues related to ITU-T, which need to be and coordinated among ASTAP member countries (companies) on the basis of cooperation.
- Submission of opinions to the major conferences of ITU-T (TSAG, WTSA, PP) after coordination.
- Reflection of opinion in the benefits of countries in the Asia-Pacific Area.
- Exchange of information related to ITU-T issues among the member countries (companies)

3.3.2.2 Submission procedure of joint report to APT

The submission procedure of reports prepared by each expert group to the International Organization for Standardization is presented in Fig. 5 as follows. When looking into the procedure in details, we may see the special features in which the procedure requires the establishment of more distinct role sharing between the reporter of expert groups and executive office of APT, regarding preparation and submission of reports, and emphasizes the scheme of cooperation among member countries for quick submission of reports to the ITU and other organizations.

Fig 6. Submission procedure of joint report to ATP



3.4 Discussion

3.4.1 ETSI

The analysis of current state of ETSI, which has been carried out so far, is aimed at the following items.

- (1) More detailed analysis on the current state of ETSI, which retains strong competitiveness in terms of the standardization in information and communications
- (2) Groping for schemes to enable domestic industry and research centers to participate in the activities of ETSI,
- (3) And understanding the strategic implication of domestic standardization through the analysis of ETSI.

Therefore, it is planned to suggest a more advance direction in the promotion of standardization of domestic information and communication systems and draw the implications that may be reflected in the standardization activities by verifying the internal capacity of ETSI, which is recognized as the most effective organization among the official standardization organizations in the world, through (1) strategic aspects and (2) methodological aspects of works.

3.4.1.1. Strategic aspects

3.4.1.1.1 Establishment of strategies focused on changes in external environment

In the environment of standardization, which is changing due to technical convergence and competition with actual standards, the ETSI has been constantly analyzing such changes in environment and groping for countermeasures. The ETSI has set up mid-term strategies every five years and promotional strategies for the next year, which has provided the driving force that enables the institute to lead big changes in the entire organization, or in the procedure.

In the mid-term strategies such as HLTF(High Level Task Force) in 1995, EFR(ETSI Future Role) in 1999, and HLRG(High Level Review Group) in 2005, the ETSI suggested the vision covering the next 5~7 years through the SWOT analysis, proposing countermeasures according to the analysis. And the ETSI has been analyzing external environment and setting up strategies regarding external cooperation/standard development/members/operation every year. We may assume that the thorough analysis on external environment and use of such strategies according to the analysis results may enable the organization to exercise the world-wide influence constantly in the rapidly changing standardization environment of information and communication, unlike other official standardization institutes.

3.4.1.1.2 Globalization through expansion of member companies

Since entering into the WTO system, the globalization or internationalization has put the borders into

the shade in information and communication markets, and the standardization makes us confirm the phenomena easily as well. Recognizing the changes, the ETSI has been making efforts to collect members such as worldwide influential businesses and manufactures in information and communication markets. And the organization is trying to collect members from non-Europe areas by expanding the power and duties of associate members from non-Europe areas to the level of full members in Europe. In consideration of the recent discussions in which the single membership, it is easy to understand the efforts of the ETSI to form a substantial shape moving toward a global standardization organization.

3.4.1.1.3 Influence of standardization policies of EU/EFTA

Promoting the globalization, at the same time the ETSI puts emphasis on combined activities and support among European organizations, including exchanges among legislative authorities and executive branches in order to support the policies set up by the EU. In the extension of e-Europe known as medium-and long-term strategy for European information society, the ETSI is trying to excavate new fields, such as the e-health and RFID-related technology, through the i2010-related standardization policy and support for R&D projects. Such policy-supporting activities enables the institute to expect to collect potential members due to the expansion of standardization fields, as well as reduce the burden in terms of operation and costs.

Above all, the EU/EFTA has been preparing the trial plan under the themes like 1) expansion of European standards utilization in the fields of policies and regulations, 2) promotion of efficiency/consistency of European standardization, and 3) standardization under the theme of globalization of European standards, through the "Action plan for European standardisation"²⁶⁾ since 2005. It may be assumed that the support of governmental policies has enabled the ETSI to carry out activities with the cause and reputation as an official standardization organization.

3.4.2 ASTAP

3.4.2.1 Discussion

Due to the characteristic of an organization, which is not focused on standard development, but sharing information related to standardization and coordination of regional, ASTAP has not prepared tasks aimed at standardization separately so far. But it seems that the organization will look for specific objects of standardization for the regional standards in the future. Currently, an expert group (EG), which is affiliated to the ASTAP, is in charge of information sharing regarding the cooperation among countries, which is focused on information and communication technology and services.

Currently, the vice president and most of reporters in the ASTAP and Japanese or Korean, so that we may say the two countries are taking the initiative in the activities of ASTAP. It may be assumed that Japan is trying to exercise its influence on the stage of international standardization by using the representability of the consultative group in the Asia-Pacific region. In order to overcome numerical inferiority as an individual country on the stage of international standardization activities, Japan is using a diversion strategy in which Japan submits standardization scripts directly to the ITU or other

organization, and at the same time the country submits scripts indirectly through the ASTAP which plays a role as a standardization group among the Asia-Pacific countries. Recently, Korea has begun to use the similar strategy, using the ASTAP as a diversion strategy to make domestic technologies enter into the Southeast countries, or submit standardization scripts to the international organizations.

3.4.2.2. Strategic utilization of ASTAP

As mentioned above, Japan is reflecting its own position effectively in the international standardization activities through the media, the ASTAP, so that we may think Korea with smaller bargaining power can use the same means efficiently. Though the roundabout approach takes additional time to gather local forces, it may be considered to be an effective method when dealing with significant matter. Therefore, it seems that we need to recommend relevant domestic industries and research institutes to participate in the ASTAP through various publicity programs.

The ASTAP is a counter organization of the ITU-T and admitted in the APT, so that it is easy to use the domestic opinions related to ITU-T indirectly. Especially, the ITU-T Issue Group takes charge of policies and strategic issues, and also it coordinates the positions of parties within the region regarding standardization-related matters such as ITU PP and WTSA, including development of joint script. In addition, a domestic expert has the chairmanship, so that the value of practical use can be valued highly. In order to reflect the domestic opinions as much as possible in the WTSA in 2008, we need to utilize the ASAP and ITU-T Issue Group in a strategic manner.

4. Conclusion

After all the comparisons and analyses, it was concluded that countries or organisations must strategically and prudently decide in which regional SDOs they want to participate. Be it standards establishment in case of ETSI or regional collaboration in case of ASTAP, they should at first determine how to take advantage of these SDOs for the benefit of their own. It should also be emphasised that SDOs should benchmark other SDOs if necessary. For instance, if ETSI wants to intensify its efforts to bridge economic and standardisation gap between member countries, it is recommended that it study the activities of ASTAP's Working Group (WG) on Bridging the Standardisation Gap (BSG) to promote initiatives and cooperation. At the same time, if ASTAP wants to start focusing more on standards establishment, it may adapt ETSI's systematic Standards Making Process (SMP), deliverables and so forth. Lastly, it was emphasised along with international SDOs such as ITU and ISO, regional SDOs are recommended to eagerly cooperate with each other to harmonise, integrate, and support the works of their regional members in order to contribute to global standardisation activities.

5. Acknowledgement

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