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Contribution to the Second Meeting of the Internet Governance Forum

Overview of Some Relevant ITU Activities

1. Introduction

Certain ongoing ITU activities and work programmes appear relevant to the themes that are planned for discussion at the second meeting of the Internet Governance Forum (IGF).

Paragraph 71 in the Tunis Agenda calls for a "...process towards enhanced cooperation, to be started by the UN Secretary-General, involving all relevant organisations by the end of the first quarter of 2006, will involve all stakeholders in their respective roles, will proceed as quickly as possible consistent with legal process, and will be responsive to innovation. Relevant organisations should commence a process towards enhanced cooperation involving all stakeholders, proceeding as quickly as possible and responsive to innovation. The same relevant organisations shall be requested to provide annual performance reports."

In recognition of the convergence taking place between telecommunications and IP-based networks, including the Internet, particularly through the development of Voice over Internet Protocol services (VoIP) and Next-Generation Networks (NGN), ITU Resolution 101 resolves that ITU shall clearly identify the range of Internet-related issues that fall within its responsibility, collaborate with other relevant organizations to maximize the benefits of IP-based networks and continue to study international Internet connectivity as an urgent matter, as called for in the Tunis Agenda for the Information Society.

More specifically in relation to the results of the WSIS, ITU Resolution 102 on ITU's role with regard to international public policy issues pertaining to the Internet and the management of Internet resources, including domain names and addresses instructs the [ITU Secretary-General](#) to continue to take a significant role in international discussions and initiatives related to the management of Internet names, addresses and other resources, and to take the steps necessary for ITU to continue to play a facilitating role in the coordination of international public policy issues pertaining to the Internet, as expressed in § 35 d) of the Tunis Agenda for the Information Society. This Resolution also instructs the Directors of the Telecommunications Standardization Bureau (TSB) and Telecommunication Development Bureau (BDT) to support these actions.

The ITU Plenipotentiary Conference 2006 also updated ITU Resolution 130 on strengthening the role of ITU in building confidence and security in the use of information and communication technologies to reflect the priority that WSIS gave to this issue and the leadership role that should be played by ITU in the implementation of WSIS Action Line C5. ITU Resolution 133 on the Role of administrations of Member States in the management of internationalized (multilingual) domain names instructs the Secretary-General and the Directors of the Bureaux to take an active part in all international

discussions, initiatives and activities on the deployment and management of internationalized domain names, in cooperation with relevant organizations.

Drawn from a recently endorsed ITU Council Document and other sources, this document provides an overview of some of these ITU activities, as a complement to the other contributions submitted to the IGF.

2. Activities related to Internet-Protocol (IP) Networks and the Development of Next-Generation Networks (NGN), including Policy and Regulatory Challenges

2.1 ITU's activities, policies and strategic direction are determined and shaped by its Member States and the interests of the ICT industrial sectors it serves. The transition to IP-based technologies is now a key strategic element in the design, development and use of the world's telecommunication networks. This transition has, and continues to shape ITU's work programmes in its radiocommunication, standardization and development activities.

2.2 Specifically, substantial investments are being made by operators and equipment manufacturers in what are often referred to as IP-Enabled Next Generation Networks (NGN). IP enabled NGNs can be seen as a logical progression from separate Public Switched Telephone Network (PSTN), mobile and IP-network infrastructures to unified networks for electronic communications based on IP. The fundamental difference between NGNs and today's data and PSTN networks is the shift towards a converged, packet-switched multi-service platform. IP enabled NGN is already being deployed by numerous service providers around the globe.

2.3 In order to address the market needs for NGN standards and to produce global standards for NGN, intensive and effective study has been carried out since 2003 and is carrying forward by the NGN-Global Standards Initiative (NGN-GSI) of ITU Telecommunication Standardization Sector (ITU-T), which encompasses all NGN work across ITU-T Study Groups. ITU-T activities are related to the establishment of architectures, interface specifications, and implementation guidelines in the form of ITU-T standards (Recommendations) for the realization of NGN. Major focuses of ITU-T NGN study include: evolution of networks to NGN, QoS (Quality of Service), interoperability, security, generalized mobility, service capabilities and architecture.

2.4 In order to facilitate the planning and coordination of ITU-T NGN work, ITU-T Study Group 13 developed a Release plan for ITU-T NGN Recommendations indicating where work is being or will be done, and by when. Further, a web-based NGN Project Management Tool was setup to provide an overview of the NGN work going on across the standardization world. Essentially, it acts as a repository of NGN information from ITU and other SDOs. A key feature of the tool is the ability to track work progress and view the latest versions of documents.

2.5 ITU-T organized a number of workshop and seminars, some jointly with ITU Telecommunication Development Sector (ITU-D), to progress existing NGN work areas and to explore new ones. The events cover a wide array of topics and attracted high-ranking experts as speakers, and attendees from engineers to high-level management from all industry sectors. More information about these events and presentations could be found at:

- ITU-T Workshop on Digital Identity for NGN, Geneva, 05 December 2006
- ITU-T/OGF Workshop on NGN and Grids, Geneva, 23-24 October 2006
- ITU-T/ITU-D Workshop "Standardization and Development of Next Generation Networks", Dar es Salam, Tanzania, 3-5 October 2006
- Workshop "Next Generation Network", Hanoi, Viet Nam, 15-16 May 2006
- ITU-T Workshop on NGN and its Transport Networks, Kobe, Japan, 20 to 21 April 2006

- Workshop on Next Generation Network Technology and Standardization, Las Vegas, USA, 19 -20 March 2006.

2.6 As IP-enabled NGNs are deployed around the world and used to provide critical public services, a number of issues arise regarding the applicability of laws and policies originally developed for services offered over circuit-switched networks to these new services. Examples include legal and regulatory provisions for public safety needs, disability assistance, law enforcement support (e.g., legal interception), competition considerations, fraud prevention, and prioritization during emergencies, privacy and data protection, and consumer protection against unwanted intrusions. Identification of these requirements can also help focus on those areas where international cooperation or standardization may be appropriate or needed.

2.7 As an example of specific ITU contributions in this area, ITU-D with infoDev are jointly developing the ICT Regulation Toolkit, an online resource for regulators and policy-makers in developing countries that contains a series of modules on key regulatory issues. The New Technologies module, for example, focuses on regulatory and policy challenges, as well as the opportunities that IP networks offer. The Competition, Interconnection and Pricing Module contains an in-depth discussion of the impact of VoIP on regulatory practices, and the Legal and Institutional Framework module includes a detailed discussion of the impact of convergence on licensing and the organizational structure of regulatory bodies. This free online resource is available at:

- <http://www.ictregulationtoolkit.org>

2.8 Another example of ITU's work in this area is fostering discussion on the policy and regulatory challenges of Next-Generation Networks. The 7th annual Global Symposium for Regulators (GSR) was held in Dubai, United Arab Emirates, in February 2007 under the theme of "The Road To Next-Generation Networks (NGN): Can Regulators Promote Investment And Achieve Open Access?". Seven discussion papers on a range of NGN-related regulatory issues were presented at the 2007 GSR, and a set of best practice guidelines on NGN regulation was agreed by the meeting. The GSR Discussion Papers and best practice guidelines can be found at:

- http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR07/Chairmansreport_final.pdf

Following a period for open comments, the GSR Discussion Papers, together with additional chapters on NGN technology and an ICT market and regulatory overview will be published in the 2007 edition of ITU Trends in Telecommunication Reform at:

- <http://www.itu.int/pub/D-REG-TTR.9-2007>

2.9 In accordance with ITU Resolutions 101 and 102 and within the framework of the World Telecommunications Development Conference (WTDC) 2006 decisions, a number of projects of the ITU-D have been implemented or are underway integrating IP-based applications and value-added services in the development of telecommunication networks, including, inter-alia:

2.9.1 E-Government projects were implemented in Cameroon, Kyrgyz Republic and Rwanda in 2006 in cooperation with the European Commission. One objective of these projects is to improve transparency and efficiency through the integration of IP-based applications and value-added services for governments, including, for example, secure email services to high-ranking officers such as Ministers and Directors, e-Forms/e-services for immigration and emigration, online requirements and administrative forms for visas, passports and work permit applications, as well as support for government web portals, public Internet access sites, etc. More information can be found at:

- <http://www.itu.int/ITU-D/e-strategies/e-applications/E-government/index.html>

2.9.2 A Regional Seminar on Internet Protocol and VoIP was held in Algiers, Algeria, on 19 - 20 March 2007. More than 200 participants from 20 Arab States attended the seminar. The seminar examined the regulatory, technical, operational and economical aspects of VoIP. More information is available at:

- <http://www.ituarabic.org/2007/IP-VOIP/>

2.9.3 An Arab States regional seminar on NGN Interconnection was held in conjunction with a joint ITU-T/ITU-D Seminar on Standardization and Development of Next-Generation Networks in Bahrain from 29 April – 3 May. More information is available at:

- <http://www.itu.int/ITU-D/treg/Events/Seminars/2007/Bahrain/index.html>

2.9.4 Several ITU-D Study Groups are dealing with IP-related issues (e.g., Question 6-2/1 on NGN Interconnection and Question 19-1/1 dealing with implementation of IP telephony in developing countries). More information on the Questions under study is available at:

- http://www.itu.int/ITU-D/study_groups/SGP_2006-2010/SG1/SG1Quest.html

3. Internationalized Domain Names

3.1 Although the majority of Internet users are now non-native English speakers, certain components of the Internet remain English-centric, creating barriers to access. One barrier is the lack of internationalized capability within the Internet Domain Name System (DNS). The deployment of Internationalized Domain Names (IDN) raises a number of issues including technical and interoperability issues, administrative arrangements (particularly for internationalized top level domains), intellectual property, dispute resolution and cultural and/or social issues. ITU-T Study Group 17 identified the fundamental documentation relevant to IDN at:

- <http://www.itu.int/ITU-T/studygroups/com17/idn/documents.html>

3.2 In line with the WSIS Action Lines C2, C3 and C8, ITU and UNESCO jointly organized a Global Symposium on Promoting the Multilingual Internet from 9-11 May 2006. Information on the event is available at:

- <http://www.itu.int/ITU-T/worksem/multilingual/index.html>

3.3 ITU-D organized a Regional Workshop on IP Strategies and IDN Issues for the Arab States, in Damascus, Syria, from 16-18 May 2006. Full information, including the recommendations agreed at the workshop, can be found at:

- <http://www.ituarabic.org/2006/IPS-IDN/index.htm>

3.4 ITU-T Study Group 17 (Question 16/17) prepared a questionnaire on the use and experiences of IDN. This was sent to the membership and 26 responses were received by December 2006. A synthesis of the results of the questionnaire can be found at:

- <http://www.itu.int/ITU-T/secured/studygroups/com17/idn/synthesis.doc>

ITU-T Study Group 17 (Question 16/17) has established liaison relationships with other organizations involved in IDN-related activities (including IETF, IAB, ISO/IEC, ICANN, CENTR and UNESCO) and has contributed actively to the Internet Governance Forum (IGF), Internet Corporation for Assigned Names and Numbers (ICANN) ccTLD workshop and several CENTR conferences.

4. ENUM

4.1 ENUM continues to merit close attention by ITU Member States, due to its potential impact on national policy, regulatory and/or legislative frameworks with regard to numbering resources. The following materials are available:

- Reports on ENUM trial activities within Member States - <http://www.itu.int/ITU-T/inr/enum/trials.html>;
- Approved ENUM Delegations - <http://www.itu.int/itudoc/itu-t/enum/enum-app.html>;
- General information on ENUM, including a tutorial paper - <http://www.itu.int/ITU-T/inr/enum/>
- Recent news and reference materials related to ENUM - <http://www.itu.int/osg/csd/enum>

5. Management of domain names and addresses

5.1 A project plan is currently underway for assisting Somalia to establish a working country code Top Level Domain (ccTLD), including the elaboration of policy issues to be considered for both the start-up phase and future ongoing management of the .so ccTLD.

5.2 The ITU-T continues its participation in the ICANN Technical Liaison Group, of which it is a member. Consistent with its status as observer ITU has participated in ICANN's Governmental Advisory Committee (GAC).

5.3 In July 2006, the US National Telecommunications and Information Administration (NTIA) of the US Department of Commerce (DoC) sought comments on the continuation of the transition of the technical coordination and management of the Internet domain name and address system (Internet DNS) to the private sector - see:

- http://www.ntia.doc.gov/ntiahome/frnotices/2006/NOI_DNS_Transition_0506.htm

5.4 The comment submitted by the TSB Director in response to this request can be found at:

- http://www.ntia.doc.gov/ntiahome/domainname/dnstransition/comments/dnstrans_comment0058.htm

5.5 On 14 August 2006, NTIA renewed its contract with ICANN for the operation of the Internet Assigned Names Authority (IANA) for one year, with four options for subsequent annual renewals. The contract can be found at:

- <http://www.icann.org/general/iana-contract-14aug06.pdf>

5.5.1 Appendix A of this contract specifies the process for IANA root management requests (i.e., changes to the domain name system root zone file). On page 28, it states:

- "Within thirty (30) calendar days of the date that the request was deemed completed and confirmed, Contractor [ICANN] shall complete all processing and issue a report with a recommendation to the U.S. Department of Commerce regarding whether the proposed changes should be authorized."

The contract with annual optional renewals until September 2011 and the specific contractual requirement above is consistent with US policy statements to the effect that (a) the "United States will continue to provide oversight so that ICANN maintains its focus and meets its core technical mission" and (b) that it "will therefore maintain its historic role in authorizing changes or modifications to the authoritative root zone file".

5.6 On 30 September 2006, NTIA and ICANN signed a joint agreement, replacing the previous Memorandum of Understanding (MoU) between them. The changes with respect to the previous MoU can be found at:

- http://www.ntia.doc.gov/ntiahome/domainname/agreements/jpa/ICANNJPA_09292006.htm

5.7 On 30 November 2006, NTIA approved the new registry agreement for ".com". The agreement was negotiated between ICANN and VeriSign as part of a settlement of litigation over terms of the existing contract, and submitted to DoC for approval. DoC retains its right to review the ".com" domain name registry agreement as part of the continuing transition of the Internet domain name and address system to the private-sector. The text of the approved agreement can be found at:

- http://www.ntia.doc.gov/ntiahome/domainname/agreements/amend30_11292006.pdf

5.8 On 29 March 2007, the ITU Secretary-General initiated a consultation, pursuant to Resolution 102, on ITU's role with regard to international public policy issues pertaining to the Internet and the management of Internet resources, including domain names and addresses. Full information can be found at:

- <http://www.itu.int/osg/csd/mina/consultations/survey.html>

6. IPv6

6.1 Discussions on the issue of IPv6 address allocation took place at the 3-11 May 2006 ITU-T Study Group 2 meeting.

6.2 On 11 September 2006, ICANN announced that it had approved the RIR (Regional Internet Registry) proposals concerning the allocation of IPv6 address space policies, which can be found at:

- <http://www.icann.org/policies/proposed-ipv6-policy-14jul06.htm>

6.3 In July 2006, pursuant to ITU-T Recommendation A.4, the Director of TSB established a liaison relation with the Number Resource Organization (NRO), an entity comprised of the Regional Internet Registries (RIRs).

6.4 At the ITU-T Study Group 2 meeting from 30 January-8 February 2007, there were contributions regarding IPv6 and enhanced cooperation in the context of ITU Plenipotentiary Resolution 102 and a discussion of the topic took place. While there was general support for enhancing cooperation, in particular between ITU-T Study Group 2 and the RIRs, and for further exchange of information between them, divergent views were expressed with respect to specific mechanisms for enhanced cooperation.

6.5 ITU-T Study Group 13 has a Question (9/13) working on Impact of IPV6 to an NGN. They have four Recommendations in progress that should be completed by January 2008. These are:

- Y.ipv6-NGN, Service requirements and functional capabilities of IPv6-based NGN
- Y.ipv6sig, Signalling for QoS in NGN using IPv6
- Y.ipv6multi, Framework of IPv6 multi-homing for NGN
- Y.ipv6transit, Framework of IPv6 multi-homing for NGN.

7. Management of Top Level Domain “.int”

7.1 ITU-T Recommendation E.910, Procedures for registering within the domain “.int”, was transmitted to the Internet Assigned Names Authority (IANA) and to ICANN. The reply from ICANN and a subsequent letter from the Director of TSB to ICANN can be found at:

- <http://www.itu.int/md/T05-SG02-070130-TD-GEN-0231/en>
- <http://www.itu.int/md/meetingdoc.asp?type=mitems&lang=e&parent=T05-SG02-060503-TD-GEN-0187>

7.2 In response to a query from the International Electrotechnical Committee (IEC), the Director of TSB wrote to ICANN on 26 March 2007, requesting information with respect to the status of consultations within ICANN regarding the implementation of appropriate provisions of E.910 and how long these consultations might last. The letter from the Director, and the query from IEC, can be found at:

- <http://www.itu.int/md/T05-SG02-071030-TD-WP1-0148/en>

8. Protection of Country Names and Names for Intergovernmental Organizations

8.1 On 13 March 2006, the President of ICANN wrote to the Chairman of GAC, suggesting that a solution could be found to implement the WIPO-2 recommendations with respect to the protection of names for Intergovernmental Organizations (IGOs), but not, at present, with respect to protection of country names, see:

- <http://www.icann.org/correspondence/twomey-to-tarmizi-13mar06.pdf>

8.2 On 15 June 2006, the Chairman of GAC replied to the President of ICANN. This reply can be found at:

- <http://www.icann.org/correspondence/tarmizi-to-twomey-15jun06.pdf>

8.3 An ICANN report issued on 15 June 2007 outlines the issues and makes some recommendations on steps that could be taken to address these issues. This report can be found at:

- <http://gnso.icann.org/issues/igo-names/issues-report-igo-drp-15jun07.pdf>

9. Internet Governance Forum

9.1 As requested by the § 72 of the Tunis Agenda for the Information Society, the Secretary-General of the United Nations established the Internet Governance Forum (IGF). For more information, see:

- <http://www.intgovforum.org/>

9.2 The Secretariat presented a series of information papers to the first meeting of the IGF, held on 30 October-2 November 2006, in Athens, Greece. These papers can be found at:

- http://www.intgovforum.org/contributions_for_1st_IGF.htm

9.3 In its open consultation meetings on 23 May 2007 in Geneva as part of the cluster of WSIS-related events for implementation and follow-up, the IGF discussed the programme and agenda for its second meeting, to be held in Rio de Janeiro on 12 - 15 November 2007.

9.4 Additional information related to Internet governance can be found at:

- <http://www.itu.int/osg/csd/intgov/>
- <http://www.itu.int/ITU-T/tsb-director/itut-wsis/index.html>

9.5 ITU has reserved a 90-minute session as one of the Open Forums, where it will present its activities and initiatives in Cybersecurity. The ITU Open Forum in Rio will be open to all interested stakeholders, and it will be an opportunity for them to join our efforts in a framework for international cooperation. The proposal can be found at:

- http://www.intgovforum.org/OF_ITU.html

9.6 On 29 June 2007, ITU submitted a proposal for a Thematic Workshop within the framework of the 2nd IGF under the theme "Diversity" - "Access for marginalized and vulnerable groups of society, including older persons and persons with disabilities." The proposal can be found at:

- <http://info.intgovforum.org/yoppy.php?poj=40>

10. Cybersecurity and Countering Spam Activities

10.1 The WSIS recognized the real and significant risks posed by inadequate Cybersecurity and the proliferation of Cybercrime and entrusted the ITU to facilitate the implementation of WSIS Action Line C5, "Building confidence and security in the use of ICTs". In accordance with its mandate and as one of the seven strategic orientations and goals defined by the Plenipotentiary Conference, the ITU Secretary-General launched the Global Cybersecurity Agenda (GCA) on 17 May 2007. Based on five pillars and seven objectives, the GCA is a multi-stakeholder initiative that will promote the goals in the fight against cybercrime and increase levels of confidence and security in the information society. It is based on international cooperation, and will engage all relevant stakeholders in a concerted effort to build security and confidence in the information society. Within ITU, the GCA will complement ITU work programmes by facilitating the implementation of ITU-D, ITU-T and ITU-R activities in this domain in a framework of international cooperation where global issues are addressed, drawing on all recognized sources of expertise.

Further information can be found at:

- <http://www.itu.int/osg/csd/cybersecurity/gca/index.phtml>

10.2 The 2nd WSIS Action Line C5 facilitation meeting was held on 14-15 May 2007 at ITU Headquarters in Geneva, Switzerland. The Meeting was open to all stakeholders and held in conjunction with a cluster of WSIS-related events between 14-25 May

surrounding World Telecommunication and Information Society Day (May 17th). Further information can be found at:

- <http://www.itu.int/osg/csd/cybersecurity/pgc/2007/events/index.phtml>

10.3 ITU has developed an online tool to track crucial ICT security standards and related work through a single access point. For the first time, ICT security vendors, service providers, developers, researchers and the public can have access to security standards through one common user interface. The guide, called the ICT Security Standards Roadmap, presents a wealth of information about existing standards and work in progress by the world's key standards developers. It is a collaborative effort between ITU, the European Network and Security Information Agency (ENISA) and the Network and Information Security Steering Group (NISSG). Further information can be found at:

- <http://www.itu.int/ITU-T/studygroups/com17/ict/>

10.4 In conjunction with the 2006 World Telecommunication Day (May 17), whose theme for 2007 was "Promoting Global Cybersecurity", ITU-D, ITU-T and the ITU General Secretariat have cooperated to launch a new portal for cybersecurity at:

- <http://www.itu.int/cybersecurity/index.html>

10.5 In line with Resolution 45 of the World Telecommunication Development Conference (WTDC), a workshop on Mechanisms for Cooperation on Cybersecurity and Combating Spam was held on 30 August-1 September 2006 in Geneva. Further information and the output of the workshop can be found at:

- <http://www.itu.int/ITU-D/e-strategies/Cybersecurity/Meetings/Geneva2006/index.html>

The meeting output called for the implementation of a Project for enhancing cooperation on Cybersecurity and combating spam, which was later endorsed in Resolution 130.

ITU-D activities related to cybersecurity can be found through the ICT Applications and Cybersecurity Division's website at:

- <http://www.itu.int/ITU-D/cyb/>

10.6 In response to a liaison request from Study Group 17 requesting a definition of spam, ITU-T Study Group 2 agreed a reply at its 3-11 May 2006 meeting, which provides guideline characterizations of spam, but no single definition.

10.7 Study Group 17 initiated the approval for ITU-T Recommendation X.1205, Overview of cybersecurity. This work provides a definition of cybersecurity and identifies common threats that users are faced with, as well as technical solutions and/or best practices to counter-act.

10.8 With regard to countering spam, ITU-T Study Group 17 (Study Group 17) Question 17/17 continues its work on seven draft Recommendations on technical means for countering spam, including email and IP multimedia spam. Work in Question 17/17 currently focuses on aspects of requirements, guidelines, technical frameworks and interactive countering spam gateway systems as one of the technical means of countering spam. The first set of three Recommendations is planned to be completed by September 2007.

10.9 Digital identity is expected to be a powerful tool for users to access unlimited digital resources through a limited number of trusted relationships, and for providers to offer these resources across different layers of communication systems, administrative domains and even legal boundaries. In this regard, Study Group 17 has established a Focus Group on identity management to develop a more consistent approach to tackle the conflicting requirements of privacy, identification and security. Further information can be found at:

- <http://www.itu.int/ITU-T/studygroups/com17/fgidm/index.html>

10.10 Additional information on ITU-T work related to cybersecurity can be found at:

- The ITU-T Manual on “Security in Telecommunications and Information Technology”, <http://itu.int/pub/T-HDB-SEC.03-2006> for the electronic version.
- Webpage of Study Group 17 as the lead Study Group on telecommunication security, <http://itu.int/ITU-T/studygroups/com17/tel-security.html>
- Security Compendium including a “Catalogue of approved ITU-T Recommendations related to telecommunication security”, http://itu.int/dms_pub/itu-t/oth/OA/OD/T0A0D0000090001MSWE.doc, and an “Extract of ITU-T approved security definitions”, available at <http://itu.int/ITU-T/studygroups/com17/tel-security.html>
- Latest draft of Summaries of all Study Group 17 Recommendations under development or revision, http://itu.int/ITU-T/studygroups/com17/SG_17final-summaries.doc
- A document titled “Security guidance for ITU-T Recommendations” to help study groups to review Recommendations to ensure security considerations have been adequately addressed - <http://itu.int/ITU-T/studygroups/com17/tel-security.html>

11. Internet Exchange Points (IXPs)

11.1 An ongoing regional initiative seeks to establish and promote Internet exchange points in the Arab States and to formulate recommendations on the harmonization of Internet exchange points on a regional level with a feasibility study of the implementation of related projects.