Council for Trade-Related Aspects of Intellectual Property Rights

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ITEM 12 INTELLECTUAL PROPERTY AND INNOVATION: INNOVATION INCUBATORS

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AGENDA ITEM 12: INTELLECTUAL PROPERTY AND INNOVATION: INNOVATION INCUBATORS

12.1 Chinese Taipei

249. The Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu is pleased to join the United States in sponsoring this agenda item. We also very much welcome contributions from other Members on this subject.

250. I would like to firstly explain very briefly the background to our Business Start-Up and Incubation Policy, then describe the aims and objectives of our Incubation Centre Programme, and finally share with you in more detail, as an example, our experiences with one of our particularly successful, and long-running, Innovation Incubators – the Nankang Software Incubator.

251. Being a developing Member ourselves, we have always recognized the crucial importance of small and medium enterprises (SMEs) to our economic and social development. The SMEs sector accounts for a major share of our production output and the total value of our exports. It is a key factor, in terms of both numbers of employees, and the numbers of enterprises as well.

252. In this new era of the "knowledge-based economy" and the challenges of global markets and heightened competition, we realize the growing importance of innovation and entrepreneurship. There is an urgent need to create a high-quality environment in which promising, early-stage start-ups can be identified, introduced to "investor angels" and taught how to benefit from regional industrial resources and to build up a comprehensive support network.

253. This is why we launched the "Start-up Taiwan Programme" in 2012, with the specific aims of further refining the incubation process and speeding up the achievement of excellence. In this context, one of the key elements of this latest Programme is the comprehensive "one-stop shopping" service for SMEs. Many new Incubation Centres have been established in order to provide a wide range of resources in an efficient and integrated manner to help SMEs upgrade and transform themselves. For example, they provide office space, access to equipment, R&D technology and funding, IP innovation, protection and management consultancy, and so on. Thus, the costs and risks that are often impossible for a new business to bear in its early start-up stages are significantly reduced.

254. For more than a decade, we have been working with other government agencies, research institutions, universities and the private sector to implement over 130 Innovation Incubators in 20 different regions and cities across the country. By the end of 2012, these Centres had successfully cultivated some 5,620 SMEs, created almost 99,000 jobs, and secured 3,300 patents and 1,559 technology transfers. 51 of the firms raised in Incubation Centres had secured stock-market or OTC listings.

255. One of the most successful of incubators over the years has been the Nankang Software Incubator (NSI). The NSI utilizes the accumulated experience and resources in technology development - market intelligence, science and technology law, industry promotion, professional talent training, etc. - to nurture emerging new companies with advanced technology and market development potential in applications such as multimedia (digital content), embedded systems, network communications, e-Business, science and technology services. The NSI also involves existing software companies in the transition of upgrading, thus helping to create the industry's future shining stars. It even provides help to related enterprises with fast orientation, facility support, on-site consultancy, sourcing and marketing, networking and project collaboration. And, needless to say, the NSI constantly supports the growth of SMEs, helping them to expand their international networks and to adopt best practices from around the world.

256. In recognition of its effectiveness, the NSI not only won the Incubator of the Year Award for 2013 from the Asian Association of Business Incubation, but it was also presented with the Soft-Landing Certificate by the National Business Incubation Association (NBIA), the world’s leading organization for the advancement of business incubation and entrepreneurship.
One of the NSI's greatest success stories is Armorize. This enterprise, carefully nurtured in the NSI since 2005, has become one of the leading developers of cloud-based anti-malware products in its field. Its main product is HackAlert Suite Cloud, which offers a scalable cloud-based platform to protect businesses from sophisticated attacks from Advanced Persistent Threats (APTs) on the internet.

As a result of its effective creativity and innovation, Armorize was acquired by the NASDAQ-listed company Proofpoint, a leading service provider on cloud-based solutions for anti-malware in 2013. Without NSI, the innovation incubator, how can a baby, Armorize, become a shining star.

In conclusion, a tribute to the success of the NSI, which also goes to show that business start-ups and incubation are probably the most important factors in today's commercial world that is constantly striving for innovation and sustainable development.

We very much look forward to hearing from other delegations about current policies in this regard, and learning from the successes and experiences of their incubation centre programmes.

12.2 United States

We are grateful for the introduction and co-sponsorship of this item on innovation incubators by Chinese Taipei, as well as other co-sponsors whose interventions are welcome. In suggesting today's agenda item, the United States and Chinese Taipei wanted to build upon previous interventions on Intellectual Property and Innovation, especially the themes of small and medium sized entities and university technology transfer.

We are particularly interested in Chinese Taipei's insightful comments on small and medium-sized enterprises.

Incubators are organizations that provide critical support to entrepreneurs, start-ups and other new entities to assist in their early stages of development. The support incubators provide include assistance in securing financing, developing and implementing a business plan, finding partners, navigating regulatory issues, commercializing inventions, and securing, protecting and monetizing IPR. Innovation incubators also provide infrastructure, such as office space, information technology support, and even laboratory facilities.

Incubators are part of the enabling environment for innovation. As we focus on IP and the important role it plays in incentivizing innovation and creativity, we have also highlighted the context in which strong IPRs reside, including the larger protective environment that assists fledgling technologies to grow and develop.

According to a recent World Bank report by InfoDev1 support for new innovators is especially needed in the context of business skills.2 Like the technology transfer offices we discussed in February, innovation incubators can help innovators with those business skills.

The first "incubator" was built in Batavia, New York in 1959 by a building owner, who was himself a trendsetter in envisioning a new use for his building. He envisioned a place where inventors, designers and developers could receive mentorship and expert advice, assistance in obtaining financing, learn about and create new technologies, start their own projects, and collaborate on existing ones. Over fifty years later, his prediction has proven to be correct and Innovation Incubators are sheltering and supporting start-ups worldwide, often with considerable success.

Of course, investing in new businesses and new technologies can be risky, and many incubators have a less than 50% success rate. But others, such as the Innovation Hub in South Africa are said to have a success rate of 75 to 81% for companies in South Africa.3

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1 InfoDev is a global multi-donor program in the World Bank Group which "supports growth-oriented entrepreneurs through creative and path-breaking venture enablers."

268. Considering that in the United States small businesses provide 64% of new private-sector jobs, and that of high patenting firms, small businesses produce 16 times more patents per employee than large firms, fostering new businesses is clearly important to the US economy and innovation incubators are one important means of promoting development.

269. In the United States, some innovation incubators are associated with Universities, such as at the University of Michigan-Flint, Harvard's HackLab and Portland University. Others are community based, such as the Innovations Science and Technology Incubator in Chandler, Arizona, as well as the Spark incubator in Ann Arbor, Michigan.

270. And others involve partnerships with a national government entity such as the United States National Science Foundation's Innovation Corps. Some are even a combination, such as the joint Google, Colombia University, and United States Patent and Trademark Office initiative in New York. After reading the article by Ambassador John Kakonge (Kenya) in the April 2014 issue of WIPO magazine, we note that an intellectual property office can also independently provide incubation services, by providing training to inventors and creators on the use of the IP system.

271. Although all of the incubators that I have mentioned have physical locations, an incubator can also be a network. For example, the NSF Innovation Corps (I-Corps) is not a place, but a set of activities and programs that prepare scientists and engineers to extend their focus beyond the laboratory.

272. No matter where these incubators are located they can serve an invaluable function. Too often innovations with the potential to benefit society are undeveloped. These inventions, with guidance from experts and entrepreneurs, can contribute to addressing, if not solving today's challenges.

273. In 2010, the United States Agency for International Development, the National Air and Space Agency, the US Department of State, and NIKE joined together to form LAUNCH in an effort to identify, showcase and support innovative approaches to global sustainability challenges in both developing and developed countries.

274. Each year LAUNCH searches for ten innovations with the potential to have a significant impact in solving today's challenges, and creates a cross disciplinary network of leaders from business/finance, policy/government, science/technology, engineering/design, media/communications, and other areas to serve as a mentor group.

275. A LAUNCH Forum is then convened to bring together the innovators and the network of leaders, to discuss the innovators' most pressing business and program challenges. Finally, following the forum, the LAUNCH Accelerator provides individually targeted strategic support to each innovator to help integrate LAUNCH forum recommendations and action items, and move each innovation to successful implementation.

276. In April 2014, USAID began an even more ambitious project, the U.S. Global Development Lab, a new entity is a new entity within USAID "that seeks to increase the application of research, science, technology, innovation and partnerships to achieve, sustain and extend the Agency's development impact to help hundreds of millions of people lift themselves out of extreme poverty." Expanding upon and including LAUNCH and NEXUS which is another U.S. incubator program, the Global Development Lab will bring together a diverse set of partners to discover, incubate and scale breakthrough innovations in areas such as water, maternal and child health, food security

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5 http://www.umflint.edu/outreach/innovation-incubator
6 http://www.pdx.edu/impactentrepreneurs/incubator
7 http://www.annarborusa.org/start-here/incubator-network/incubator-faqs
9 http://www.nydailynews.com/new-york/google-cornell-innovation-campus-opens-article-1.1173034
and nutrition, energy, education and financial inclusion. To do this, USAID is planning to invest more than $146 million in the lab in the 2015 budget.

277. The United States and Chinese Taipei requested the agenda item, because we recognize that we are not alone in incubating innovation. As I mentioned in February, the Government of Botswana has created the Botswana Innovation Hub to attract foreign innovative companies to its market. The Hub is designed not only to mobilize mutually beneficial investment partnerships, but to translate university research into goods and services that benefit the consumers of Botswana.

278. In 2013, the East African virtual incubation pilot\(^\text{10}\) was launched in Nairobi, Kenya, by the World Bank infoDev program I mentioned earlier as well as a consortium of partners from in Kenya, Rwanda, Tanzania, and Uganda led by AfriLabs, a pan-African network of technology hubs. The network includes: m:lab East Africa, a Kenyan mobile incubation center; NaiLab, a Kenyan start-up accelerator; the Technology and Business Incubation Facility, a Rwandan technology incubator; Dar Teknokama Business Incubator, a Tanzanian technology incubator; and the Hive Colab, a Ugandan collaboration, innovation, and incubation space. Unlike many incubators, this pilot will be virtual and offer services to rural communities. We hope to hear more about this work. A similar infoDev program reached over 500 entrepreneurs in Vietnam in one year.

279. Another innovation incubator is the Sultanate of Oman's National Business Center which helps "start-up companies define their ideas and develop their business plan so they can be evaluated."\(^\text{11}\) Once a business plan is developed, an incubator can help find financing, provide mentoring and business advice and provide office or laboratory space.

280. Yet another incubator is the Cape Town, South Africa based, Reconstructed Living Lab (RLabs) which describes itself as a "global movement and registered Social Enterprise that provides innovative solutions to address various complex problems" which provides "an environment for community driven innovation and reconstruction."

281. According to Jonathan Ortmans, President, Public Forum Institute, Brazil’s incubator network “has developed from 136 in 2000 to over 400 today.” He quotes a 2007 Networks Financial Institute working paper to say that "Brazil leads one of the most successful incubation movements in Latin America, with incubator models that are bottom-up, service-oriented, suited to indigenous needs and have universities as their facilitators." The government of Brazil also fosters innovation by providing financing to start ups, and by providing, by law, that federal university professors may take temporary leave to create a startup.

282. For those WTO Members that do not yet have incubators, I commend to you a recent study Incubating Success: Incubation Best Practices that Lead to Successful New Ventures, by the Economic Development Administration of the US Department of Commerce.\(^\text{12}\) This study discusses best practices in incubators, and is a useful reference.

283. Common to all of these examples of innovation incubators is the importance of environments that support, protect and promote innovation. These incubators, like IPR, can play not only a critical catalytic role and but also make the difference between success and failure. They can provide shelter from funding scarcity, potential refuge from theft, and possible safe haven from market realities. Such incubators, particularly when coupled with strong IPR, represent another innovation best practice.

284. In sum, the innovation life cycle is complex and delicate. The TRIPS Council can play a role in identifying and encouraging enabling environments to allow innovators to thrive. Incubation centers are one way to nurture young innovators. As stated by Ambassador Kakonge, "much can be gained by exchanging experiences and views with other emerging economies...where rates of IP use are on the rise." We hope to hear from these delegations today.

\(^\text{10}\) https://www.infodev.org/articles/east-african-virtual-incubation-pilot-launch-nairobi-kenya
\(^\text{11}\) http://www.nbc.om/preincubation/services.aspx
\(^\text{12}\) This study was from the U.S. Department of Commerce, Economic Development Administration, the University of Michigan, the University at Albany, State University of New York, the National Business Incubation Association and Cybergroup. http://www.edaincubatortool.org/pdf/Master%20Report_FINALDownloadPDF.pdf
12.3 Panama

285. For Panama, IP and innovation are of prime importance. This is why our country boasts the National Secretariat of Science, Technology and Innovation (SENACYT), an autonomous institution created by Law No. 13 of 15 April 1997 and subsequently modified by Law No. 50 of 21 December 2005, which granted it autonomy in its administrative tasks. The Secretariat's work is underpinned by the guidelines established in the National Strategic Plan for Science, Technology and Innovation (PENCYT) 2010-2014. All SENACYT's activities, projects and programmes are aimed at strengthening, supporting, influencing and promoting the development of science, technology and innovation with a view to raising the level of productivity, competitiveness and modernization in the private, government and academic research sectors and in the population at large. SENACYT encourages business sector participation and investment in projects which generate products, processes and services.

286. In addition to SENACYT, Panama houses the City of Knowledge, which is a private initiative and knowledge management platform focused on boosting the innovative and competitive capacities of the users who share the Campus. In this space, integration, dynamic networking, and joint efforts facilitate the transference of knowledge. This allows for an unusual concentration of innovative firms, international organizations focused on development, and academic and research institutions, resulting in a lively and successfully collaborative community. In order to strengthen these dynamics, the City of Knowledge provides access to a series of benefits and services aimed at the needs of its users.

287. Among its various programmes, the City of Knowledge offers a business acceleration programme known as the Don Alberto Motta business acceleration programme, a regional platform promoting exchange, collaboration and creativity, which together foster innovation. It is also a focal point for resources and initiatives to further the growth and visibility of innovative start-ups with high growth potential on a local and international level. Generally speaking, these types of businesses have limited assets and capital and depend largely on their innovative capacity and human capital to obtain satisfactory results.

288. The City of Knowledge supports these businesses through the City of Knowledge Business Accelerator, which offers five resources to innovative start-ups: (1) the Mentor Programme initiative, in which entrepreneurs are assisted by business people and experienced high-profile executives who give them guidance, support and a sense of empowerment; (2) access to Specialized Knowledge, which enables entrepreneurs to receive expert advice on key business issues, for example tailored advice about registering their innovations to obtain exclusive rights over their use, an area in which IPRs are a very useful tool; (3) access to seed capital, i.e. access to seed funds so that key team members can dedicate themselves to creating prototypes and speeding up the discovery process through trial and error; (4) visibility, achieved by giving entrepreneurs communication mechanisms and meeting spaces to promote their business and attract the attention of international clients, investors, allies and partners; (5) infrastructure opportunities, which enable entrepreneurs to make use of workspaces in the City of Knowledge, where they can stay in constant contact with other entrepreneurs and professionals.

289. The City of Knowledge will be participating in the next innovation fair, which will take place next October during the meeting of this Council. We therefore hope that delegations will show an interest in learning more about Panama's successful innovation incubator model.

290. Lastly, we would like to thank the delegations of the United States and Chinese Taipei for including this item on the agenda, and to state that we would be glad to appear as its co-sponsors.

12.4 Hong Kong, China

291. We would like to thank Chinese Taipei and the United States for adding this item and their introduction. Hong Kong, China welcomes the opportunity to share our experience and learn from the best practices of others.

292. Innovation is a key enabling element for the betterment of people's lives. It contributes to the enhancement of quality of life, creation of business and employment opportunities, and facilitation of commercial transactions. Hong Kong is therefore mindful of the importance of
fostering an innovative culture in society and promoting technological entrepreneurship. With a view to supporting innovation and technology start-ups, the Hong Kong government has been facilitating the provision of structured support for them.

293. Many would-be-entrepreneurs around the world share a common headache – they have brilliant ideas that have the potential to be transformed into great problem-solvers or multi-billion-dollar businesses. However, they do not have the capital or knowhow to start a commercial venture. In Hong Kong, to address this, the Hong Kong Science Park runs incubation programmes to help technology start-up companies to get on track. Under these programmes, they are provided with subsidised office space and facilities; financial aid; assistance in technology, management, promotion and development; and business support such as investment matching.

294. These incubation programmes have produced very heartening results. Among the 309 graduates, about 75% are still in business. Since April 2003, they have filed more than 730 IP registrations, and have attracted about US$109 million in angel or venture capital investment.

295. To give stellar performers an additional lift, the Hong Kong Science Park launched the Leading Enterprises Acceleration Programme, or LEAP, earlier this year to provide enhanced services for start-ups under incubation or recent graduates that have the potential to achieve a significant business scale. The services include access to well-connected business leaders who can advise on development; access to accounting advice on IPO, M&A and fundraising; subsidies for engaging consultants; access to a panel for financial, taxation and legal advice; and assistance in reaching out to markets outside Hong Kong.

296. In our view, regional and international collaboration is also beneficial to technology start-ups. In a couple of weeks, the Hong Kong Science Park will formally open its Soft Landing Centre with a view to attracting technology transfer offices from renowned universities, and their start-ups and spin-offs, to establish outposts in Hong Kong for collaboration with local and southern China companies. An array of support services will be provided, including office space and facilities; business matching; fundraising; referral to professional services on company set-up; and talent recruitment. The Centre has secured InvestHK and the Consulate General of Israel in Hong Kong as strategic partners. It has also identified other potential partners in Hong Kong, Taiwan and the mainland of China.

297. In addition to the Hong Kong Science Park, the following entities in Hong Kong also provide different forms of assistance and incentives for technology start-ups:

- Hong Kong Cyberport operates the Cyberport Creative Micro Fund Scheme to help start-ups to translate their innovative ideas into prototypes.
- The Office of the Government Chief Information Officer runs "iStartup@HK", an interactive portal which provides useful information on business set-up and serves as a platform for business promotion and outreach to potential investors and venture partners.
- The Innovation and Technology Fund, or ITF, provides funding on a dollar-for-dollar matching basis for start-ups and other SMEs to undertake in-house R&D projects. In the coming year, the government funding ceiling will be nearly doubled, to about US$1.3 million per project. Under new funding terms, the recipient companies will also retain all the IP rights.

298. We certainly have not missed the potential contributions that can be made by academia. From this year, the ITF will provide annual funding of up to about US$3 million for teams from universities in Hong Kong (which may comprise students, professors, alumni or a mix of them) to set up technology businesses and commercialise their R&D outcome.

299. Thanks to the entrepreneurship and the "can-do" spirit of Hong Kong people and companies, we have seen a mushrooming of technology start-ups in recent years. We are very happy that the support measures already in place have played a constructive role. We hope that the new initiatives will make Hong Kong an even better destination for innovators and investors alike.

300. Hong Kong, China looks forward to further opportunities for listening and discussion.
12.5 Japan

301. This delegation would like to express its gratitude to Chinese Taipei and the United States for their efforts in proposing "Intellectual Property and Innovation: innovation incubators" as an agenda item. Japan appreciates this opportunity and wishes to share its view and experiences in this field with other Members so as to create a common understanding of how incubators play an important role in promoting innovation.

302. This delegation recognizes that SMEs and venture companies are engines for innovation, and thus have a key role to play in economic growth both in developing and developed countries. In order for SMEs and venture companies, especially for technology-based companies, to contribute to economic growth by promoting innovation, their achievements that resulted from research and development activities need to be well protected by IP. At the same time, effective utilization of IP is also indispensable for their business development. On the other hand, it is not always feasible or even not possible for SMEs and venture companies to utilize IP effectively on their own. This is the very occasion where innovation incubators play crucial roles.

303. In this regard, this delegation would like to share with Members one successful case, which would deepen Members' understanding on the incubators' role. In this case, Aim-tech, a Japanese venture company, successfully started its business operations with the support of various incubators, and keeps growing through the effective utilization of IP.

304. The founder of this company had an idea to automate gas-leak testing. This idea was based on his years of experiences in his previous gas company. He was convinced that his idea could respond to industry needs, although he had no idea where to start. There were two incubators that led him in the right direction for his future success.

305. First, he consulted a patent licensing advisor, who was sent by the government. He received a wide range of advice on IP, from how to file patent applications up to how to make use of various subsidies in order to acquire a patent for his invention. It became a valuable opportunity for him to recognize the importance of IP and IP strategy in maintaining a competitive advantage over other companies.

306. Then, he visited a local technology foundation to seek some advice. He was not only allowed to make use of research facilities owned by the foundation but also encouraged to have a meeting with a local university who might be interested in his technology. The meeting resulted in an initiation of academy-industry collaboration between his venture company and the university.

307. The significant support from these incubators paved the way for the commercialization of his idea of the gas leak tester. When it comes to IP, the company strategically acquired patents in Japan and abroad for its technologies developed through the collaborative research with the university. More interestingly, Aim-tech was able to obtain a loan from a local financial institution, using its IP as collateral. The financial company was highly impressed by the technological capabilities of the company and the marketability of their patented products. Aim-tech's IP surely is contributing factor toward the further growth of the company, since the financial loan was also utilized to develop new products.

308. In conclusion, this delegation would like to emphasize, once again, that incubators play an important role in terms of facilitating IP-based innovation. In line with this, it should also be noted the crucial role of IP, such as patents, in creating new businesses. This delegation welcomes further share of experiences of and discussions on these issues among Members at this Council and also would like to continue to make active contributions by sharing our views and experiences that we hope are useful to other Members.

12.6 Chile

309. We find it interesting that the topic proposed by Chinese Taipei and the United States on IP and innovation was placed on the agenda, because innovation incubators are in many cases the first and only support that new business ventures receive. We welcome the inclusion of this subject on the agenda.
310. The Chilean State's incubator creation programme began in 2001 with the setting up of four incubators. The Chilean incubator model emerged in the context of universities, so the majority of the incubators in operation are contingent on a place of learning.

311. The creation of a co-financing instrument to establish business incubators in Chile was promoted by the Ministry of the Economy and the Chilean Economic Development Agency (CORFO). It was formally established in 2000 as the outcome of a process of reflection on the role of instruments for setting up and strengthening incubators, which are designed to be executing entities for policies relating primarily to innovation and, secondly, to regional economic development.

312. When this incubator promotion instrument was launched, it called on recipients, universities and technological entities to focus on projects that foster innovative and technological businesses, stressing "the necessity of sharing the initial financial effort and improving links between universities and emerging business sectors", and highlighting "uses of information technology in the areas of electronics, computing and communications" as desirable areas of specialization.

313. There are currently 15 business incubators spread across the country. The CORFO agency INNOVA Chile continues to co-finance the operation through various schemes to which these entities must apply, undertaking to produce quantitative and qualitative results in return.

314. Lastly, in the field of innovation and IP, it is important to note the commitments undertaken by the Chilean Government pursuant to its agenda for productivity, innovation and economic growth, which includes action to create new institutions and/or programmes, or to strengthen existing ones, by supporting business ventures in the early stages, the regionalization of the Start-Up Chile programme, which seeks to attract entrepreneurs from different parts of the world, and other initiatives.

315. We believe it important to encourage a discussion within this Council aimed at exploring alternatives that could strengthen innovation incubators. This should take place with a view to taking concrete steps in this field, such as developing support materials and training seminars for professionals from business incubators. Similarly, we are willing to actively discuss other areas relating to the link between IP and innovation, a topic which we believe is of the greatest relevance to all our countries and this Organization.

12.7 New Zealand

316. We have heard a lot already this afternoon about how incubators can work, so I will limit my comments to some observations about the policy rationale as to why the New Zealand Government is providing further support to encourage technology incubators.

317. High-growth start-up firms play an important role in driving productivity gains, commercialising IP and growing emerging sectors. Often start-ups and other new firms exploit novel opportunities that have been overlooked by more established businesses and in doing so can make an important contribution to economic growth. Robust and predictable IP regimes are an important fundamental for technology start-ups, but IP protection is not enough on its own.

318. The New Zealand Government has been working to explore possible policy tools that can help to reshape New Zealand’s economy and increase economic growth by increasing the number of high growth, technology-based, firms.

319. Start-ups commercialising complex, difficult to replicate, IP that has typically (but not exclusively) been developed in public research organisations face particularly acute barriers. Two key barriers are:

- Access to risk capital: Start-ups commercializing complex IP are often capital intensive, requiring substantial up-front investment to develop their product and business. This is when the risks and uncertainties are the highest, firms are not yet fully 'investor ready' and the period before returns on investment can be realized can be long. This differs from start-ups from creative and services industries which can require little initial funding for commencing operations.
• Entrepreneurial capability: Complex IP based start-ups are a growing New Zealand strength, but our track record is still limited. Consequently, the specialist entrepreneurial and management skills required to successfully establish these start-ups are in short supply.

320. New Zealand has had an Incubator Support Programme in place since 2001, which was designed to address New Zealand's lack of high-growth potential firms by enhancing the survival and growth of these firms via the development of high-quality incubators. This programme has been successful in catalysing founder-focused business incubators which work with entrepreneurs and build on business propositions. New Zealand research institutions are good at developing new ideas and concepts, but we have been far less successful in commercialising complex technologies to the extent seen in other countries.

321. To address this problem, New Zealand has recently launched a new technology incubator programme. This will see incubators established with public and private sector funding, which will work with IP intensive firms to provide capability training that will help these start-ups advance to the 'investor-ready' point. Rather than building a start-up around an entrepreneur, these will create a business around an idea. These technology focused incubators will operate under a market-based, profit-driven focus to establish and nurture businesses based particularly on complex products and technologies, often derived from R&D.

322. The technology incubators will identify suitable IP-based ideas or technologies, and then work to build a business team around the IP. A small amount of pre-incubation funding will also be available to help incubators to establish whether a start-up idea may be commercially viable, which will include steps such as conducting a patent search to establish the freedom for a new firm to operate, having a business plan, but the generation of the IP does not need to have been completed.

323. This new technology incubator model is complementary to other business development tools that support New Zealand's Business Growth Agenda, including elements such as R&D grants, and support for seed or venture investment funds

12.8 Canada

324. Both government-sponsored and private sector innovation incubators serve to help facilitate innovation. Incubators play an important role in the development and promotion of new technologies. There are many benefits from the development of new technologies: not only do they innovate to address or solve an existant problem, but they also serve to increase the knowledge base of innovative products or processes.

325. The innovation development process can lead to many far-reaching benefits such as through the transfer of physical goods or services. The spread of technical and business information and knowledge on which a product, process or service is based and the transfer of skills and know-how. In Canada, a significant proportion of scientific research takes place within multi-disciplinary partnerships and networks formed by researchers and private industry government research institutions and academia.

326. In fact, networks have become a major contributor to the Canadian way of pursuing research excellence. This collaborative approach holds true across all research sectors whatever their focus – aerospace, advanced manufacturing, information and communication, life sciences or resource and environmental technology.

327. The Canadian Digital Media Network is a Canadian federal centre of excellence in commercialization and research. It creates and enables connections and collaboration between entrepreneurs, companies, research institutes, governmental and intermediary organizations. The Canadian Digital Media Network works together as part of an ecosystem throughout Canada and around the world with 28 hubs and partners. The Canadian Digital Media Network proactively started establishing a stronger working relationship with Brazil in response to the bilateral science and technology agreement signed between the two countries.
328. As a result of organised initiatives and events, Canadian and Brazilian companies are now working together leading to richer relationships in an effort to accelerate small and medium-sized company growth and technology transfer between companies.

329. Universities in Canada are working on ways to improve innovation and are addressing this by creating new innovation spaces, programmes and opportunities to increase internships that promote the two-way exchange of ideas. Universities are important entities in the international innovation ecosystem. They help to generate and produce new technologies that increase innovation across all sectors. For example the Association of University Researcher Parks represent 26 research and technology parks across Canada and its mission is to support, champion and advocate on behalf of its parks member in a meaningful way that will result in the growth and development of new and existing Canadian research technology parks and advance the knowledge economy.

330. Finally, we would like to thank the US and Chinese Taipei for adding this item on the agenda for this Council's meeting, and we look forward to pursue a discussion with other Members on IP and innovation at future meetings.

12.9 Switzerland

331. My delegation would like to thank the US and Chinese Taipei for proposing the discussion topic "Innovation incubators" for this Council meeting.

332. We agree with what was said by the two delegations that an enabling environment is important to allow innovators to thrive. We also agree that innovators and start-ups who seek to market their idea or invention face many challenges.

333. There is no shortage of good ideas. The challenge is to turn them into real innovations that can reach the market and potential customers. What is lacking is often very basic knowledge about "how to do things". A minimum of support, basic information and good advice can often decide about whether a start-up undertaking will be undertaken at all, whether it will succeed or fail.

334. Incubator tools can make a difference, even if it is only through providing information and useful contacts through a dedicated internet website.

335. The Swiss Federal Polytechnical School of Lausanne (EPFL) provides an incubator space for innovative, aspiring entrepreneurs. Called "la Forge" (= blacksmith shop, standing for a place where new things get forged). Situated at EPFL's Innovation Park, it provides a co-working space to starting entrepreneurs for an initial period of 6 months to shape their ideas into companies. In this time window, embryonic start-ups can undertake important first steps to shape their ideas into companies, can grow and evolve.

336. "La Forge" opened its doors only last November but today hosts already 16 future companies in fields as diverse as computer science, life sciences and communications. Some make "la Forge" their temporary headquarter, others meet there from time to time with their team while other use it for appointments with potential partners.

337. "La Forge" provides an ideal venue for its residents to interact, share ideas and network. Coaches consult new entrepreneurs on the development of their project, target markets or sample the availability of research and development funds. Informal meetings are regularly organized at "la Forge" with seasoned entrepreneurs, professional investors and other players in the start-up ecosystem. Talking to their peers, whose companies are at the same stage of development, provides insights, follow-up ideas, inspiration and visibility.

338. As mentioned, future start-ups may use the venue for a six month period, renewable once after submitting a progress report. "La Forge" is an example of an innovation incubator, providing young entrepreneurs sufficient time to assess whether the initial spark of their invention can evolve into a concrete project, manages to raise necessary funds to develop a marketable product and advance from there to the next stage of implementing their business plan.
12.10  India

339. We thank the delegations of the United States and Chinese Taipei for tabling an agenda item on "Intellectual Property and Innovation", which we understand is a stand-alone item.

340. Let me just recall our intervention when the agenda item on IP and Innovation was first introduced in the TRIPS Council. Our statement is still relevant when we are discussing the Innovation Incubators under the broad theme of IP and Innovation. In that meeting India pointed out that the word "innovation" appeared just once in the TRIPS Agreement, in Article 7 which states that "IPRs should contribute to the promotion of technological innovation and on the transfer of and dissemination of technology," and not for the sake of innovation itself, but "to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations." Thus the TRIPS Agreement makes it very clear that the purpose of the IP system is not solely to protect the commercial interests of the IP holder but it is one of the many tools available to the society to achieve technological development, its social and economic welfare and innovation. Further, there is no direct correlation between IP and innovation and the countries have to define the path depending on their level of socio economic development.

341. Even today, the view that IP does not necessarily have a positive effect on economic development is still predominant among economists. For instance, based on an analysis of historical studies, Bessen and Meurer (2008) concluded that "nations with patent systems were no more innovative than nations without patent systems. Similarly, nations with longer patent terms were no more innovative than nations with shorter patent terms". According to Boldrin and Levine, "[I]ndeed, historical evidence provides little or no support that innovative monopoly is an effective method of increasing innovation." It is not only economists who have this view; it is shared by a growing sector of business actors. For instance, the Computers and Communications Industry Association (CCIA), whose members include Google and Microsoft, says in its Mission statement, "Innovation – how to foster it, protect it, and benefit from it – requires us to understand the dynamic process that has worked to get us to where we are. We do not think it is an accident that innovation has flourished in a society that values an open, competitive economic marketplace, nor where original independent and free speech are enshrined in law. Therefore, our commitment to vigorous competition, freedom of expression, and openness is a natural product of the understanding of what has helped our industry thrive, and what it needs to continue to do."

342. Further, the World Health Organisation (WHO)'s Consultative Expert Working Group on Research and Development: Financing and Coordination also recommended open approaches to research and development (R&D) and innovation. It found that there is insufficient R&D for diseases that prevail in developing countries and endorsed the adoption of a binding convention that guarantees the results of R&D will be public goods i.e. not subject to appropriation but free for use, to generate medicines needed particularly in developing countries. They also recommended prizes as incentives to innovation, in particular milestone prizes.

343. Chair, since we are discussing about the innovation, let me also refer to the book written by Anna Lee Saxenian: Regional Advantage: Culture and Competition in Silicon Valley and Route 128. The book is a comparative study of the two biggest electronics and ICT innovation centres in the US, viz. the Silicon Valley and Route 128 corridor in Massachusetts, and explains the reasons for the success of the Silicon Valley and failure of the Route 128. The results of the analysis are relevant to the discussion of this agenda item to counter the point being made by the proponents that high level of IP is good for development and innovation. The two innovation clusters commenced together in the 50s with heavy investment from the government and without any market competition. Both developed around the Universities of Stanford and MIT respectively so that the local industry could develop on account of its proximity to these centres of excellence. Both focussed on similar areas of technology.

344. Behind the reason for the success of the Silicon Valley the author gives different reasons. The Silicon Valley evolved a culture of interdependence between the firms with the venture capitalists acting as hubs to ensure synergy between different businesses and services. The Route 128 on the other hand had a culture of independence of the firms with vertical integration. While there was collaboration, openness and informal exchange of information and knowledge between these firms in Silicon Valley, the culture in Route 128 was of closure and secrecy. High job mobility in Silicon Valley that spread new knowledge: moving to another firm was not seen as being
unfaithful but as a common thing. New companies made to develop projects that were not possible in other companies: employees that exited to create startups were not badly considered but instead their previous employer could start to be client or supplier of the new firm. On the other hand, in Route 128 people stayed in the same firm for 20 years or more and employees were seen as traitors if they exited to start their own company. Thus innovation cannot be promoted through the culture of secrecy propounded by the IP regime but through open collaborative models, free exchange of information etc.

345. There is no doubt that the innovation incubators promote the development of new technologies. But their success depends on several factors like infrastructure, resources, level of education, quality of universities and their linkages with industry, quality of manpower etc. We are afraid that by looking at innovation through the narrow prism of IP, we would not only undermine the spirit of innovation amongst the people but would create barriers in providing affordable, low cost and appropriate technologies to the developing countries. Further, the IP-centric model would discourage basic research needed in varied fields of science and would block access to affordable medicines to the millions of poor, hamper the efforts of the developing countries to address environmental issues etc.

346. India strongly believes in innovation and has setup several such incubators in the Universities and Premier technical institutes to promote low cost innovation. The Cluster Innovation Centres, India Innovation Fund, One MP, One Idea etc. under National Innovation Council have been successful in providing innovation to the small and medium industries in different areas. These ideas and centres, based on open source models, have been successful in providing low cost solutions to the industries, farmers, entrepreneurs etc. Even the private companies like Microsoft have set up several such innovation centres to tap the IT skills of the students in India.

347. Let me therefore conclude by saying that there is not direct linkage between IP and innovation. While innovation incubators can deliver depending on individual capacities of the countries, it would be too simplistic to say that IP focussed model can promote innovation incubators.

12.11 Botswana

348. Let me join other delegations in thanking the delegations of Chinese Taipei and the US for introducing the subject of innovation incubators. Botswana is a relative newcomer to this initiative. Botswana Innovation Hub has established as part of the Botswana Excellence Strategy, which proposes a three-prong national strategy, the goal being economic diversification, job creation and moving the country towards a knowledge-based economy. Botswana Innovation Hub was incorporated as a company to develop and operate Botswana's first science and technology park. The company is mandated to support new ventures in existing companies as well as attract companies, universities, research and advanced training institutes to establish a science and technology park. This is intended to help transform Botswana into a technology-driven and knowledge-based economy by promoting a culture of innovation and competitiveness among its associated companies and knowledge-based institutions. In order to achieve one of its mandates, that is of supporting new ventures, the Botswana Innovation Hub established a technology entrepreneurship development programme, branded First Step Venture Centre, which is a hybrid business technology accelerator incubator.

349. The first venture centre started its operation mid-2013 and serves technology entrepreneurs in the following priority sectors: biotechnology; clean technology; mining technology; and ICT. In addition to providing subsidised working space within the science and technology park, the centre of qualified support services include business advisory services, IP and legal advice, corporate compliance and business coaching and mentoring. The centre has also just opened a technology transfer office which is responsible for, among others, interrogation of ideas and claims to innovations on issues of patentability or any other IP protection; convention on conceptual and detailed designs for prototyping, helping creation of spin-off companies to facilitate take-up innovations from the Centre to the market stage.

350. As mentioned earlier, Botswana's innovation incubator is relatively new, and like any new establishment is facing teething problems, biggest and most challenging being inadequate financial resources. Currently, the First Steps Venture Centre is 100% government-funded and has to
compete for the little resources with other competing national priorities. In an effort to try and be self-sufficient the Centre is considering to try activities such as hot-desking to try and generate income. Assessing suitable finance for the start-ups is also the biggest challenge in that sense. The Centre is still looking into assisting its clients with bridging funding within the programme. In addition, to try and make the programme more sustainable, the Centre is looking into equity holding of not more than 5% in the businesses that they support. The suitability of this idea is still being evaluated.

351. This is to mention but a few challenges and efforts by the Centre to try and overcome these challenges. The Centre is looking for collaboration with partners than can facilitate the attainment of intended objectives of this important initiative. We are therefore looking forward to support or collaboration with Members who are currently at a more advanced stage than we are.

12.12 El Salvador

352. El Salvador would also like to welcome the inclusion of this item on the agenda. This issue goes hand-in-hand with a series of activities that El Salvador is constantly trying to drive forward through raising awareness and providing incentives for innovators and promoting young talent by encouraging them to continue in research. For example, sometimes our institution that is responsible for IP devotes a week to a national activity for invention and this is the contest for inventors and independent inventors to take part in this as well as young students from universities, and this is leading to innovation incubators.

353. For example, as a success story, we have an invention called Turbo Kitchen, which is aimed at trying to protect the environment. We also are encouraging young talent to continue research and development, and gaining some economic benefit from their inventions, particularly in terms of finance. Our Government has been investigating entrepreneurship issues for SMEs through agencies and others that have been encouraged by the Ministry for the Economy. Our new government plan for 2014-2020 has highlighted innovation and science and technology as issues. We very much hope that in the next meetings of this Council, once this item is included in the agenda, we will be able to continue sharing our experience with you.

12.13 United States

354. I wanted to thank Members for their interventions. I thought that this was an extremely productive discussion and exchange of national experiences, and obviously look forward to the EU’s intervention on this as well, and we of course thank India for its statement which ultimately did get to incubation at the end of its intervention as well. We wanted to respond to India’s remarks, and its analysis of US innovation models. India identified one author’s view of two different models, or two different incubation centres including some views on successes and failures of those models. What I think India does not identify and clarify, however, is that whether you look at innovation in California or Massachusetts or anywhere else in the United States, and as we have heard today, this is true for many Members who have spoken in the Council on this issue, that IPRs are important to innovation and certainly in the United States, no matter what state you are in, no matter where you are doing innovation. Strong IP protection and enforcement is a critical feature of the models you describe whether you are in Massachusetts or California. IPRs are present and form a critical part of the innovation model.

12.14 European Union

355. The EU does not have an extensive presentation, given the short deadline. Since the EU is a heavy machine, we could not assemble the information to be at the level of debate today which was once again excellent. We are very supportive of this extremely enriching discussion, during which a lot of information was provided. We would like to thank Chinese Taipei, the United States and Panama for co-sponsoring this item.

356. On the intervention of India, I would say that it is equally over-simplistic and equally, in our view, not correct to claim that IP is the main or the only driver for innovation, that is to say that it is the main or only obstacle to innovation. Issues are advanced: IP is very important element, it is not the only one of course, you need universities, you need research, you need many other things to have innovation.
12.15 Brazil

357. Brazil would like to thank the US, Chinese Taipei and Panama for proposing this agenda item and we welcome the debate on innovation incubators. At the outset, I would like to recall that it is important to highlight that patents, as mentioned by our colleague from the EU, are far from being the single elements driving innovation. It is only one of a larger mix of different tools that promote innovation.

358. One initial comment is that discussion on IP and innovation must be based on the realisation that the granting of exclusive IP rights can only be justified to correct a potential failure in the markets for technology and knowledge in order to foster innovation. That correction of market failure entails costs for society. By establishing monopolies, however provisional they might be, protection of IP can impair market efficiency in allocating factors of production and other resources. To compensate for the possible costs of misallocation, the IP system demands, in return for the granting of exclusive rights, full disclosure of the know-how of the protected invention in such a way that society as a whole might benefit from it and build upon it. In this regard an imbalanced IP system can impede innovation once the granting of low-quality patents can restrict activity of innovative companies. Encouraging the creation of known innovative companies such as the non-practicing entities, also known as patent trolls.

359. Regarding specifically innovation incubators, providing access to technological knowledge, technological infrastructure and guidance are some of the activities of these structures. According to the National Association of Innovative Enterprises, there are 384 innovation incubators in Brazil. I believe that there is a difference between the data that US has provided, perhaps 16 providers were incubated between the time you presented your data. These innovation incubators host 2,640 companies that employ 16,000 workers. These innovation incubators originate in more than 2,500 companies with an income estimated at R$4.1 billion, around US$1.9 billion, employing 29,000 workers. These companies can receive support, either from universities as we discussed in at the last Council meeting in February, or from the national system to support small and medium enterprises.

360. Regarding start-up programmes, we would like to mention specifically the programme "Start Up Brazil" developed by the Ministry of Science and Technology with the aim to incubate 100 information technology companies with a special objective of establishing links with international foreign SMEs. Regarding SMEs, the national system aimed at fostering small and medium enterprises has also developed a programme called SEBRAETEC that provides mentoring in different areas of technology and in the use of instruments such as industrial design, geographical indications, trademarks and patents.

12.16 India

361. India would like to respond to the statement made by the US colleague. We have no issue with discussing technology innovators and business incubators anywhere, but we think that the TRIPS Council is not a place for that, and that is the reason why we had mentioned that the word innovation is mentioned in the TRIPS Agreement only once. Since the TRIPS Agreement is a flexible agreement, and we do not think that there is a direct correlation between IP and development, Members have to take in innovation according to their level of social economic development.

362. Regarding the Silicon Valley and Route 128, my point was basically about the open-source models where, just as in the field of telecommunication, disputes are happening between Samsung and Apple. In fact, it is actually public-funded researchers that have contributed most of the research, whether it is in Samsung or Apple, it is not just that the original research hasn’t happened in these companies. So that is my point – that ultimately no-one is the originator.