

出國報告（出國類別：國際會議）

2008 年度台拉立「波海基金」年會 及「2008 台捷科技日」籌辦及參訪

服務機關：行政院國家科會委員會

姓名職稱：陳正宏副主任委員

國合處張慶瑞處長

國合處陶正統副研究員

派赴國家：俄羅斯

報告日期：97 年 09 月 20 日

出國時間：97 年 06 月 17 日 ~

97 年 06 月 23 日

摘 要

陳副主委正宏依本會雙邊協議率團赴拉脫維亞主持台拉立三方年會並參訪科研機構，此行主要目的係議定本年度補助之三方計畫申請案及討論波海基金擴增案，達成之結論摘要為：(1)同意持續補助進行中 4 件計畫及 3 件新申請計畫；(2)製訂並提供一份三方共同計畫報告格式，以利統計與成果追蹤；(3)自 2009 年度起調整計畫徵求與執行期限，期符合會計年度運作及利於計畫主持人經費運用；(4)自 2009 年起所補助之新計畫至少含 1 件人文社會領域案，並調高單件自然科學領域計畫之補助額度；(5)單件計畫之三方經費分擔比例將自 2009 年起進行調整；(6)針對未來擴大三方合作達到初步的共識，如：將台拉立三方合作與歐盟 FP-7 計畫之參與相互連結並建立相關機制，初步以將合作國自 3 國擴大至波羅的海週邊所有國家（如：瑞典及芬蘭等北歐國）為重要推展標的國家。

此外，為籌辦「2008 台灣-捷克科技日」活動順道赴捷克拜會相關單位，雙方重要之初步決議包括(1)本年度重點領域為：ICT、能源環境及精密機械；(2)活動分為研討會及參訪兩部份，合計約 3-4 天；暫定於 10~11 月時舉辦；(3)台灣代表團將包括學研界與產業界，其中廠商的參與應以高科技領域或具有研發投入之公司為限；(4)台灣代表團訪捷之國際旅費及住宿由台方自行負擔，研討會及境內交通由捷方負擔。另訪問奈米技術研發機構及與捷克科學基金會 (GACR)洽談合作協議之簽署事。

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壹、緣起及目的

本會與本會與拉脫維亞及立陶宛之教育科學部於 2000 年簽署合作協議共同成立研究基金以補助合作計畫，同時每年輪流於其中一國舉辦三方年會進行計畫審議與檢討，援例，本年度由拉脫維亞負責辦理，除將審議申請案，依據上年度年會決議，此次亦將擴大本項合作基金列為重要提案。

此外，繼去年由本會與捷克駐台辦事處合作辦理「2007 台捷科技日」後，捷克訪團對我國科技發展印象深刻，有意強化雙方合作，遂提出本年度於捷克辦理「2008 台捷科技日」，此項活動在獲得國內外交部、經濟部技術處、工研院與資策會辦理共識與支持之下，由本會與對方進一步商談活動的方向與模式。

貳、過程

甲、 訪問行程

時 間	活 動	備 註
97.06.14 (Sat)		
晚上	國合處張處長、陶副研究員共 2 人自台北搭機赴捷克【經法蘭克福轉機】	CI061 23:15~06:50 CI9061 08:05~09:10
97.06.15 (Sun)		
上午	抵達捷克布拉格 旅館 Diplomat Hotel check-in	捷克科技組接機 CZ – 160 41 Prag 6, Evropská 15 Tel: +420 296 559 111 http://www.diplomathotel.cz/
下午	代表團與駐捷克科技組工作會議	
97.06.16 (Mon)		
上午	拜會捷克研究發展委員會第一副主席 Ms. Miroslava Kopicova 女士 Participants: His Excellency Karel Zbrakovsky Dr. Jiri Krechl, CzechInves	Mr. Gistrova Lea Gistrova Lea, Secretary Opletalova 25, Prague 1 (near Wenceslas Square) Tel: 224 500 500 gistrova@nvf.cz ,
下午	拜會捷克科學院 V. Paces 院長	Dr. D. Dvorak Deputy Head, International Department Academy of Sciences of the Czech Republic Narodni 3, 11000 Prague 1 Tel:221 403 417, Mobile:(+420) 608 834 542

晚上	捷克代表處沈代表斯淳宴請訪團 與捷克科學基金會主席 Josef Syka 洽 談簽署合作協議及合作方案	晚宴地點：TBD 外賓：RDC Vice-Chairman Ms. Miroslava Kopicova、教育部 Ruzicka 次長、國合處處長 Jan Marek、捷克基金會主席 Josef Syka、Deputy CEO CzechInvest Mr. Jiri Nydodym、捷克外交部無任所大 使 Karel Zebrakovsky
97.06.17 (Tue) Liberec, Czech		
上午	拜會 Liberec 科技大學 Oldrich Jirsak 副校長 Presentation: Development in nanotechnologies at TUL Development and strategy of R&D and higher education in Czech Republic (CzechInvest)	車程約 2 小時 Halkova 6, 461 17 Liberec Tel.: +420-485353233 Fax: +420-485353113 www.tul.cz , e-mail: oldrich.jirsak@tul.cz Venue: Meeting room of rector (in the new administrative building, 8th floor.)
下午	拜會 Elmarco 公司 Ladislav Mares, Chief Executive Officer Presentation of nanofiber technology and potential and process demonstration	V Horkach 76/18, 460 07 Liberec 9, CZ Tel.: +420 489 209 111 Fax: +420 485 151 997 ladislav.mares@elmarco.com www.elmarco.com
晚上 I	陳副主委自台北搭機赴拉脫維亞	CI061 23:15~06:50
晚上 II	返回布拉格	
97.06.18 (Wed)		
上午	代表團搭機抵達拉脫維亞 I. 陳副主委 及科技組 II. 國合處	I. LH3244 09:50~12:55 II. OK880 11:45~14:35
下午	抵達旅館 Hotel Monika check-in 拜會駐拉脫維亞代表處 代表處進行簡報	由拉國科學院安排 Elizabetes street 21, Riga Tel: +371 67031900 Fax: +370 67031901
晚上	王代表歡迎代表團晚宴 代表團與駐德科技組工作會議	Lido krasta 餐廳 Hotel Monika
97.06.19 (Thu)		
上午	參訪 Latvian institute of Organic Synthesis	Aizkraukles iela 21
下午	拜會 Institute of Solid State Physics	Kengaraga iela 28

	at the University of Latvia	
晚上	拉國國家科學院歡迎晚宴 賓客包括立國與我代表團及我代表處等	Restaurant Otto Schwarz, Kalku Street 28
97.06.20 (Fri)		
整天	1. 拜會拉國科學院 院長 Juris Ekmanis 2. 舉辦 2008 台拉立科技年會 聽取進行中計畫簡報、審議計畫及討論 基金擴增案	Venue: Latvian Academy of Sciences Adademi jas Square 1 Seneate Meeting Hall
晚上	本會陳副主委答宴 賓客包括立國代表團、拉國學者及友我 國會議員等	Radisson SAS Daugava Hotel Kugu Street 24
97.06.21 (Sat)		
上午	會議資料整理	
下午	文化巡禮	代表處協助安排
晚上	歌劇欣賞 Yevgeniy Onegin	拉國科學院安排 P. Tchaikovsky Aspazijas Boulevard 3
97.06.22 (Sun)		
清晨	搭機返國	BT431 07:25~08:25
97.06.23 (Mon)		
清晨	返抵台灣	CI064 09:25~06:30

乙、「2008 台灣-捷克科技日」籌辦會議

捷克自四年前成為歐盟會員國之一員後，積極提升該國經濟，基於以國際合作模式拓展並強化國內科技與經濟實力的策略，分別與日本、瑞士、以色列等國辦理「科技日」活動，期能吸取國外長處，共創合作雙贏的局面；其後，本會於 2006 年 10 月選擇捷克布拉格成立了第 16 個科技組，經過我科技組同仁的努力聯繫與關係建立，捷克方面漸漸明白台灣科研實力的不容小覷，於 2007 年由其外交部主動邀集了 17 位該國來自產、官、學界重量級的人士來台，希望透過「台捷科技日」研討會讓雙方面對面的接觸與溝通，對彼此科技發展、強項有更深、更深的了解，該項會議由本會籌辦，在 2007 年 11 月 3 日舉行完畢，由捷方 9 位及我國 4 位人士報告捷克及台灣的科研現況及雙方可進行之合作，共有上百位人士參加，並安排整個訪團至新竹研發單位及園區進行參訪。

去(2007)年「台捷科技日」活動圓滿落幕，並引起訪團很大的迴響，認為

收穫良多，值得繼續辦理，是以本年度該國外交部又與本會駐捷克科技組聯繫，希望再度辦理是項活動，並改在捷克舉辦，希望我方組團前往；本會考量兩國的科技合作需要許多的單位的共同參與才能克盡其禱，本項跨部會性活動絕非本會可單獨決定或完成，是以邀集國內相關部會於 97 年 6 月 3 日舉辦協調會議，共同商議本項活動參與必要性及籌辦方式（會議記錄請參附件一）。

此次本會國合處張處長慶瑞前往捷克訪問並拜會其研究發展委員會第一副主席 Ms. Miroslava Kopicova 女士及 Karel Zebrakovsky 無任所大使，即依據協調會當天各部會達成之共識及我方建議之會議議程與之商談活動細節。

在 K 次長對我方詳細說明捷克在科技方面因應成為歐盟國家之後的政策、近日完成的事蹟以及下半年擬舉辦或參與的重要科技活動後，由於 Z 大使曾任駐日本代表，其在辦理各國「科技日」活動十分有看法，加之去年「台捷科技日」的成功經驗，雙方的會談馬上進入正軌，無論是活動進行方式、會議領域與主題、參與機構各方面都有具體結論（會議記錄請參附件二）。

基本上，本活動第一天將於布拉格與捷克來自產、官、學、研的代表全天進行一場研討座談，之後兩天，則分赴 Liberec、Brno 二市，規劃參訪 Technical University of Liberec 及 Masaryk University 學術單位、Nuclear Research Institute 等研發單位，以及至捷克 TECHNOPARK 參觀高科技廠商，讓兩國纏官學研進行面對面的接觸討論！



【圖一】國科會（NSC）國合處張慶瑞處長（中）偕科技組謝組長水龍（右一）、經濟組何組長元圭、陶正統副研究員與林秘書惠珍（左一~三）等人拜會研究發展委員會第一副主席 Ms. Miroslava Kopicova 女士及 Karel Zebrakovsky 無任所大使，並於會談後合影。



【圖二】國科會（NSC）國合處張慶瑞處長（中）偕科技組謝組長水龍（左二）及陶正統副研究員（右一）拜會捷克科學院 Paces 院長（右二）及國合副處長 Dvorak（左一）討論我國與捷克研究團隊參與歐盟計畫以及明年年初規劃在捷克舉辦雙邊基因體研討會事。

	
<p>【圖三】我駐捷克代表處沈代表斯淳宴請晚宴，教育部 Ruzicka 次長（中）亦受邀出席，本會國合處張處長慶瑞於宴中與捷克基金會主席 Josef Syka(右二)討論雙方協議簽署（附件三）及合作機制。</p>	<p>【圖四】本會代表團與 Elmarco 公司 CEO L. Marces 先生（左四）及行銷公關負責人（左一）會後合影。</p>

丙、 捷克科研機構參訪

Liberec 市在捷克以紡織業為傳統，對於機器研發與產學合作也很成功，近年發明號稱世界第一台奈米纖維製造機(nanospider)可量產奈米纖維，由於該科技大學積極開拓國際合作，我科技組考量或可與該校進行奈米材料領域之研發合作或人員交流，是以安排前往訪問。

一、 訪問 Liberec 科技大學

Liberec科技大學，距布拉格以北1百多公里，近德國邊境，該校建於1953年，原為機械工程科技專科學大學，隨年擴編，目前已成具6個學院共7000位學生的科技大學，提供藝術與科學的博、碩及學士全方位學位，該校擅長理工，在產學合作有相當傳統，最主要的研究成果在奈米纖維科技之相關應用，2004年亦成功技轉當地Elmarco公司，合作開發了世界第一台奈米纖維製造機器Nanospider，已有不少實驗室採購並使用。該校理工方面高達50%經費用於研究，研究計畫非常多，正致力於推動招收國際學生，尤其歡迎博士生。

二、 參觀 Elmarco 公司

2000年才成立的捷克Elmarco公司為一家high-tech solutions for the nanofiber and semiconductor industries廠商，2004年發明了Nanospider (First prototype of Nanospider for water based polymers, Laboratory unit - verification in larger samples - 10 m2 per day)之後，業務扶搖直上，2007年瑞士與法國投資了約5億台幣(275 mil.

克朗)取得25%股權，與許多國際知名大學及廠商均建立商業化合作，合作開發高生產力之大型製造設備(Upscale from laboratory unit to industry line - up to 1000 m² per day以及Industry line)，包括：美國麻省理工學院、北卡大學及康寧公司、新加坡國立大學、澳大利亞Commonwealth Scientific and Industrial Research Organization及CSIRO、以及南非的Stellenbosch University等。

丁、拉脫維亞科研機構參訪

一、拉脫維亞科學院有機合成研究所

台、拉兩國代表團經拉國科學院安排參觀有機合成研究所，由台拉立三邊計畫之拉方計畫主持人 Nikolajs Sjakste 教授實地介紹實驗理論、過程，並展示成果。

二、拉脫維亞大學固態物理研究所

拉脫維亞大學固態物理研究所係由該大學原有之半導體及電物兩研究所於1978年合併成立，該所目前有123位研究人員，其中88位具有博士學位，另有35位學生，該所在材料科學及跨領域研究不僅在拉國居領導地位，且國際知名；其主要的研究方向為：不同材料結構上電子及離子研究、新無機材料之合成、環境監測之科學儀器之設計與製作，以及利用新低分子有機化合物之光子或奈米電子材料等等。

台、拉兩國代表團下午參訪固態物理研究所，在聽取簡報及交換意見後至實驗室實地參觀相關設備。



【圖五】國科會陳副主任委員正宏（中）及張處長慶瑞認真聽取計畫主持人介紹計畫操作。



【圖六】台、拉代表團成員仔細聆聽固態物理所解說該實驗室主要的研究計畫主題及其成果。

戊、2008 年台拉立「波海基金」年會

本會與拉、立兩國科技合作關係之建立始於 1997 年及 1998 年分別與其科學院簽署合作協議，惟因科學院屬榮譽性機構並於充裕之經費進行與我國之學術交流或合作，其後經過科學院的推薦與協助，本會遂得於 2000 年 8 月與兩國之教育科學部部長以換文方式簽署三邊共同基金合作綱領，由三邊提供經費補助合作計畫、研討會及講座活動等；為推動三方活動，自 2001 年起由協議單位每年輪流主辦年度工作會議。





本年度係三方第 8 屆的工作會議，援例，應由拉脫維亞教科部主辦，計畫申請案在 2 月截止收件後，各自進行計畫審查，5 月時交換初審意見進行比對，並擇定於 6 月份召開年會，除就申請案進行評議討論，選定補助計畫之外，由於上年度拉方臨時提議為因應兩國加入歐盟及學者研究經費之實際需求，希望能擴大此項三方合作基金，當時雖對該項提議有所共識但無建議方案，是故列為本年度年會重要議案，由於經費的擴增事涉各方預算資金投入出資比、計畫規模擴大與計畫件數的增加等多項因素考量，為求在會議中能有具體可行的方案與決議，本會經過仔細研擬於會前提供建議方案（如附件四）以利會中討論。

此次工作年會由主辦單位拉國科學院副院長 Andrejs Silins 擔任會議主席，在確定議程後，首先由進行中 6 項計畫的拉方計畫主持人一一報告合作計畫期中或期末簡報，同時由與會代表提出問題以檢討計畫執行進度與成果。

在工作午餐後，與會各方代表共同審議進行中計畫是否繼續予以補助，後就新申請計畫的初審結果交換意見，共議定持續補助 4 項計畫及 3 項新的補助案。

在議題討論部份，首要議題是此項基金的擴增案，我方承辦同仁陶副研究員先對草案進行說明，獲得與會者的基本支持，出資比幾無異議，但在單件計畫的補助規模與補助件數方面，拉、立兩方均有修正建議，惟他們彼此雙方意見有相當大差異甚至完全相左，後主席裁示依本會建議方案予以通過；立方另外提出擬調整三方合作的作業時程，拉方亦有不同想法，後裁示為於會後以電子郵件方式完成決議；至於，以三方之合作為基礎，擴大至歐盟計畫的參與議題，則獲得所有與會者的同意，主席裁示本會提案照案通過，至於作業機制的建立與執行細則則列為下一年度年度之首要議題。

每屆台拉立工作會議記錄均由三方每方三位代表以 3x3x3 的方式共同簽署，此次仍同，拉方依據開會結果責成工作會議記錄，三方完成簽署後，第 8 屆台拉立工作年會劃下完美句點。

	
<p>【圖七】第一組三方代表進行簽署。</p>	<p>【圖八】第二組三方代表簽署後合影。</p>
	
<p>【圖九】第三組三方代表進行簽署。</p>	<p>【圖十】第 8 屆台拉立工作會議結束暨完成會議幾錄的簽署後，所有與會者一同合影。</p>

參、心得

甲、「2008 台灣-捷克科技日」籌辦會議

本會此次聯合工研院、資策會等國內單位與捷克外交部、研究發展委員會及捷克投資局等單位聯合舉辦「2008 臺灣-捷克科技日」活動。旨在建立一共同平台，促進兩國產、官、學、研各界在科技研發與創新的政策、趨勢及技轉下多層面的資訊交流及實質合作方案之建立；同時，期望藉由這樣跨部會、跨領域之交流機會，促成政策制定者與企業領導人、研發機構與科技公司之間的網絡建構與對話。

另外，本會過去僅與捷克科學院建有雙邊協議，兩國之合作交流集中在人員

的研究互訪，並曾舉辦過昆蟲及基因體兩項研討會，合作規模有限，此次與捷克基金會洽簽合作備忘錄，若能順利推動，未來將重在合作計畫的合作補助，為兩國之合作開啓新頁。

乙、2008 年台拉立「波海基金」年會

過去七年，此項台拉立基金均只補助科技性計畫，自去年本會主動邀請六位不同領域之人文社會領域學者專家赴拉國進行開拓性訪問，與拉國相對應領域之學者專家進行面對面座談，討論雙方可合作議題，本年度終於有人文類的計畫提出申請並予補助，算是三方合作一個突破性的發展，未來希望有更多的人文社會科學的合作計畫能夠產生。

此外，本項合作計畫的成立前提是一須由台拉立三方每方各一位計畫主持人共同撰寫一份計畫書進行合作研究，由於拉、立兩國學者在研究上往往同質性較高，但彼此非常熟悉，另一方面與台灣學者較不熟稔或是地緣距離較遠，所以此三方合作，往往發生計畫多集中兩兩單位之間的合作或是論文發表，較少有三方共同發表的研究論文；同時，每年年會的計畫成果簡報，各計畫主持人的報告內容差異性很多，很多流於專業的說明的問題，對工作會議的與會成員來說，較難判斷其合作或研究成果；最後，由於一些合作計畫之性質，部份計畫主持人在經費運用需要購買設備或儀器，如：電腦，來執行計畫，參考歐盟對補助機構的作法，似可製作一標籤貼紙，作為對本項基金所購得之儀器設備的財產性標示。

肆、建議事項

- 一、1993 年自捷克和平獨立的斯洛伐克，也是今年另一加強推動合作的國家，因此在籌辦此「2008 臺灣-捷克科技日」的同時，似可考慮在之後赴斯洛伐克舉辦類似的合作論壇及參訪活動，以增加訪問效益。
- 二、下(2009)年度的台拉立基金工作會議將在我國進行，屆時應設計簡報大綱，著重計畫人員交流及培訓情況、學術論文的產出成果及計畫執行困境等提供台方計畫主持人參考。
- 三、規劃台拉立三方合作計畫之期中/期末報報格式供計畫主持人參考利用與撰寫（附件六）。
- 四、配合台拉立三邊計畫需求購買之儀器與設備，設計並製作一標籤貼紙提供計畫主持人之用（附件七）。
- 五、以台拉立三方研究人員及其計畫為據點或基礎，規劃並建立一歐盟計畫參與機制，並可以大波海地區，包括：芬蘭、瑞典、德國及波蘭等，為主要或先期推動對象。

附錄

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附件一、「2008 台捷科技日」97.06.05 國內協調會議記錄

2008 「台灣-捷克科技日」活動協調會議—會議記錄

時間：97 年 6 月 5 日 10:00~11:30

地點：國科會第 8 會議室 (台北市和平東路二段 106 號 2 樓)

主持人：國科會國際合作處張處長慶瑞

出席者：(請參會議簽到單)

會議資料：議程、駐捷克代表處 97 年 4 月 7 日 CZE241 號電、2007 「台捷科技日」研討會 proceedings 與宣傳報名表

議程及會議記錄：

一、主席致詞 (略)

二、國科會國際合作處承辦人就本案緣起及 2007 年在台舉辦之「台捷科技日」活動情況簡要報告 (略)

三、各與會代表自我介紹並就本項活動進行報告 (摘錄)

1. 國經協會：本協會辦理與捷克廠商之商務合作會議已進行六年，主要的合作辦理夥伴為我駐捷克代表處經濟組以及捷克工業總會 (Confederation of Industry of the Czech Republic)；日前自經濟組組長那裡聽聞本年度有「台捷科技日」活動，本協會很願意徵求國內廠商組團共同參與，並協助安排訪問行程；此外建議整項活動可去 2-3 個國家，除捷克外，如：奧地利、波蘭及拉脫維亞是我們今年的目標國家。
2. 外交部歐洲司：歐洲司對本項「台捷科技日」無特別看法或建議，參加此次會議主要是想聽聽大家的意見，在派員參與部份，受限於我們年度出國經費，恐無法參團，但歐洲司很願意在這項活動上提供國內訪團出國所需之行政上的協助，此外，我駐捷代表處科技組一定會對本案全力配合。
3. 環保署：本署業務的主要服務對象仍以國內為主，在國際部份，一般針對國外對等機構，議題亦以環保政策為主；是以若本項活動屬業務層面以及本署年度出國預算有限情況下，恐不克參與。
4. 資策會：我國資通產業的對外拓展與國際合作一直是本會重要工作之一，東歐國家，像是捷克，也是我們近年擬加強推動的目標，所以本會有意參與此次「台捷科技日」活動，甚至希望除捷克之外，能再延伸至第二個國家進行訪問，如：波蘭。
5. 經濟部技術處：東歐國家國際合作是我們的重點，惟本處限於年度出國

預算及人力短缺，恐無法派員與會，但願意以計畫方式委由工研院代表與會及推動相關合作。

6. 工研院：捷克為本院今年國際合作業務重點推動國家，在作法上，若要配合本項「台捷科技日」活動，可能如技術處所言，會透過目前 UFP 計畫方式進行，屆時應會派員參團。

主席：經過與會代表的報告，好幾個單位原均有推動與捷克合作之年度規劃，因此本項 2008「台捷科技日」似可成行，既然如此，接下來我們就針對這下半年的活動細節進行討論。

四、議題討論 (略)

五、結論

1. 活動型式—建議研討會的部份至少一天，考量與會報告人員眾多且成員包括學研及產業兩種不同性質，可於同時段分成兩個 sessions；拜會部份則建議有 1~2 個共同拜會活動，其餘參訪則依專業領域至少分成兩批分別進行，增加效益；參考我駐捷代表處來文，捷方會負責訪問期間的會議舉辦及當地交通費用，惟，屆時若有必要，國經協會可負擔當地交通的部份費用。
2. 組團方式及經費分擔—訪團成員可來自部會機構、廠商及學者專家，其中，部會機構由單位各自派員並負擔出國經費，廠商則請國經協會對外徵詢有意願者，費用亦由廠商自理，學者專家部份，則可待會議主題較為確定後，由國科會及經濟部技術處主動邀請或對外徵求，並提供經費補助。
3. 活動日期—目前建議 10 月下旬，但請我駐捷克科技組與對方洽定日期，以便進行整項活動（含訪問日程及訪問國家）的規劃，才能徵求國內學者及廠商的參與。
4. 活動分工—整項活動分成「研討會」及「訪問行程」兩部份，前者由國科會、工研院及資策會合作協調規劃，整團的行程則由國經協會擔任聯絡窗口。
5. 會議主題—我方建議四項領域，包括：I. 資訊科技及產業 II. 能源環境 III. 精密機械及其應用 IV. 貿易投資合作組；各項目均可依政策面、研發面及貿易面等進行交流；再請駐捷科技組轉知捷方提供各領域下更細部的主題後擲回我方。
6. 活動分組—考量訪團成員來源的性質，或可分成兩組，一為官學研組，一為產業組，屆時參訪活動可依兩組各自需求安排，並由駐捷科技組及經濟組協助與陪同。
7. 訪問國家—建議整項活動可包括 2-3 個國家，並以捷克為中心，再往後延伸，展延行程由各單位各自規劃，產學研組將考慮再訪問匈牙利、波蘭或斯洛伐克其中一國，產業組則視廠商意願再訪問奧地利、波蘭或拉

脫維亞。

8. 行前活動初步規劃—自本項協調會至訪問活動的工作時程約有 4 個月，
 - I. 官學研組—6 月底前訂定出研討會的會議結構及日期；7 月底能擬定初步訪問人員名單（含專長及其履歷）。
 - II. 產業組—只要確定好活動日期，一般在出發前 1-2 個月前召集廠商。
9. 研討會名稱—國經協會建議是否能將本項活動稱為：「2008 Czech-Taiwan Science and Technology Days & The 7th Session of the Czech-Taiwan Joint Business Council」？
10. 擬請駐捷克科技組協助確認事項— 訪問活動日期、會議主題、捷方及代表處的分工與聯絡窗口。
11. 議程規劃

2008 Czech-Taiwan Science & Technology Days Tentative Seminar Agenda

Day 1 (October 15, 2008 Wednesday)		
08:30~09:00	Registration	
09:00~09:30	Opening Remarks - Czech VIP - Taiwan VIP	
09:30~10:30	Session I: Contract Research, Human Potential Building and Exchange	Session II: Trade Cooperation & Investment
	- Speaker 1 (NSC) - Speaker 2 (Czech)	- Speaker 1 (CIECA) - Speaker 2 (Czech)
10:30~11:00	Coffee Break	
11:00~12:00	- Speaker 3 (RTO, eg. III, ITRI) - Speaker 4 (Czech)	- Speaker 3 (CIECA) - Speaker 4 (Czech)
12:00~14:00	Lunch	
14:00~16:00	Session III: Cooperation under EU-FP7	Session IV: Technology Commercialization & Exploitation
	- Speaker 1 (NSC) - Speaker 2 (Czech) - Speaker 3 (RTO) - Speaker 4 (Czech)	- Speaker 1 (NSC) - Speaker 2 (Czech) - Speaker 3 (RTO/Industry) - Speaker 4 (Czech)
16:00~16:30	Coffee Break	

16:30~17:00	Panel Discussion & Summary
18:30~21:00	Banquet (TBD)
Day 2 (October 16, 2008 Thursday) (依外館建議)	
09:00~12:00	Individual Meetings
12:00~14:00	Lunch
14:00~17:00	Visit to research Institute
16:30~20:00	Dinner (TBD)
Day 3 (October 17, 2008 Friday) (依外館建議)	
08:00~	Departure to BRNO
10:00~14:00	Visit Masaryk University
14:00~	Return to Prague

備註：本項會議的規劃特色在於以領域，即：資訊科技及產業、能源環境、精密機械及其應用等為橫向，以合作層面，即：政策、研發與貿易等為縱向，方式進行合作討論，期激起雙方更大的合作空間與機會。各 Session 重點為 I.學研現況及其人員交流機會、II.歐盟、III.投資與貿易機會及 IV.技轉與產學合作。

**Minutes for the preparation meeting of Czech-Taiwan Science and
Technology Days
Between
National Science Council and Research and Development Council**

Date: 9:30am, Monday, June 16, 2008

Venue: National Training Fund, Opletalova 25, Prague 1

Participants:

RDC: Madame Miroslava Kopicova, 1st Vice Chairman of Research & Development Council

Mr. Karel Zbrakovsky, Ambassador-at-Large, Ministry of Foreign Affairs of the CR

Dr. Jiri Krechl(absent), Director of R&D Support Dept. of CzechInvest

NSC: Prof. Ching-Ray Chang, Director of International Cooperation

Ms. Cheng-Tung Tao, Program Director

TECO: Dr. Jonathan Shieh, Director of Science and Technology Division

Ms. Hui-Chen Lin, Secretary

Mr. Robert Ho, Director of Economic Division

Material: NSC proposed event agenda

Program of the meeting:

- (1) Welcoming from both sides
- (2) Madame Kopicova gives overview and progress of the ongoing R&D and tertiary education reform of the Czech Republic and importance of Czech Republic to take over its first Presidency of EU from January 2009 to CR participation of EU Framework program
- (3) Discussion of the proposed Czech-Taiwan Science and Technology Days

Summary:

- (1) The event (Science and Technology Days - STD) should focus on high-tech industry and basic and applied research.
- (2) Agreement on the following three areas to be focused on (1) ICT and its industry (including robotics and cybernetics); (2) Energy and Environment (including hi-tech low-consumption technologies and alternate energy resources technologies and renewable resources);(3) Precision Machinery (with possible outreach towards air and space technologies and industry and Galileo programme)
- (3) Agreement that the event will consist of 2 parts – seminars (presentation) to last one day and 1~2 days lasting the fields visits with possible modification in case

- of additional bilateral meetings between research or industrial parties
- (4) For the proposed Session II, 「Trade Cooperation & Investment」, NSC will confirm with CIECA's participation to be limited to the course of high-tech items and R&D based commercial contacts. Another possible title is “R&D based production and trade to put stress on the R&D phenomenon. This section is proposed for inclusion based on the request of Confederation of Industry and Transport (SPD) following a meeting with President Mr. Míl and Mrs. Kuchtová. However, very careful consideration is needed to guarantee that participants from R&D sphere and from hi-tech production and trading sphere do not form two distinct groups
 - (5) Name of the event to be decided after confirmation of the participants and sessions, however, the tradition of “Science and Technology Days - STD” name should be kept for this event as well
 - (6) NSC to provide more clear definition of Session I - 「Contract Research, Human Potential Building and Exchange」so that the objective and content of this session is clear and well defined
 - (7) For the Session III - 「Cooperation under EU-FP7」, Technology Center of ASCR, which is in charge of the nation's FP7 participation, should be invited to participate.
 - (8) For the seminar agenda, a summary is to be produced at the end of each session and “final summary” at the end of the event.
 - (9) For the 3 areas to be focused, preliminarily suggesting (a)Robotics, Cybernetics and Microelectronics to be included ICT area. (b) renewable energy such as bio-fuel, energy efficiency and low energy consumption in Energy area (c)airspace and Galileo project related in precision machinery
 - (10) Site visits to research institutes/companies for 1 or 2 days including traveling to Brno region (possible areas – air-space industry, robotics etc.)
 - (11) Czech side proposes the event to be held at the week of 13 or 20 of October. NSC promises to reply in the early July, should it be convenient to both parties.
 - (12) Contact persons in charge of the event:
Czech: Dr. Jiri Krechl, Director of R&D Support Dept. of CzechInvest
TECO: Dr. Jonathan Shieh / Mr. Robert Ho
NSC: Ms. Cheng-Tung Tao
 - (13) Taiwan side will cover its expense of air travelling and accommodation. Czech side will cover the local expenses such as meeting related expenses and local transportation.
 - (14) Confirmation of all participants by early September.
 - (15) Czech side will nominate contact experts for each specific area.

附件三、國科會與捷克科學基金會簽約草案

MEMORANDUM OF UNDERSTANDING
ON
RESEARCH COOPERATION
between
the National Science Council (NSC)
and
the Czech Science Foundation
Grantová agentura České republiky (GACR)

The National Science Council of Taiwan (NSC) and the Czech Science Foundation - GACR of the Czech Republic (GACR), hereinafter referred to as “the Parties”;

Recognizing the importance and the mutual benefit to be derived from bilateral cooperation in scientific research;

Desiring to promote and strengthen the cooperation relationship between the Parties, and to provide this relationship with more visibility.

Have agreed as follows:

ARTICLE I GENERAL PROVISIONS

The objectives of this Memorandum of Understanding (Memorandum) are to encourage exchange and cooperation between the scientists, engineers and scientific institutions of the two countries.

The scope of the cooperation shall be conducted in the fields of research and development supported by the Parties.

ARTICLE II DEVELOPMENT OF RESEARCH COOPERATION

Activities conducted by the Parties pursuant to this Memorandum are subject

to the availability of funds.

The NSC shall be responsible for coordinating all Taiwanese participation under this Memorandum, and the GACR shall be responsible for coordinating the Czech participants.

In order to attain the objectives referred to in the Article I of this Memorandum, the Parties commit themselves, subject to the availability of resources and in conformity with their respective attributions, to undertake the following programs:

Research cooperation shall be developed through:

- a) Joint research projects
- b) Bilateral workshops and seminars
- c) Other forms of research cooperation shall be determined through mutual consultation

- a) Joint research projects

Joint Research Project proposals shall be prepared jointly by the collaborating researchers of both countries.

Written proposals will be submitted concurrently to the NSC and to the GACR in accordance with the terms and conditions established by the Parties for their research grant proposals.

The proposals have to be submitted by the deadline agreed to by both Parties.

The proposals have to include a detailed description of the research project, budget and the cooperative activities as well as bibliographical data of the participants.

Visits of scientists involved in the joint project, dedicated to achieving the scientific goals of the project, can be part of the project proposal.

The duration of the research projects is set to be from one to three years.

b) Bilateral workshops and seminars

Bilateral workshops and seminars will be research-oriented and well focused.

They can be held in either country and will be normally limited to the participation of up to 10 scientists from each country.

Written proposals for seminars shall be prepared jointly by scientists from both countries and submitted simultaneously to the NSC and to the GACR for evaluation.

The proposals have to be submitted by the deadline agreed to by both Parties.

Preparatory and consultative visits of scientists/scholars will not generally be supported under this program. However, the Parties may elect to jointly support program development activities of mutual interest, on a case by case basis.

ARTICLE III

PROCEDURES

In parallel, the NSC and the GACR will evaluate proposals, determine if funding is available, and exchange pertinent information with the other side.

The final agreement on support of a joint research project, scientific activity or program will be established by an exchange of correspondence containing the necessary information.

Scientists and their institutions whose proposal have been approved under the program are responsible for the performance of the approved activity and for the proper use of funds. Principal investigators of each side must report on the progress of their activity through established channels in their country.

The activities under this Memorandum shall be subject to the laws and regulations of the two countries.

ARTICLE IV ELIGIBILITY OF THE PARTICIPANTS

All of the scientists and scholars that meet the requirements established by the Parties may request support from the NSC and the GACR.

ARTICLE V FINANCIAL PROVISIONS

Each Party shall support the basic costs of the project within its own territory of activities approved under this program.

Funding for the applied projects requires approval from both Parties.

ARTICLE VI INTELLECTUAL PROPERTY

In respect to any discovery or invention derived from cooperative research activities implemented under this Memorandum, the collaborating researchers shall consult and agree on the ownership of any intellectual property and the terms of commercial exploitation. In their consultations, collaborating researchers should take note of the relative contributions of each party to the research.

ARTICLE VII PERIODIC MONITORING

To monitor the progress of the research cooperation, both parties shall correspond periodically and discuss the programs and projects already being undertaken as well as those for forthcoming years.

Each Party shall notify the other of its annual support plan that further specifies the joint research projects and bilateral workshops and seminars to be funded at the beginning of every year.

ARTICLE VIII

FINAL PROVISIONS

This Memorandum shall enter into force upon signature by the Parties, and shall be valid for five years. It shall be automatically renewed annually on the expiry of the five (5) year period with the same terms including this right of renewal, unless one party gives written notice to the other, at least six (6) months prior to the renewal date, of its intention to terminate this Memorandum.

In case of termination of the Memorandum, previously approved joint projects, workshops and seminars shall remain valid until their date of expiration.

Matters which are not mentioned in this document shall be discussed through the good offices of both the Parties. This Memorandum is subject to revision or termination through prior consultation leading to either one or the other effect.

Signed inin two originals in English, both texts being equally valid.

For the National Science Council
of the Taiwan

For the Czech Science Foundation
of the Czech Republic

Prof. Chien-Jen Chen
Minister

Professor Josef Syka
President

附件四、台拉立合作基金擴增方案

1. Expansion of Taiwan-Baltic Mutual Fund

Description—

After 7-year steady and smooth cooperation among NSC, SMM and LZA, all three parties agree to review the current mechanism and intend to expand the trilateral Fund in order to enhance cooperation in areas where Taiwan, Latvia and Lithuania will benefit from research and technological progress in the medium to long term.

Current situation--

- Activity of Fund: Funding trilateral research projects
- Number of projects granted: 6 (2 new ones/ year)
- Scale of grant for each project: 60,000USD (20,000USD/ side)
- Contribution of Fund by three Parties:

Unit: USD

	Fund	%	Project	TW side	LV side	LT side
TW	270,000	75.0	45,000	20,000	12,500	12,500
LV	45,000	12.5	7,500	0	7,500	0
LT	45,000	12.5	7,500	0	0	7,500
Total	360,000	100.0	60,000	20,000	20,000	20,000

Factors to be considered—

- Other than six projects in engineering and science, one project in humanities and social sciences in amount of 48,000USD of grant will be added each year, for example, that will total the number of projects seven.
- Expanding the grant funding scale of each project, e.g.: from 60,000USD to 72,000USD or 75,000USD or the other amount that three Parties agree.
- Increasing the funding number of new research projects each year, e.g: from 2 to 3, or up to 3 or 4

New constitution of Fund each year—

Unit: USD

	Fund	%	Project	TW side	LV side	LT side
TW	270,000	50	45,000	30,000	7,500	7,500
LV	135,000	25	22,500	0	22,500	0
LT	135,000	25	22,500	0	0	22,500
Total	540,000	100	90,000	30,000	30,000	30,000

Assumption: Number of projects granted is still 6 (2 new ones/ year) with scale of grant 90,000USD (30,000USD/ side) for each project in year 2010.

For the ongoing research projects, the funding will remain the same as current level, USD 60,000 for each until it expires, or

- a. The new financing contribution of Fund applies to all projects including four ongoing research projects up to now

2. Participation of researchers from Taiwan, Latvia and Lithuania in EU FP-7

Description:

Latvia and Lithuania have been EU members since 2005 and the highly active participation of FP-7 is greatly encouraged by EU member states. According to the general provisions of FP-7, the submission of proposals for non-EU member research team must be involved with at least two research teams from two EU member states. Based on the past successful collaborative experience, it is time for NSC, SMM and LZA to encourage their scientists to collaborate by submitting application for the FP-7 research grant funding.

Potential participants—

- a. Those PIs who have been working together with the support of Taiwan-Baltic Mutual Fund
- b. Scientists whose research work needs more international participation or more data input from more than three countries
- c. The research budget exceeds more than 60,000USD

Ways of promotion—

The National Science Council has a policy that once a proposal submitted by Taiwanese and their colleagues in EU countries for grant funding is approved by FP-7, each research team from Taiwan will be provided extra grant funding from NSC as an incentive to encourage trans-national cooperation. It has proved this policy is working well. It's suggested that Latvia and Lithuania will consider to take some incentive measures according to their own internal practices. The NSC is willing to support more strategic cooperation from Taiwanese researchers with their counterparts in Latvia and Lithuania, particularly, for those areas in which international participation is essential.

**Protocol of the 7th Steering Committee Meeting
Mutual Funds for Science Cooperation
Of Lithuania, Latvia and Taiwan**

Date: 20 June 2008

Time: 10.30 - 17.00

Place: Latvian Academy of Sciences, Riga, Latvia

Chair: Prof. Andrejs Silins, Latvia

Committee Members:

Latvia: Prof. Andrejs Silins, Dr. Maija Buziule, Dr. Dace Tirzite

Lithuania: Jūrate Dečėterė, Prof. Antolius Sruga,

Prof. Jozas Vidmantis Vaitkus

Taiwan: Prof. Cheng Hong Chen, Prof. Ching Ray Chang,

Dr. Suang-Jing Pong

1. Presentations on the ongoing projects were made by the Latvian representatives of the projects and Steering Committee comments on the results of joint research projects and exchange of opinions were made.
2. It was concluded that the following projects were completed successfully:
 - a. "Characterization of advanced composite material properties";
 - b. "Purification and characterization of the gamma-butyrobetaine esterase".
3. Taking into account the reports on the ongoing projects the Committee decided to continue financing of the following projects from August 1, 2008 to July 31, 2009:
 - a. "Taiwan-Lithuan theoretical studies of spectroscopy of atoms and their behavior in strong laser fields" for third year;
 - b. "Sustainable production of biodiesel fuel from renewable resources and fatty wastes" for third year;
 - c. "Structural Organization and Optical Nonlinearities of Low-Dimensional Molecular Structures" for second year;
 - d. "Analysis of *H. pylori* virulence and host response factors in the development of atrophic gastritis in Baltic States and Taiwan" for second year.
4. The Committee decided to finance the following new projects from August 1, 2008:
 - a. "Design, synthesis and studies of new effective materials for organic opto-electronics";
 - b. "Studies of Nitric Oxide Semiconductor nanostructures for Energy Technology applications";

c. *"The changing image of man: Tang, Song and Ming China: Religious, Literary and Philosophical Perspectives"* *

*It was decided to recommend to the coordinators of project to improve and state precisely the scientific goals of the project.

5. The Delegations provided the following suggestions:
 - a. To develop the Draft of Common Annual Project Report form by Taiwanese side and be electronically approved by all Parties;
 - b. To consider the new time schedule for calls and project funding in a due time electronically agree before the call in 2009.
6. Expansion of the budget of Taiwan-Baltic Mutual Funds starting from 2009:
 - a. Increase the number of new research projects from two to three or four projects (a least one project in social sciences or humanities);
 - b. The grant scale for each project should be increased at least to 75 000 USD for exact sciences – natural, life sciences and engineering;
 - c. For social sciences and humanities the grant scale is up to 60 000 USD;
 - d. Starting from 2010 the ratio of the contributions to the budget of the Mutual Funds will be as follows: 50% from Taiwan, 25% from Latvia and 25% from Lithuania.
7. The next meeting place is foreseen in Taiwan, Taipei, in May 2009.

Signature of the Steering Committee Members:


/Prof. Jüriak Deviševs/



/Prof. Andrejs Šteins/


/Prof. Cheng Hong Chen/


/Prof. Juozas V. Vaitkus/


/Dr. Māris Daudāder/


/Prof. Chung Hsi Chang/


/Prof. Atilius Springa/


/Dr. Dainis Tiesle/


/Dr. Suang-Jing Peng/

Guideline for Report of Joint Research Project between Lithuania, Latvia and Taiwan

I. Purpose

The National Science Council (NSC), and Ministry of Education and Science of Lithuania (SMM) and Ministry of Education and Science of Latvia (IZM) set up a mutual fund to co-sponsor joint research projects to promote the scientific cooperation between Taiwan and Baltic countries since 2000. In the end of the project executed each year, Principal Investigator (PI) is expected to submit the progress or final report. These reports will be used to tract as both sides' cooperative achievement, and to revise the cooperation scheme in the future.

On the basis of the opening of academic research, the research results will be disclosed partially to the public as reference by SMM, IZM and the NSC. The PI should be fully responsible for the content of the research report when submitting and all three funding agencies won't do any modification on it. However, the PI should notify in advance not to announce the report in case that the patents and other intellectual properties are involved, the medical and hygiene rules are disobeyed, or the common customs and social stabilities are concerned in the report.

This Guideline is used as reference of the report format when the PI writes the research report but not to exclude or restrict the research results to be appearing. It is a compressed report, usually 4 to 10 pages, for submission. It can't be substituted for the regular report of general research project, which is requested by the NSC, for example, normally.

II. Outline of the report : Please have the report written in sequence of Cover, English abstract, Content, Reference, Self-assessment of the cooperation, Statistic data of the cooperation and appendix.

1. Cover : Please refer to the appendix 1 as the format.
2. English abstract and keywords : Please give 5 to 7 keywords and summarize this collaborative research with maximum 500 words.
3. Content : usually including Preface, Research project's background and goals, Research methods, procedures and progress, Research result and achievement (discussions and suggestions) , etc. Please also briefly describe the division of task between Taiwan and Russian researchers and how young scientists from both sides involved in this project. If there are joint publications, joint patents, technique report, or graduate dissertations which come out with the cooperative research, please state in the table of "Statistic data of the Joint Research Cooperation" as our possible further reference.
4. Page number : Please put the page number in middle, bottom part of each page with Roman numeral I, II, III, etc for abstract and table of content, and with Arabic numeral 1, 2, 3, etc for the report content and afterward.
5. Tables or figures could be attached within the content or after the reference. Please give a brief description for each table or figure.
6. Self-assessment : Please give an overall conclusion for your research results regarding to the correspondence with the plan or expectation, the achievement to the target, applicable academic or commercialized value, possible patenting or the major discovery.
7. Statistic data of the cooperation : Please fill the form as attached in appendix 2.
8. Font : Please use Times New Roman, 12 size, single space in A4 paper for the report.



NSC

National Science Council
of Taiwan



Ministry of Education and Science
of Lithuania



Ministry of Education and Science
of Latvia

Joint Research Cooperation

Final Report
 Progress Report

Project Title :

Total Project Period : (yyyy/mm/dd- yyyy/mm/dd)

Principal Investigator (PI) :

Taiwan Side	Lithuanian Side	Latvian Side
(English Name)	(English Name)	(English Name)
(Chinese Name)	(Lithuanian Name)	(Lithuanian Name)
(Position)	(Position)	(Position)
(Department/ Institution)	(Department/ Institution)	(Department/ Institution)
(Organization)	(Organization)	(Organization)
Reference No. (ex. 06-1013-B-004-00y)	Reference No.	Reference No.

Date of Report (yyyy/mm/dd) :

Statistic Data of the Join Research Cooperation

- I. Number of Staff working in this joint project** – the “staff type” including: principal investigator (PI), collaborating principal investigator (co-PI), assistant investigator, and postdoctoral research fellow.

Staff Type	Taiwan Side	Lithuanian Side	Latvian Side
PI and Co-PI			
Full-time research assistant			
Part-time research assistant			
Postdoctoral Research Fellow			

II. Joint publication (by the date of this report submitted)

1. Scientific Journal Information for Papers Being Published or Accepted

Title of Paper	Name of Journal	SCI/EI/SSCI	Impact Factor	Volume No.	Date

2. International or Domestic Conference or Symposium

Title of Paper	Name of Event	Organizer of the Event	Date

3. Other Publishing Plan of Papers 【Submitting or Under-reviewing】

Title of Paper	Name of Journal	SCI/EI/SSCI	Impact Factor

III. Joint application for Patent rights or Technology transfer

- Patent Technology transfer

Name of Invention or Technology	
Technology Description (max. 200 words)	

Technique Features	
Applicable Industry or Potential Product for Commercialization	
Patent Issued Country	
Patent Period	

Note: please don't describe the major content if you haven't got the patent issued.

IV. Data of Personnel Exchange

1. Visiting Russia from Taiwan Research Team

Date of Visiting	Main Task and Result	Total member of visiting team	No. of Young researchers involved (aged 40 or lower)

2. Visiting Taiwan from Russian Research Team

Date of Visiting	Main Task and Result	Total member of visiting team	No. of Young researchers involved (aged 40 or lower)

V. Pattern of Cooperative Research

- Data collection sharing
- Research information exchange
- Model of theory establishment and inspection
- Data induction or deduction
- Device or product design
- Others (please specify) _____

附件七、台拉立基金之儀器設備用標籤



備註：因應研究設備之大小，共製作同款兩型之標籤，規格分別為 9cmx5.4cm 及 6cmx3.6cm。