

行政院及所屬各機關出國報告

(出國類別：其他)

出席 APEC 電機電子相互承認協議
(EEMRA) 訓練研討會暨
第 12 次聯合諮詢委員會(EEMRA/JAC)
會議報告

服務機關：經濟部標準檢驗局

姓名職稱：科長 李秀真

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派赴國家：汶萊

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壹、摘要

本次 APEC 電機電子相互承認協議訓練研討會暨第 12 次聯合諮詢委員會(EEMRA/JAC)會議於今(2007)年 5 月 12 至 14 日假汶萊斯里百家灣舉行，主辦國為汶萊，參加國家包括澳洲等 16 個會員體。會議第一天議程邀請講師說明與 APEC 電機電子相互承認協議相關之機制及協議，包括認證機構體系如 IEC，IECEE，APLAC，PAC 及工業界人士對於相關法規應用之經驗分享。第二天研討會，則請各會員體代表報告該國法規體制之更新、改進及阻礙對 EEMRA 參與之意見分享，本局以「中華台北之符合性評鑑活動」為題，介紹我國現行商品檢驗法規、符合性評鑑程序、及目前台灣檢驗、驗證及認證體制，讓會員體更進一步瞭解我國之檢驗制度及相關法規。與會代表除了肯定此次會議中工業界之經驗分享及表達對 EEMRA 之期待外，也一致認為加強各會員體間對法規體制之訊息交換及經驗分享能有助於各會員體對參與 EEMRA 之意願。

大會並冀望各會員體能提供其強制性要求及適用之法規等相關訊息，以利各會員體之主管機關能更瞭解其他會員體之法規制度。此外，主席在會議中針對副主席人選及美國在 WTO 非農業市場(NAMA)中「電子產品之電氣安全及電磁相容」提案尋求各會員體之意見，獲得廣泛討論與回應，

主席並希望各會員體能提供預定於 2008 年 11 月在印尼巴里島舉行之第 13 屆 JAC 會議之討論議題。紐西蘭與會代表並在此次會議中對於後市場監督議題提出專題報告，我國亦提供 2007 年於台北舉辦之後市場監督會議中有關各會員體後市場監督機制之問卷分析及相關之書面資料予各會員體作為參考，主席特別於會議紀錄中感謝我國。最後主席對於各會員體之參與及汶萊安排此次會議之辛勞與親切接待表達謝意。

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貳、本文

APEC EEMRA 係於 APEC 貿易暨投資委員會論壇 (Committee on Trade and Investment, CTI) 下之標準及符合性次級委員會 (Sub-Committee on Standards and Conformance, SCSC) 之 (Pathfinder Initiatives) 開路者倡議，開路者倡議之概念是讓有能力及意願者先行，經確定之倡議於該年度之部長級會議和領導人非正式會議中正式宣佈，並責成相關論壇組織加以落實及推動，這種模式使議題可實現性強，並較容易達成共識。APEC 自從 2002 年起通過多項開路者倡議，其中電氣電子設備符合性評鑑相互承認協議 (EEMRA) 亦是其中一項。

本次會議於今 (2007) 年 5 月 11 至 14 日假汶萊斯里百家灣之帝國飯店暨鄉村俱樂部會議廳舉行，此次主辦國為汶萊，由其發展部暨建設、規劃及研究單位負責統籌，並由新加坡標準、生產力暨創新局 (SPRING) 消費者產品安全及量測處處長 Mr. Michael Ong 擔任會議主席。

此次會議除美國、加拿大、墨西哥等美洲國家及韓國外，其餘環太平洋國家皆參與此會議，參加國家除了澳洲、汶萊、智利、中國、印尼、日本、馬來西亞、紐西蘭、巴布亞紐幾內亞、秘魯、菲律賓、俄羅斯、新加坡、泰國、越南、我國等 16 個會員體。其中中國代表為中國國家認證認可監督管理委員會總工程師劉衛軍，紐西蘭代表為紐西蘭經濟發

展部競爭、貿易暨投資部門首席技術顧問 Mr. Peter Morfee，越南由越南標準和品質中心暨東協 JSC EEE 主席 Luong Van Phan 代表，馬來西亞由能源委員會助理處長 Yusof bin Sarnawi 代表。會議第一天議程邀請講師說明與 APEC 電機電子相互承認協議相關之機制及協議。

首先 APEC 秘書處計畫處長 SUN Tao 以「Promoting APEC Trade in Electrical and Electronic Equipment」為題，以 1994 年在印尼領袖會議達成之 Bogor Goals 為目標，希望達成亞太地區自由及開放貿易投資之遠景。

緊接著由聯合諮詢委員會暨新加坡標準、生產力暨創新局 (SPRING) 消費者產品安全及量測處處長 Mr. Michael Ong 報告其對 APEC EEMRA 研討會之簡介、具體目標與經驗分享。

此會議上並安排來自汶萊電機工程技術機構之 William Voon 博士報告，William Voon 博士從工業界之角度來看 EEMRA 對促進貿易便利化需求之期待，認為透過相互承認之簽署來承認各會員體測試報告及驗證，與建立訊息交換、警示系統，及電機電子法規之調和都是可以達到促進貿易便利化之方法。

來自馬來西亞電機電子協會的榮譽院士 Ir. Rocky Wong 在本研討會中，對於 EEMRA 促進貿易便利化之需求提出看法及建議。為了便利區域內之貿易便利，他冀望能便利具專

業認證或有能力工程師之移動性並加強訊息分享與交流。

越南標準和品質中心暨東協 JSC EEE 主席 Luong Van Phan 在研討會上對於東協以電子電機產品之共同市場為目標，介紹東協 EEMRA 之背景、運作，與東協各國調和法規體制之 EEE 協定及東協 EEE 協定實行要素。

聯合諮詢委員會暨新加坡標準、生產力暨創新局 (SPRING) 消費者產品安全及量測處處長 Mr. Michael Ong 延續 JSC EEE 主席 Luong Van Phan 提及之東協 EEE 協定實行要素，來讓會員體更瞭解 MRA 與如何運作以達到逐步實現 APEC EEMRA，他更進一步闡述實行 APEC EEMRA 三個階段特性。從資料交換階段、測試報告之相互承認階段到驗證結果之相互承認階段，強調各階段之目標，並說明最近幾屆 JAC 會議中實現 APEC EEMRA 之成效。

第二天研討會上，讓各會員體代表報告各國法規體制之更新、改進及阻礙對 EEMRA 參與之意見分享，本局以「中華台北之符合性評鑑活動」為題，對現行商品檢驗法規、符合性評鑑程序以及目前台灣檢驗、驗證及認證體制作簡介，讓會員體更進一步瞭解台灣之檢驗體制。

一.過程

(一)電機電子相互承認協議訓練研討會

會議第一天議程，APEC 秘書處計畫處長 SUN Tao 以「Promoting APEC Trade in Electrical and Electronic Equipment」為題，介紹 APEC 會員體佔世界人口、貿易量及國民生產毛額(GDP)分別為 41%、49%及 55%，對於 APEC EEMRA 在促進貿易之助益，列出幾項要點：

- 促進更好之資訊與法規體制交流。
- 透過相互承認協定來減少商務時間與成本。
- 消除重複性商品測試。
- 透過驗證與檢查來幫助產品市場擴展。

他並重申 APEC EEMRA 之開路者倡議議題進展目前已有 16 會員體（澳洲、汶萊、智利、中國、香港、印尼、日本、韓國、馬來西亞、紐西蘭、菲律賓、蘇聯、新加坡、我國、泰國、越南）參加第 1 階段；5 會員體（澳洲、馬來西亞、紐西蘭、新加坡、汶萊）參加第 2 階段；4 會員體（澳洲、紐西蘭、新加坡、汶萊）參加第 3 階段。

緊接著由聯合諮詢委員會暨新加坡標準、生產力暨創新局 (SPRING) 消費者產品安全及量測處處長 Mr. Michael Ong 報告此次研討會之具體目標，強調此研討會具體目的在於促進各會員體間法規瞭解、提升檢驗體制信心、及區域性或國際性符合性評鑑制度經驗分享，並提供分享平台之機會給政

府、學術討論及包括認證機構體系如 IEC, IECEE, IPLAC, PAC 及工業界人士之經驗交換。

1. 工業參與意見

汶萊電機工程技術機構之 William Voon 博士報告 EEMRA 對促進貿易便利化需求，他指出實行 MRA 之益處及貿易便利化之原因，可歸因於各國對於家用電機電子產品及建築用附屬電器如插座、照明及切換器等，有不同之法規體制如安規、EMC 及產品效能，各會員體又有不同之電力系統包括電壓 110/220 V、頻率、接地系統、保護安全系統及電力分配系統。APEC EEMRA 之參與有助於加速標準化之過程和減少測試時程，透過相互承認之簽署來承認各會員體之測試報告及驗證，並建立訊息交換、警示系統，及電機電子法規之調和都是可以促進貿易便利化之方法。

馬來西亞電機電子協會之榮譽院士 Ir. Rocky Wong 對 EEMRA 促進貿易便利化表示，WTO 及其多邊協定都是建構在以往 GATT-貿易商品或 GATS-貿易服務之 TBT 協定基礎上。他進一步提出從工業角度投資者之期望清單包括：(1)擴展所有適用各種電壓之電機電子產品，(2)將消費者保護之觀念推展至保護大眾利益問題，(3)修改 EEMRA 之範圍來增進貿易便利之總量，(4)藉由 SDoC 方法之採納不僅可以降低處理業務之費用並且讓產品發展費用更具可預測性。除此之

外，為了便利區域內之貿易便利，他冀望能便利專業認證及有能力工程師之移動性並加強訊息分享與交流。

2. 東協 JSC EEE 觀點

越南標準和品質中心暨東協 JSC EEE 主席 Luong Van Phan 在研討會上對於東協以電子電機產品之共同市場為目標，東協 EEE 協定實行之要素可分為(1)EEE 協定基本要求包括安規、環境及 EMC (2) EEE 協定符合性評鑑程序中之機制及產品驗證系統。為此他更進一步解釋東協 EEMRA 及東協 EEE 協定之不同，強調東協 EEE 協定藉由修改各國法規來達成東協建立共同市場之目標。

3. 對 MRA 簽署之信心程度分析

聯合諮詢委員會暨新加坡標準、生產力暨創新局 (SPRING) 消費者產品安全及量測處處長 Mr. Michael Ong 提出如何運作 MRA 之簽署，最重要之檢驗信心程度會受符合性評鑑程序是否健全所影響，最後才能完整與國際標準調和，在這種堆疊架構下簽署之 MRA，其檢驗信心程度是最高的。對於實行 APEC EEMRA 三個階段特性，第一階段為資料交換階段包括現行強制性要求、符合性評鑑程序體制和範圍、聯絡點及指定之權責機關，並希望能增加電機電子法規體制之透明度及建立經驗分享之網路。第二階段為測試結果之相互承認階段，測試機構將以 IECEE CB Scheme 為架構

或 APLAC 多邊 MRA 及強制性要求為依據。第三階段為驗證結果之相互承認階段包括指定驗證機構符合會員體之認證與驗證要求、接受由指定驗證機構簽發之驗證結果及會員體相互接受驗證報告，驗證機構以 IECEE CB-FCS 為架構或 PAC 多邊 MRA 及強制性要求為依據。

4. IEC/IECEE

IEC/IECEE 之執行秘書 Mr. Pierre de Ruvo 介紹 "IECEE CB Scheme and FCS and its success in meeting the needs of industry and government regulators", 其主要內容摘要如下：

介紹 IEC/IECEE 之組織架構包括符合性評鑑委員會(CAB)及標準管理委員會(SMB)，並特別提及此 CB 體系中之驗證管理委員會(CMC)。按照 IECEE 規定，CMC 在國際電工委員會符合性評鑑委員會 (IEC/CAB) 之授權下工作，全面負責 IECEE 之運作。CAB 負責批准 CMC 關於更改 CB 體系規則、官員之任命、財務及 IECEE 之政策等方面建議。

- 驗證管理委員會 (CMC) 組織包括訴願委員會(Board of Appeal), 主席顧問團(Chairman Advisory Group), 政策及策略論壇 (Policy and Strategy Forum), 測試實驗室委員會(Committee of Testing Laboratories,CTL), 評鑑與驗證顧問團(Assessment and Certification Advisory Group, ACAG) 及工廠檢查委員會 (Factory Inspection Committee, FIC)。

- 評鑑與驗證顧問團(Assessment & Certification Advisory Group, ACAG)
 - ACAG 主要負責同儕評鑑之監視。
 - 決定對 ISO/IEC Guide 及 ISO/IEC 17025 共同之瞭解及方法。
 - 評估對候選國家級驗證機構(NCB)及測試實驗室(CTBL)之評鑑報告並對 CMC 提出建議。
- 測試實驗室委員會(Committee of Testing Laboratories, CTL)
 - 詳述如何執行 IECEE 相關測試以達到測試結果之可複製性。
 - 調和測試儀器製造及使用，並提供建議給相關 IEC 技術委員會或次級委員會以改善標準。
 - 透過研討會將可以證明或討論之實際測試問題提供給測試實驗室。
- 工廠檢查委員會(Factory Inspection Committee, FIC)。
 - 包括工廠稽核、檢查及後續進一步服務。
 - 工廠稽核、檢查之目地可做為提供符合性評鑑之元素，此符合性評鑑元素可以做為供應商符合性聲明，及驗證系統 1 升級至驗證系統 5，來做為 CB scheme 升級至 CB-FCS 之必要條件。

5. APLAC

新加坡標準、生產力暨創新局（SPRING）主管 Chang Kwei Fern 女士報告 Asia Pacific Laboratory Accreditation Cooperation (APLAC)之多邊相互承認協定(MLA)如何達到企業及政府主管之需求，其內容簡述如下：

APLAC 之主要角色包括：

- 亞太地區實驗室、檢查機構及標準材料生產者(RPM)認證組織發展。
- 提倡亞太地區實驗室、檢查機構及標準材料生產者(RPM)認證組織作為便捷貿易之工具。
- 協助發展認證系統。
- 認可亞太地區測試校正、檢查機構及標準材料生產者(RPM)認證組織。
- 和其他區域實驗室、檢查機構及標準材料生產者(RPM)認證組織加強合作。

APLAC 之認證乃根據實驗室、檢查機構及認證組織之技術能力、完整性、透明度及認證範圍為主，並遵循國際標準法規。

6. PAC

我國之全國認證基金會(TAF)經理李步賢先生報告PAC之多邊相互承認協定(MLA)如何達到企業及政府主管之需求，其內容簡述如下：

- PAC 之具體目標為提出一個全球化系統，並同意國際驗證認可及管理系統、產品、服務、人員及其他計畫之符合性評鑑。
- MLA 為 PAC 會員體之間之正式協定。依據認證組織間對等之認證計畫，透過認證組織同儕檢視來驗證。
- MLA 之計畫包括品質管理系統、環境管理系統及生產驗證系統。

PAC 符合性評鑑之原則為健全同儕評鑑所支持之客觀、公正、能力、獨立、透明及一致，以達到檢驗之信心。

(二) 本局報告「中華台北之符合性評鑑活動」

本局以「中華台北之符合性評鑑活動」為題，對現行商品檢驗法規、符合性評鑑程序、及簡介目前台灣檢驗、驗證及認證體制。內容包括：

(1) 本國商品檢驗法規之介紹與實行

- － 法規歷史背景及產品範圍
- － 檢驗方法介紹
- － 中華民國商品檢驗標識
- － 後市場監督

(2) 檢驗標準

- － 程序及國際調和

(3) 符合性評鑑系統

- － 測試實驗室、認證組織、及工廠檢查

(4) 認證系統

- － 第三者驗證機構
- － 相互承認

(三) 第12次聯合諮詢委員會

根據聯合諮詢委員會主席 Mr. Michael Ong 期許 EEMRA 具體目的可分為：

1. 讓會員體電機電子主管瞭解 MRA 之元素與運作模式。
2. 讓會員體電機電子主管建立網路分享願景、經驗及有關 EEE 法規之想法。
3. 建立電機電子主管與地區符合性評鑑機構之對話，以提升對 APLAC 和 PAC 評鑑過程之信心。
4. 建立對 IEC 標準和 IECEE CB Scheme 和 CB-FCS 計畫之瞭解。
5. 為工業界對電機電子規章制度增加明確度
6. 改進風險估計和管理。

以此具體目標為主軸，邀請區域性及國際性符合性評鑑制度之專家及在工業界有經驗人士在研討會上分享經驗，與會各會員體經過兩天訓練過程後，提供許多寶貴之意見及目前可能遭遇之問題，這些議題包括：

- 電機電子法規主管對於發行不同標誌之評估。。
- 就發布市場上有問題之仿冒電機電子商品之經驗交換。
- 交換法規上如何處理電機電子商品之網路交易之經驗。
- 指定符合性評鑑機構之法律責任。
- 符合性評鑑機構能力經由認證組織或 IECEE CB Scheme 之信心程度。

- 有關執行單一標誌之法律責任。

主席希望各會員體能協助完成香港後市場監督之調查問卷。並提醒尚未完成調查問卷之會員體能協助完成此份問卷查，並送至 APEC 秘書處，香港亦將在下一次 JAC 會議，就此後市場監督問卷之結果，分析其研究心得。有關主席希望各會員體能協助完成香港後市場監督之調查問卷，本局已完成該調查問卷，亦於 4 月 1 日送交 APEC 秘書處。

二.目的

此次 EEMRA 研討會概念來自於 2005 年八月在印尼巴里島舉行之第一次電機電子相互承認協議訓練研討會，當時在印尼舉行之研討會目的是為了找出造成 EEMRA 進度緩慢之阻礙及實現 EEMRA 前進之方法。對於 EEMRA 整體之效果與益處，除了便利在亞太地區電機電子儀器(Electrical and Electronic Equipment, EEE)貿易之便利，EEMRA 效果也必須依靠電機電子(EI)法規主管機關持續及積極參與 JAC 會議及相關研討會，其益處並包含進入市場之確定性與減少成本達到進入市場之即時性。整個研討會涵蓋相當程度主題來讓亞太地區電機電子(EI)法規主管機關促進對 EEMRA 共同之瞭解與信心，亦藉此機會提供亞太地區電機電子(EI)法規主管機關及工業學術界參與者討論與經驗分享之機會。

聯合諮詢委員會主席 Mr. Michael Ong 期許透過此次電機電子相互承認協議訓練研討會(EEMRA)，讓會員體電機電子主管瞭解 MRA 之元素與運作模式，以利建立網路分享願景、經驗及有關 EEE 法規之想法，並建立電機電子主管與地區符合性評鑑機構之對話，以提升對 APLAC 和 PAC 評鑑過程之信心。此外，建立對 IEC 標準和 IECCE CB Scheme 和 CB-FCS 計畫之瞭解，來為工業界對電機電子規章制度增加明確度及改進風險估計和管理。透過對各國法規之瞭解及區域性、國際性符合性評鑑制度之經驗分享有助於

達成各會員體對 EEMRA 之瞭解與參與意願之目的。

參、心得及建議

一、APEC EEMRA 是我國在強制性領域參與之重要相互承認活動，從各會員體之報告及提問過程，瞭解到不論是測試報告或是驗證結果之相互承認，EEMRA 皆可為亞太地區帶來利益，經多年推行，近年來雖小有進展，惟仍不甚順利。研析其原因可歸納於下列兩點：

1. 目前各會員體間對其他 APEC 會員體之檢驗及驗證體系信心不足。

其主要因素為 (1)亞太地區各國文化、消費習慣、檢驗及驗證水平不一致。(2) 部分會員體對於參與 EEMRA 第 2、3 階段之法規制度及基礎建設尚未建置完備。(3)各會員體國內供電電壓及插座形式等電力系統規格均有差異，且未來統一不易。因而多數會員體對於加入 EEMRA 第 2、3 階段仍有疑慮。

2. IECCE CB Scheme 運作成效良好。

IECCE CB Scheme 雖屬於自願性領域，卻是機電子產品相互承認活動中最具成效之制度，從組織架構來看，其以國家為單位之國家級驗證機構(NCB)來負責發行 CB 測試報告及證書，與依附在 NCB 底下遍佈各國之測試實驗室(CBTL)，各會員體彼此間相互承認其測試報告，其驗證管理委員會(CMC)負責 IECCE 所有測試實驗室、檢驗及工廠檢

查之監督與查核業務。目前部分 APEC 會員體亦是 IECEE CB Scheme 會員，其透過 IECEE CB Scheme 機制之運作，商品檢驗及驗證亦可以順利進行。

對於如何扭轉 APEC EEMRA 的現況，本次研討會以 IECEE CB Scheme 之運作經驗為借鏡，試圖從組織架構面找出解決 APEC 各會員體法規及制度差異之方式，惟我國與會代表認為除此之外，APEC EEMRA 需要有一個更具市場影響力及領導力之中立檢驗驗證管理委員會來凝聚 APEC 會員體共識及調和相關之歧見。

- 二、有關會議中對於美國在 WTO 非農業市場(NAMA)中之「電子產品之電氣安全及電磁相容」提案加以討論，顯示 APEC 會議對於 WTO 相關議題亦相當關切；特別是本次會員體討論之主題集中在此提案之商品範圍、SDoC 實施方式及各附錄正面表列之商品。對於美國 WTO/NAMA 之提案，其宣稱係為消除電子產品之電氣安規及電磁相容性非關稅貿易障礙所提之協商，本提案內容提及之符合性評鑑程序及廠商符合性宣告，牽涉到電子類商品符合評鑑相關業務之正面表列商品，此表列商品將因各國考慮進出口商品競爭優勢而有所差別，由於各國立場不同，勢必很難達到一致結果，惟其進展仍值得我國密切注意。

三、祕魯在會議上亦表示有興趣加入第一階段，巴布亞紐幾內亞則考慮加入第一階段及第二階段，我國考量下列主要因素，目前尚未決定加入 APEC EEMRA 第 2 及第 3 階段之時程 (1) EEMRA 效益不明顯。(2) 目前我國較希望洽簽雙邊 MRA 之日本、韓國二會員體皆表示由於是 IECEE CB Scheme 成員，透過該體系之運作已可達成相互承認之目的，並無意加入 EEMRA 第 2 及第 3 階段。(3) EEMRA 屬多邊相互承認協議，若有新會員體加入第 2 及第 3 階段，其他已加入之會員體除非有正當理由，原則上應接受該會員體所提出之指定試驗室及/或驗證機構，由於 APEC 各會員體測試及驗證機構之水準參差不齊，有些會員體之認驗證制度是否已達我國之要求仍待評估。(4) 我國相關產品之法規作業（如產品責任制度）及後市場監督機制亦尚待立法或建置。

綜觀，建議我國仍先朝雙邊相互承認之方向努力，較易達到貿易便捷化之效益。

肆、附錄-與會資料

一、行程及紀要

日期	紀要
5 月 11 日	啟程至汶萊
5 月 12 日	參加議程： 電機電子相互承認協議訓練研討會
5 月 13 日	上午議程： 報告各國法規體制之更新、改進及阻礙對 EEMRA 參與之意見
	下午議程： - 達到良好法規及 MRA 設計之風險管理報告 - 討論 JAC 工作計畫 - 討論 APEC EEMRA 之加入與進展現況 - 討論如何促進加入 APEC EEMRA 第 1、2 及 3 階段
5 月 14 日	參加議程： 討論 JAC 工作計畫
5 月 15 日	回程抵台北

二. 附件

1. Overview of APEC EEMRA Seminar and its Objectives
-by Michael Ong
2. Industriy Perspective on the Need for MRAs to Help Facilitate Trade-by Willian Voon
3. Seminar on Understanding and Implementing the APEC EEMRA-by
Ir. Rocky Wong
4. ASEAN EEMRA & ASEAN EEE Agreement on Harmonized
Regulatory Regime-by Luong Van Phan
5. Understanding MRAs, How they Function and Steps toward
Implementation of the APEC EEMRA-by Michael Ong
6. IECEE CB Scheme and FCS and its success in meeting the needs of
industry and government regulations-by Pierre de RUVO
7. APLAC Multilateral MLA-Meeting the needs of industry and
government regulators-by Cheng Kwei-Fern
8. Introduction to the PAC Multilateral Mutual Recognition
Arrangement(MLA) and its success in meeting the needs of industry
and government regulators-by Pu-Hsien Li

Overview of APEC EE MRA Seminar and its Objectives

Michael Ong
Chair
APEC EE MRA-Joint Advisory Committee

12 May 2008



Background

- ❑ This seminar was conceptualised during the first APEC EE MRA Seminar in Bali, Indonesia, 10-11 August 2005
- ❑ The objective of the Bali Seminar was to identify the impediments for the slow progress and find a way forward to implement the EE MRA.

Collective Effort and Benefits

- ❑ The APEC EE MRA facilitates trade in Electrical and Electronic Equipment (EEE) in the region
- ❑ The effectiveness of APEC EE MRA depends on increased and active participation of EE regulators both at JAC meeting and related seminars such as this
- ❑ The benefits are :
 - Certainty of market access
 - Reduce cost and time to market.

Overview of Seminar

- ❑ The seminar covers a range of topics which are aimed at promoting a common understanding and confidence amongst the region's EE regulators
- ❑ Key sharing by representatives from the Specialist Regional Bodies such as APLAC, PAC and International Bodies like the IEC and its IECEE conformity assessment scheme
- ❑ The Seminar will provide opportunities for discussions and exchange of experiences amongst APEC EE regulators and participants – such as from industry, government and academia.

Objectives

❑ The objectives of the seminar are :

- Create awareness amongst EE regulators of the elements of MRAs and the way they function
- Build network amongst EE regulators to share perspectives, experiences and ideas on regulating EEE in the region
- Create a dialogue between the EE Regulators and the Special Regional Bodies to enhance confidence in APLAC and PAC processes of accreditation
- Create a better understanding of the IEC standards and the IECEE CB and FCS Schemes
- Increase transparency in EE regulatory regimes within the region for industry
- Improve risk assessment and management in relation to EEE traded in the region.

Industry's Perspective on the Need for MRAs to Help Facilitate Trade

**William Voon,
TECO (Electrical), Brunei Darussalam**

12 May 2008

Slide: 1

Why do MRAs benefit and facilitate trade?

Member economies apply different regulatory regimes (product safety, EMC and energy efficiency mainly for :-

- Household electrical and electronic appliances
- Electrical accessories for building e.g. mains socket outlets, plugs, switches and lighting

Slide: 2

Understanding and Implementing the APEC EE MRA

Why do MRAs benefit and facilitate trade?

Member economies have different electrical supply systems :-

- Mains Voltage eg. 230V/110V
- Mains Frequency eg. 50Hz/60Hz
- Grounding / earthing systems eg. TT, TNS, TNC, TNCS
- Safety and protection systems
- Power distribution systems

Slide: 3

Understanding and Implementing the APEC EE MRA

Benefits of EE MRAs

- Standardization of consumer products
- Remove costly re-testing and re-certification
- Enable quicker time to market
- Ensure market certainty
- Reduce cost to manufacturers and traders
- Tapping and sharing of testing and certification resources within the region

Slide: 4

Understanding and Implementing the APEC EE MRA

How MRAs and Other Measures Help to Facilitate Trade

- Mutual recognition
 - Mutual recognition of test reports
 - Mutual recognition of certification

Other Measures

- Information exchange
 - Updated on each member economy regulatory requirements
 - Provide each member economy access to certification and test reports
- Safety alert system
 - Exchange of information on unsafe EEE
- Harmonize EE regulatory regime
 - One standard, One Test, One Certification and Accepted by All.

Slide: 5

Understanding and Implementing the APEC EE MRA

THANK YOU

Slide: 6



SEMINAR ON UNDERSTANDING AND IMPLEMENTING THE APEC EEMRA

**12-13 May, 2008
Brunei Darussalam**

INDUSTRY'S PERSPECTIVE ON THE NEED FOR MRA'S AND OTHER MEASURES TO HELP FACILITATE TRADE:-

By Engr. Rocky H.T. Wong, FIEM, P.Eng, Hon. FAFEO ASEAN Engr., Fellow AAET, MACEM, Honorary Fellow (TEEAM) cum Technical Adviser; Chairman The IEM pro-ETI Bureau; The Head Commissioner ASEAN Engineers Register.

RWHT/APEC EEMRA SEMINAR/BRUNEI/Rev(1)080408

1/10



- First, here is WTO and its multi-lateral Agreements – among which are the GATT (1994) for trade-in-goods, GATS for trade-in-services, Agreement on TBT and others.
- FTA (CECA), based on a WTO⁺ approach, is to facilitate preferential trade among trading nation-partners with lower limitations to cross-border mobility of goods & services; consumption; capitals & investment; and professionals, skilled personnels & talents.
- Have FTA, negotiate MRA's; FTA's/MRA's are to benefit the business community (i.e. the state-holders of the associated industry).

2/10

- Designated Authorities are national regulators to realising and to operationalise MRA's.
- Domestic regulatory regimes – in the context of the WTO's TBT Agreement, are to be international standards centric; as relevant IEC standards underpin both the APEC EEMRA and the ASEAN EEMRA.
- 1st G-EEMRA has coverage of LV (consumer) Electrical and Electronic Equipment (EEE) – aim: consumer protection. That is viewed as only a start.

3/10

- The scope of coverage of the 1st G-EEMRA should be expanded for the full spectrum and range of EEE of all voltages, ratings and applications.
- 1-1SDoc Approach – One standard, One Test to Supplier's Declaration of Conformity.
- Besides consumer protection – protecting public interest is equally important;
- meaning to maintain public confidence in the standard of services provided by regulated and licensed electrical competent personnels.

4/10

- The Qualified and Competent Electrical Engineering Works Delivery Team consisting of professionals, para-professionals and skilled workers are expected to deliver safe electrical installations and facilities in a professional and competent way, and will continue to maintain public confidence in the standard of services provided during the operation and maintenance of the same.
- E2WMRA will facilitate trade-in-services in electrical engineering works, and possibly the transactions of power & energy cross border – as in the cases of the ASEAN power grid, and the ASEAN gas network. The proposed SKRL will involve a lot more electrical engineering works too!

5/10

An Industry Stake-holder's Wish List:-

- Now, after a number of years since APEC EEMRA (and ASEAN EEMRA) came into being, Industry stake-holders have a better and deeper understanding of FTA's and MRA's.
- The 1st G-EEMRA which has a coverage limited to LV (consumer) EEE should be revised, expanding the scope of coverage to include EEE of all voltages, ratings and applications.
- We should progress from consumer protection (only) to protecting public interest issues.

6/10

- The next generation and revised MRA with expanded scope of coverage will facilitate larger volume of trade.
- With the acceptance of the 1-1SDoc approach, i.e. one standard, one test of supplier's declaration of conformity, the cost of doing business will be lowered and product development costs predictable.
- To facilitate trade-in services relating to electrical engineering works as would be delivered by regulated and licensed qualified and competent engineering personnels, TEEAM and the ASEAN Federation of Electrical Engineering Contractors (AFEEC) have proposed the realization of a E2WMRA which shall facilitate:-

7/10

- a) The mobility of professionals, para-professionals, skilled workers and talents of the qualified and competent electrical engineering works delivery team; and
- b) The exchange of information among the FTA partners in order to promote the adoption of harmonized standards-centric regulatory regimes governing electrical installation and testing, operation and maintenance of electrical installations and facilities; addressing electrical safety and other essential requirement issues that will protect public interest.

8/10

- If a similar E2WMRA is proposed for APEC, it is the belief the the Federation of Asia Pacific Electrical Contractors' Associations (FAPECA) will support the same.
- In the specific context of ASEAN – now with a formal charter coupled to the on-going ASEAN Economic Integration (AEI) agenda to achieving the ASEAN Economic Community (AEC) – come 2015, ASEAN would see the beginning of an EU type common market and a borderless production base.

9/10

- ASEAN citizens and Industry stake-holders have no option; ASEAN has to integrate, otherwise we vegetate. If that is the route we in ASEAN must take, then certain MRA's will have to give way to ASEAN Directives – after having harmonized the various standards-centric regulatory regimes in all the 10 ASEAN member-states.
- Let's start with ASEAN Directives for EEE and Electrical Engineering Works.
- Thank you.

10/10

Towards ASEAN common Electrical & Electronic Equipment Market

ASEAN EE MRA & ASEAN EEE AGREEMENT ON HARMONIZED REGULATORY REGIME

Luong Van Phan
Vietnam Standards and Quality Centre
Chair of the ASEAN JSC EEE

Brunei Darussalam, 12-13, May, 2008

Outline of Presentation

1. BACKGROUND
2. ASEAN EE MRA
3. ASEAN AGREEMENT ON
HARMONIZED EEE
REGULATORY
REGIME (ASEAN EEE
Agreement)

BACKGROUND

- EPWG (1999)
 - to draft EE MRA
 - First draft - June 2000
 - EE MRA signed April 2002
- JSC EE MRA (2003)
 - Provide key information on latest Regulatory Regimes
 - Designation of testing labs and Certification bodies

BACKGROUND

- JSC EE MRA task force (2004).
To draft ASEAN Agreement on harmonization of EEE Regulatory Regime
 - First draft 2/2004
 - Final draft – 11/2005
 - Signed – 12/2005

ASEAN EE MRA

- **Participation in acceptance of Test Reports**

- Participation: all 10 member countries
- Implementation: 14 test Labs listed
(Singapore: 2; Malaysia:1; Vietnam:2; Thailand:4; Indonesia:4; Philippines:1)

- **Participation in acceptance of Certification**

- Participation: 7 member countries
- Implementation:
 - 1 Product Certification Body (Singapore) listed
 - 1 Product Certification Body (Vietnam) listed

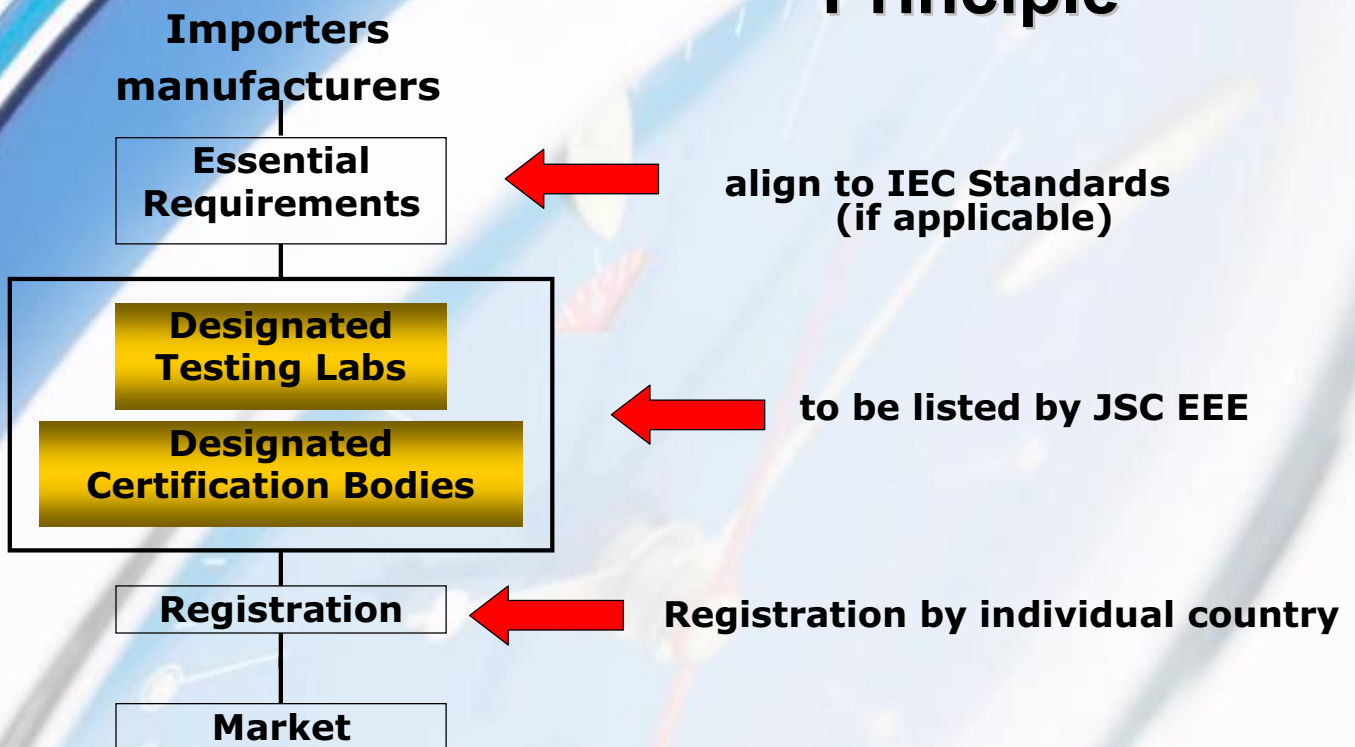
JSC EEE –

To implement the Agreement on the ASEAN Harmonized EEE Regulatory Regime (ASEAN EEE Agreement)

- Promotes designation of CABs to harmonised standards
- Provides information on Regulatory Regimes
- Drafts the document on Risk Assessment
- Sets up the principle for acceptance of IEC standards – version(s).

ASEAN EEE AGREEMENT

Principle



ASEAN EEE AGREEMENT

Element of the ASEAN EEE Agreement

- Essential Requirements for EEE
- Conformity Assessment Procedures



ASEAN EEE AGREEMENT

Essential Requirements for EEE

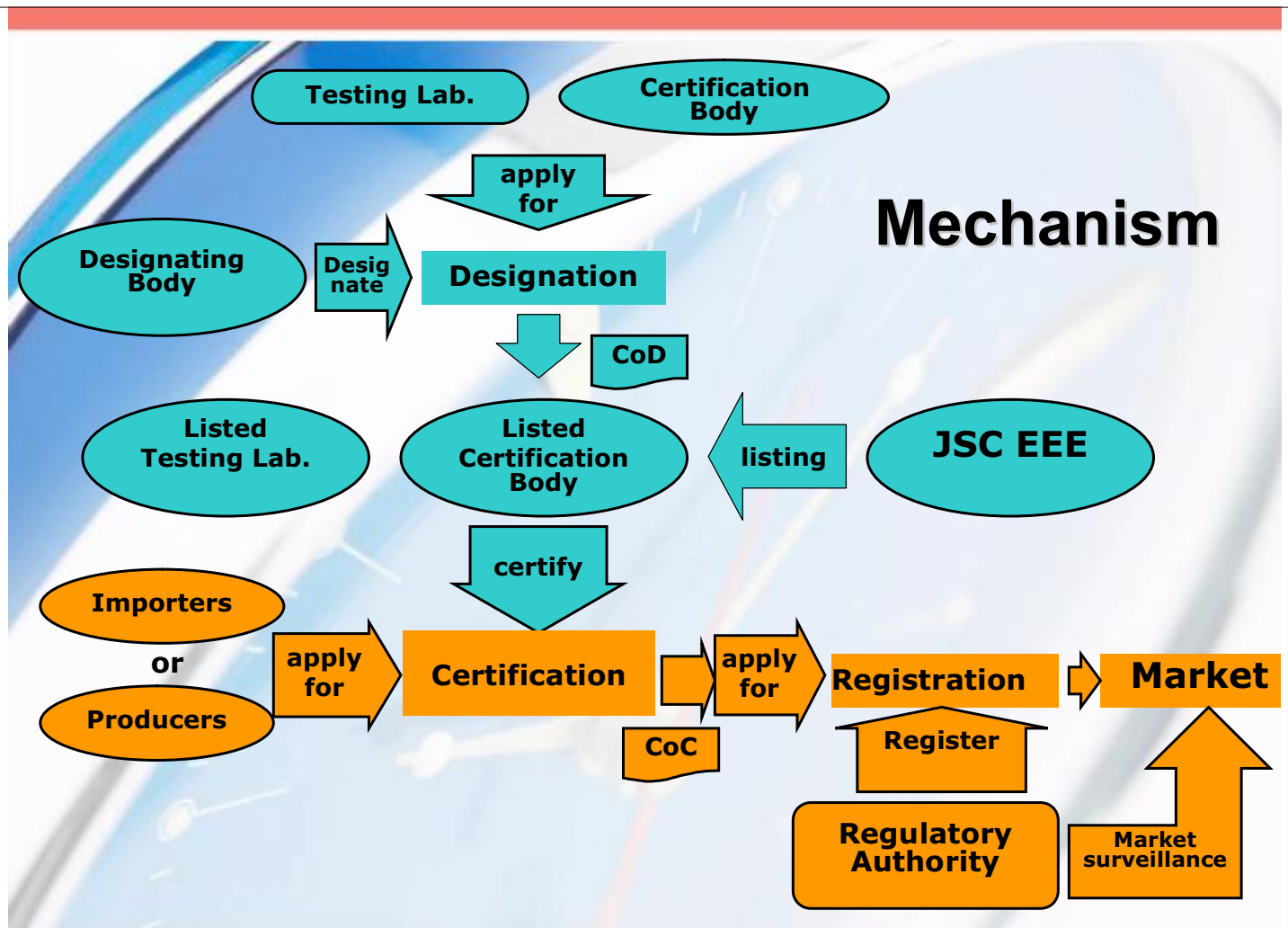
- Safety
- Environment (e.g. energy efficiency)
- Electromagnetic Compatibility



ASEAN EEE AGREEMENT

Conformity Assessment Procedures, Registration of EEE and Designation of CABs

- Mechanism
- Product Certification System



ASEAN EEE AGREEMENT

Product Certification System

- **Medium Risk EEE → System 1**
(type testing)
- **High Risk EEE → System 5**
(type Testing + Factory Inspection)

DIFFERENCES BETWEEN ASEAN EEE AGREEMENT AND ASEAN EE MRA

ASEAN EE MRA

Not necessary to change:

- Technical Regulation / Mandatory Standards
- Conformity Assessment Procedure & Conformity Assessment Bodies
- Laws & Administrative Provision

ASEAN EEE Agreement

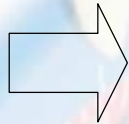
- Technical Regulation / Mandatory Standards
- Conformity Assessment Procedure & Conformity Assessment Bodies
- Laws & Administrative Provision

SHALL be in line with the Agreement

HOW TO IMPLEMENT ASEAN EEE AGREEMENT

1. Review

2. Amend

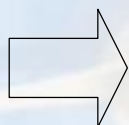


- Laws
- Technical Regulation / Mandatory Standards
- Administrative Provision

3. Develop

or

4. Establish



- Post Market Surveillance System
- Safety Alert of unsafe EEEs



**Towards a common Electrical &
Electronic Equipment Market**

Thank you !

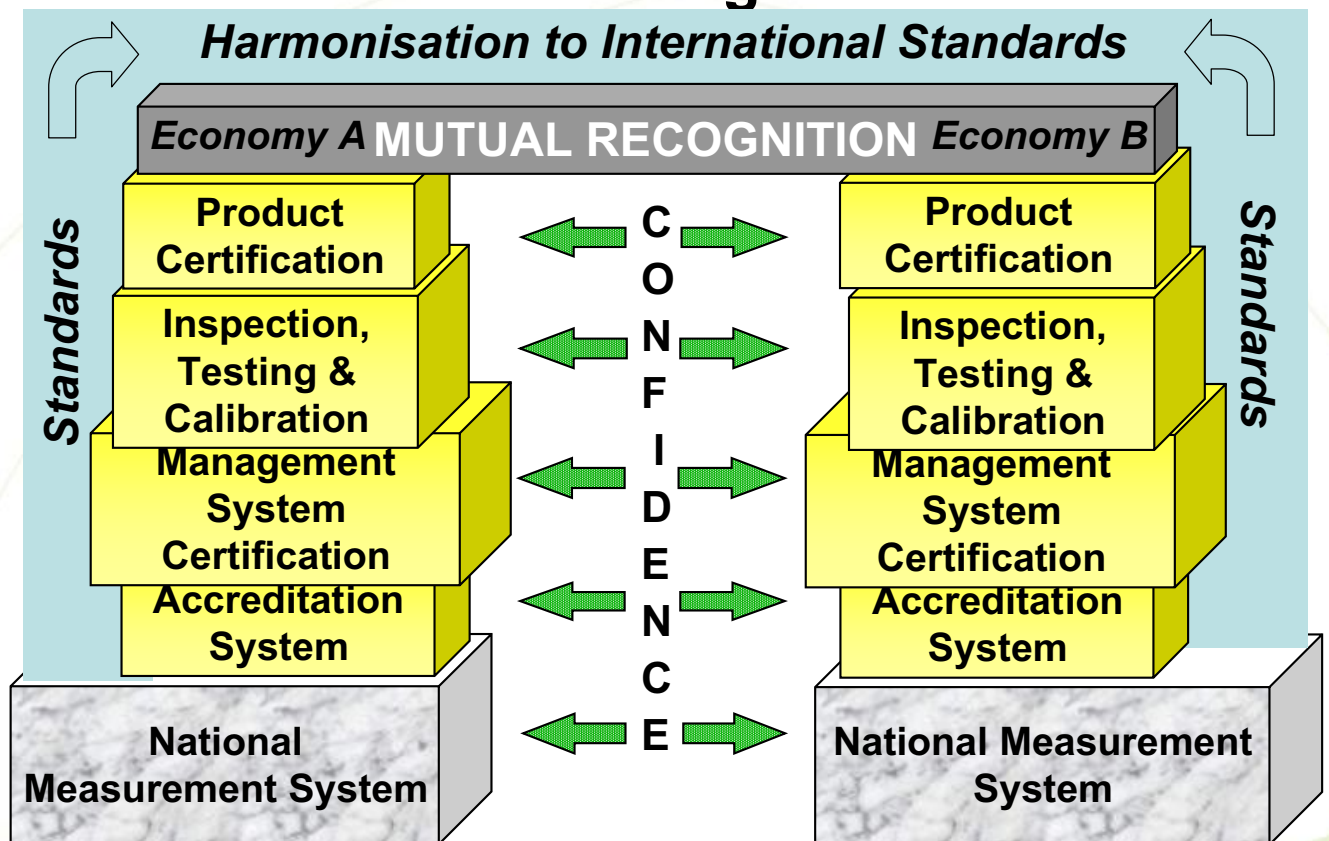
Understanding MRAs, How they Function and Steps toward Implementation of the APEC EE MRA

Michael Ong
Chair
APEC EE MRA-Joint Advisory Committee

12 May 2008



Understanding MRAs



History

- ❑ The APEC EE MRA was drafted by the APEC Ad Hoc Experts' Working Group – with its inaugural meeting in 1996
- ❑ The MRA was endorsed in 1999 in Rotoru, New Zealand.

Elements of the APEC EE MRA

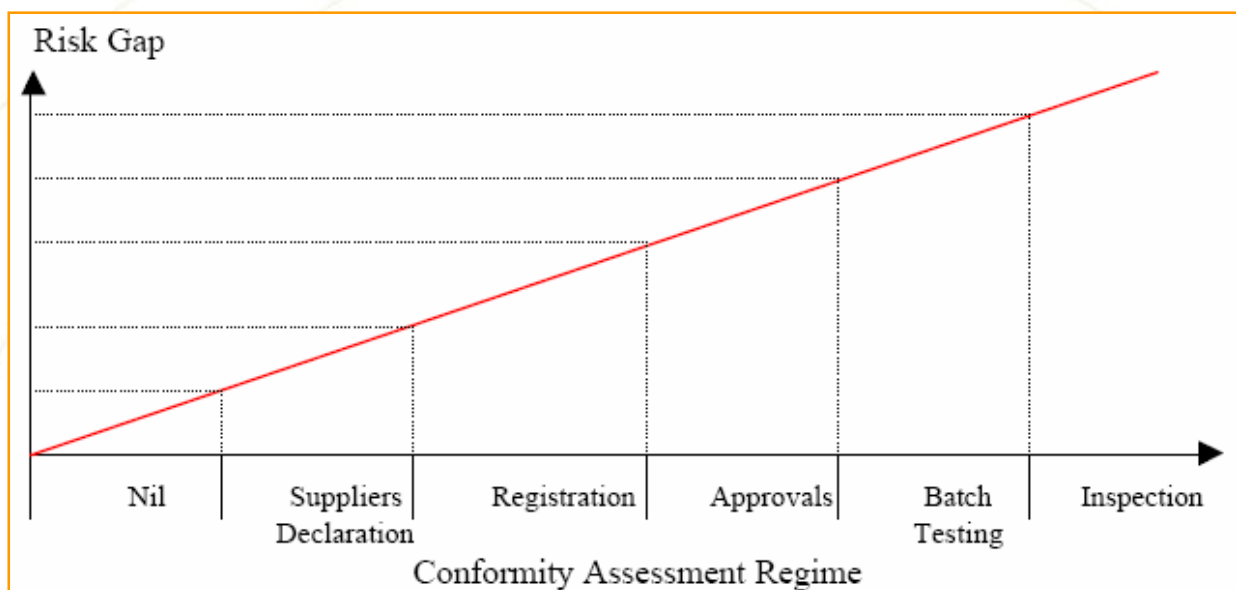
- ❑ The aim of the APEC EE MRA is to facilitate trade of EEE and it consists of 3 Parts :
 - **Part I – Information Exchange**
 - ❑ Increase transparency in EE regulatory regimes within the region for industry
 - ❑ Build network amongst EE regulators to share perspectives, experiences and ideas on regulating EEE in the region
 - **Part II – Mutual Recognition of Test Reports**

Underpinned by the IECEE CB Scheme and the APLAC Multilateral MRA and Mandatory Requirements imposed by regulators to support regulators' acceptance of conformity assessment results undertaken by Testing Facilities of participating member economies

Elements of the EE MRA

- **Part III – Mutual Recognition of Certification**
Underpinned by the IECEE CB – FCS and PAC Multilateral MRA for Product Certification and Mandatory Requirements imposed by regulators to support regulators' acceptance of conformity assessment results undertaken by Certification Bodies of participating member economies.

APEC Informative Notes on Good Regulatory Practice



APEC Joint Advisory Committee

The APEC Joint Advisory Committee (JAC) was formed in 1999. It is a body established by the APEC member economies for the purpose of administering and facilitating the effective functioning of the APEC EE MRA.

The JAC is to provide a forum and mechanism for discussing issues, sharing information and reaching decisions associated with the operation of the MRA.



Steps toward Implementation

- ❑ The following steps were taken toward implementation of the APEC EE MRA :**
 - (a) At the 10th JAC Meeting in April 2007, the application form for listing of designated Testing Facility and Certification Body was endorsed**
 - (b) The format for Certificate of Conformity (CoC) was also endorsed at the 10th JAC Meeting**
 - (c) At the 11th JAC Meeting in November 2007, the Notification Procedure for the designation of Testing Facility and Certification Body was endorsed**
 - (d) In April 2008, Singapore nominated TUV SUD PSB as Testing Facility and Certification Body of New Zealand**
 - (e) New Zealand accepted the nomination also in April 2008.**



Summary

The APEC EE MRA is underpinned by :

- **IECEE CB Scheme and APLAC Multilateral MRA for Part II**
- **IEC EECB – FCS and the PAC Multilateral MRA for Product Certification for Part III**

The APEC EE MRA does not duplicate work of the above Schemes and MRAs, rather it leverages on these Schemes and MRAs together with the mandatory requirements imposed by regulators of EEE to support regulators' acceptance of conformity assessment results undertaken by designated Conformity Assessment Bodies of member economies.

Summary

The APEC EE MRA offers significant benefits in terms of trade facilitation of EEE in the region. This includes certainty of market access, reduces cost and time to market.

Its effectiveness depends on increased and active participation of EE regulators of member economies.



WORLDWIDE SYSTEM FOR
CONFORMITY TESTING AND CERTIFICATION
OF ELECTROTECHNICAL EQUIPMENT AND COMPONENTS (IECEE)

IECEE CB Scheme and FCS and its success in meeting the needs of industry and government regulators



by
Pierre de RUVO
Executive Secretary IECEE

IECEE. Taking Conformity Assessment Further



"Always in service with God's guidance"



Allah Peliharakan Sultan - God Bless the Sultan

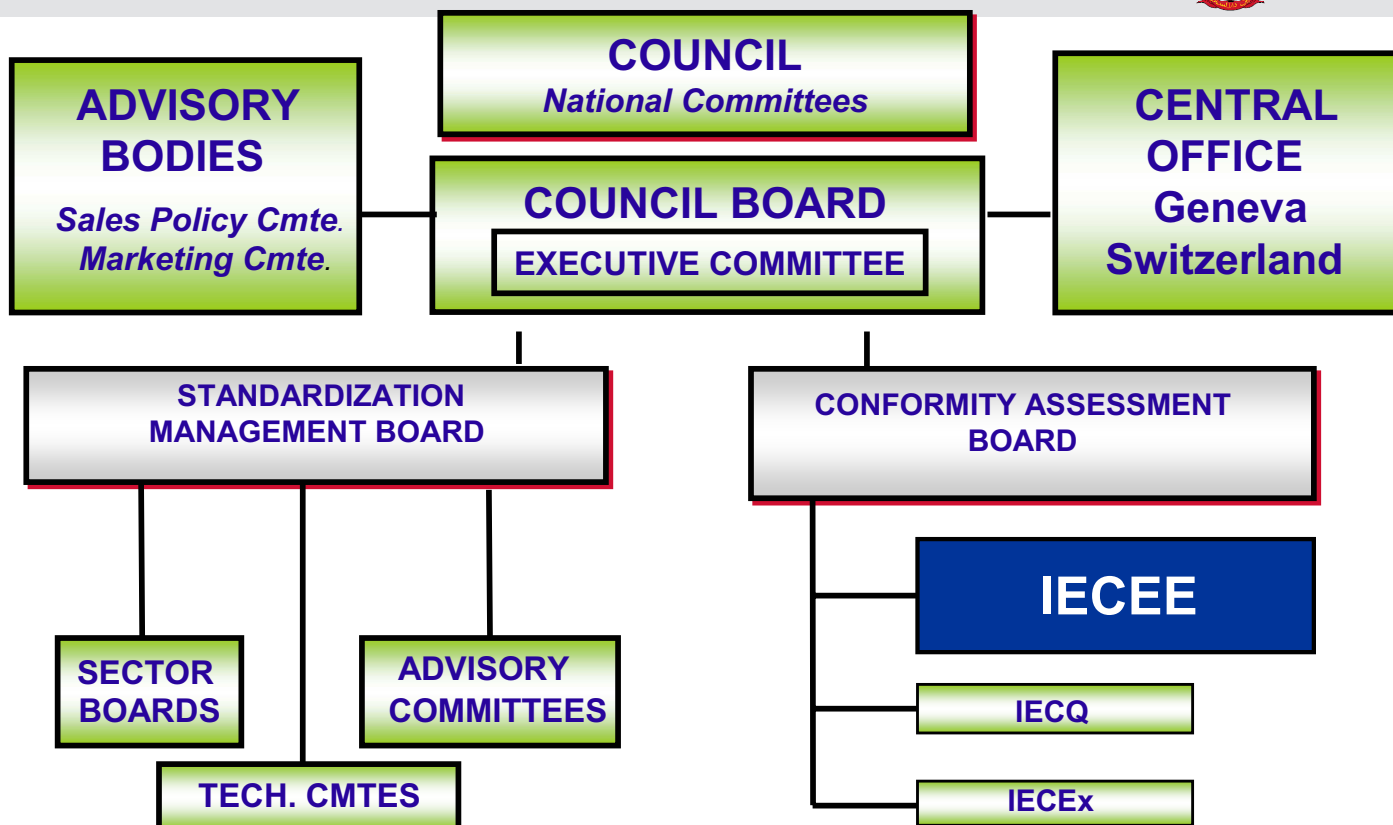




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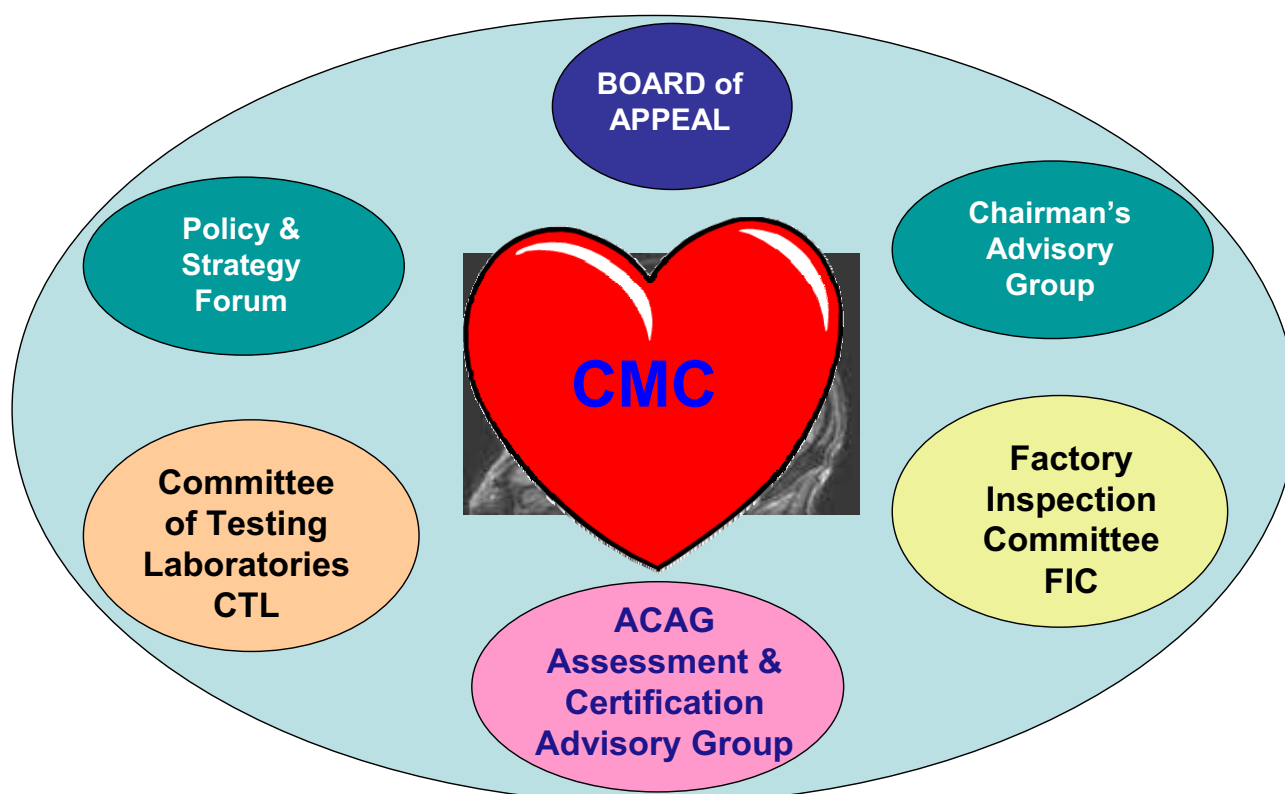
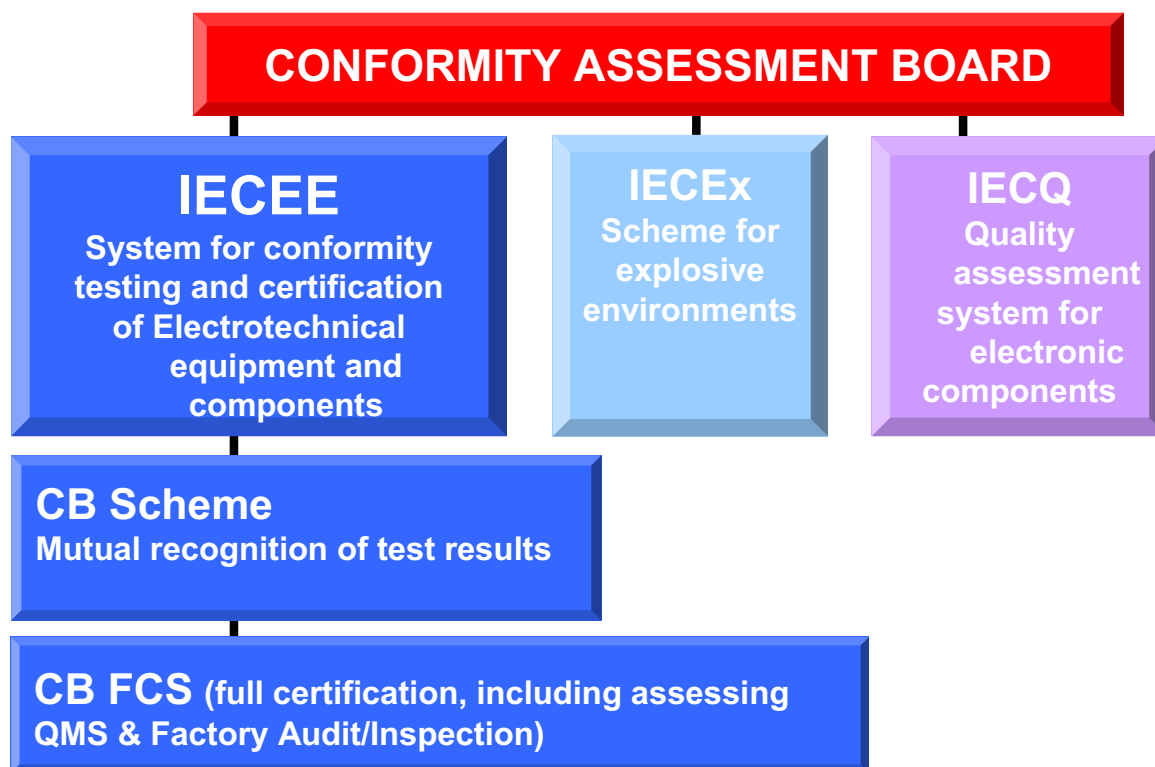
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Chairman



Pierre de RUVO
Executive Secretary



Jun XIE
Vice-Chairman



Fritz BEGLINGER
Treasurer

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BOARD OF APPEALS



Chairman: Don MADER (UL)



Bo YUMIN (CNCA)



Yoji ONO (JQA)

Members



Joe GRYN (CSA)



Trond SOLLIE (NEMKO)



**Ted Gaertner
(KEMA)**



**Jukka VUORINEN
(SGS FIMKO)**

Deputies



**Paul TAN
(TUV SUD PSB)**



**Gerhard DREGER
(VDE)**

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ACAG – Assessment & Certification Advisory Group

TERMS OF REFERENCE

- › To monitor the Peer Assessment and Re-assessment
- › To determine common understanding and approach on ISO/IEC Guide 65 and ISO/IEC 17025
- › To evaluate the Assessment Reports of candidate NCBs and CBTLs and make recommendations to the IECEE-CMC

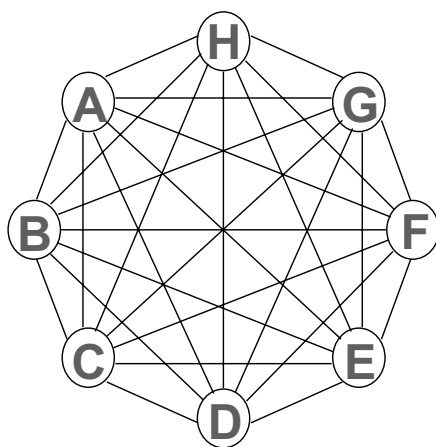


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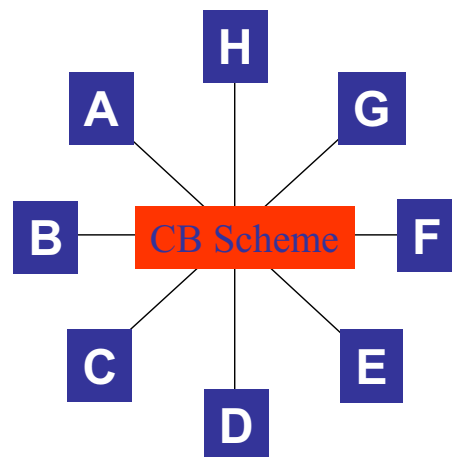
«Bilateral recognition»


 $n(n-1)/2$ relations

n = 57

1596 audits
798 agreements

Peer assessment Multilateral



n relations 57 NCBs

57 audits
1 agreement

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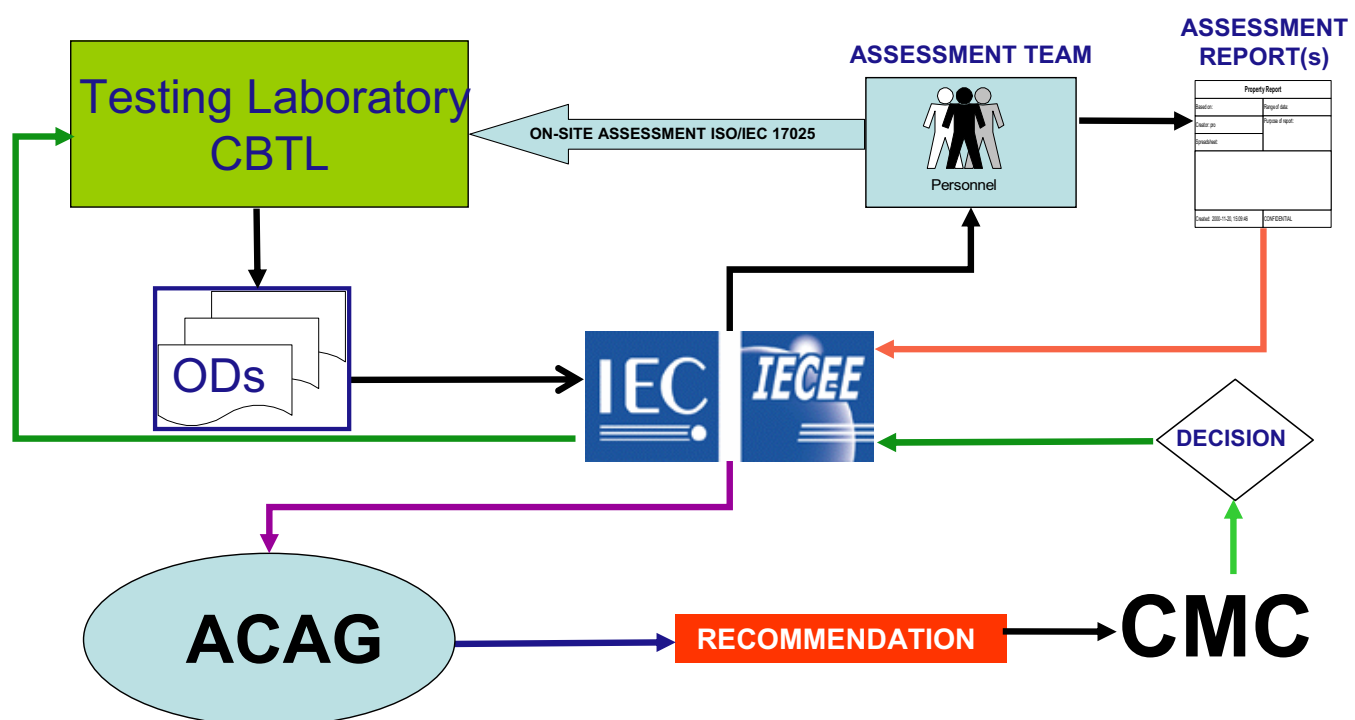


Well-founded “Mutual Confidence” is needed for NCBs to grant their Certification Mark on the basis of the review of Test Results without repeat testing; this is what Peer Assessments achieve.

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CTL - Committee of Testing Laboratories



Joe GRYN
CTL Chairman



John M. Thompson
CTL Secretary

The CTL is the Technical branch of the IECEE and plays an essential role to build confidence.

The CTL is composed of experts from 229 Testing Laboratories and 62 Certification Bodies



CTL - Committee of Testing Laboratories

The main tasks of the CTL are to:

- detail the way in which the tests related to the IECEE have to be carried out so as to achieve the necessary reproducibility of test results,
- harmonize the design and use of the test equipment referred to in standards and to make recommendations to the relevant technical committee or subcommittee of the IEC for improvements of those standards,
- provide testing laboratories with a forum in which practical testing problems can be demonstrated and discussed



CTL - Committee of Testing Laboratories

The task of the CTL is to:

- Organize Proficiency Testing Programmes under the auspices of the IECEE CMC
- Organize Workshops to analyze the results of PT programmes and subsequent test methodology to achieve consistent test results
- Carry out other technical work as directed by the CMC.

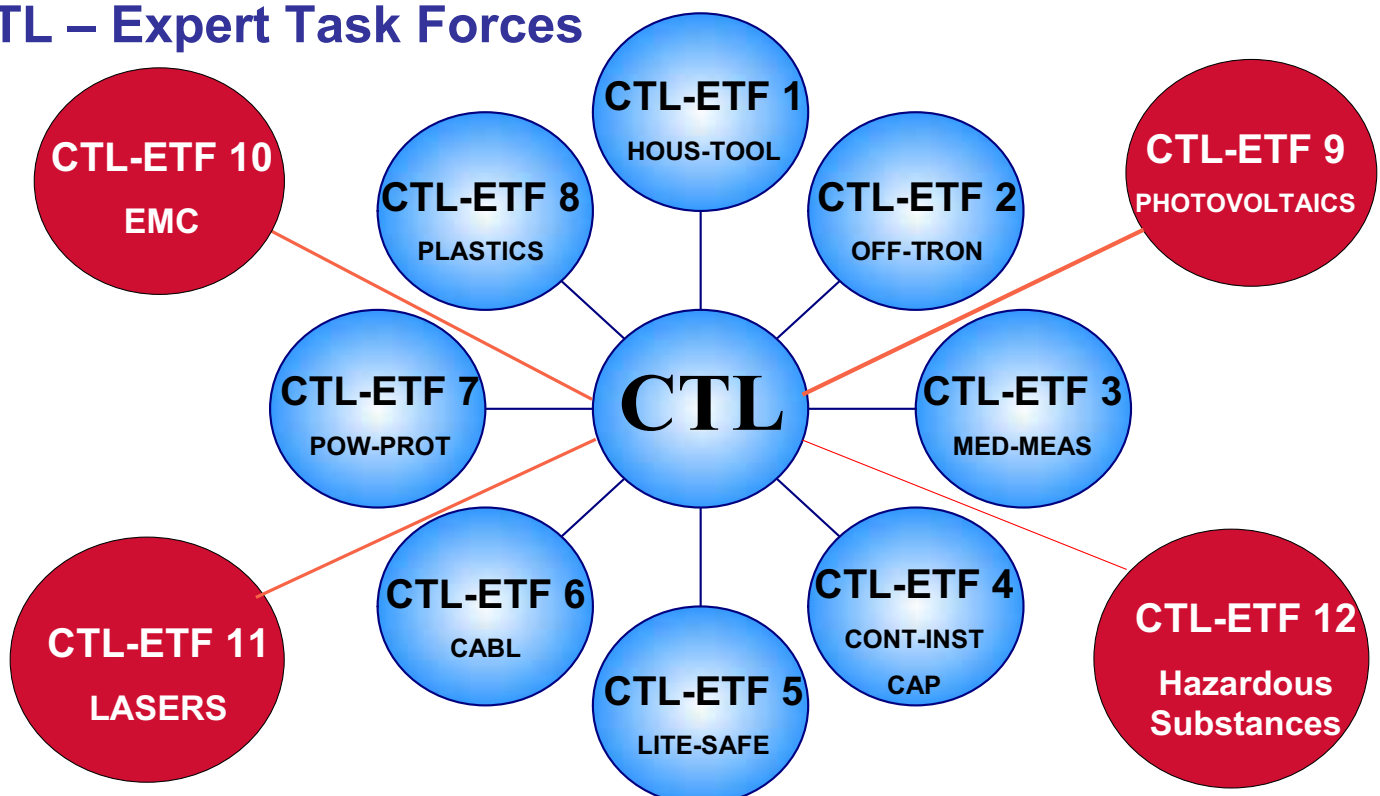
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CTL – Expert Task Forces



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FIC - Factory Inspection Committee



Dr. Wolfgang Kreinberg
FIC Chairman



Dieter Fitz
FIC Secretary

The FIC is the Factory Inspection Committee tasked to develop Procedures and Audit/Inspection Forms to be used as either a stand alone service or as part of the CB Full Certification Scheme.

The FIC is composed by experts in Factory Audits, Inspections, Follow up services



FACTORY AUDIT/INSPECTION

To provide services related to Factory Audit/Inspection as a stand alone element of the Conformity Assessment Programme.

This Service can be used either as an element of the Supplier Declaration of Conformity SDoC or to upgrade a Certification System 1

into a

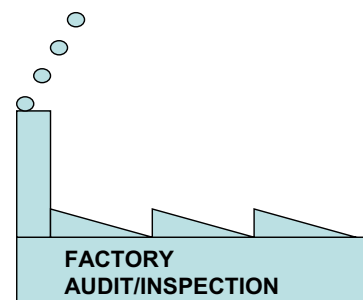
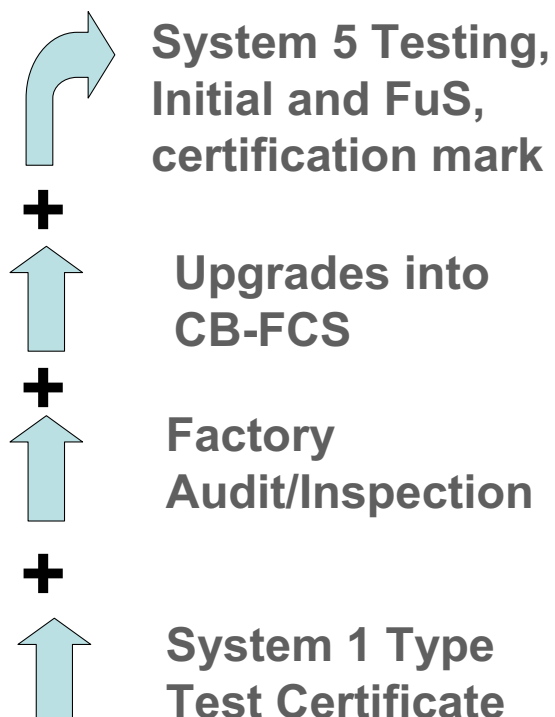


Certification System 5





FACTORY AUDIT/INSPECTION



LEVELS OF MEMBERSHIP

	MEMBER BODY	NCB(s) NATIONAL CERTIFICATION BODY	CBTL(s) TESTING LABORATORY	MANUFACTURER'S TESTING LABORATORIES
Level 3 ***	Full Rights 	Issuing and Recognizing 	Associated with the NCB 	Under the Responsibility of the NCB
Level 2 **	Full Rights 	Recognizing only 		
Level 1 *	Full Rights 			



IECEE participating countries

	Argentina		India		Saudia Arabia
	Australia		Indonesia		Serbia
	Austria		Ireland		Singapore
	Belarus		Israel		Slovakia
	Belgium		Italy		Slovenia
	Brazil		Japan		South Africa
	Bulgaria		Kenya		Spain
	Canada		Korea Rep. of		Sweden
	China		Malaysia		Switzerland
	Croatia		Mexico		Thailand
	Czech Rep.		Netherlands		Turkey
	Denmark		New Zealand		Ukraine
	Finland		Norway		United Arab Emirates
	France		Poland		United Kingdom
	Germany		Portugal		United States
	Greece		Romania		Uruguay
	Hungary		Russia		

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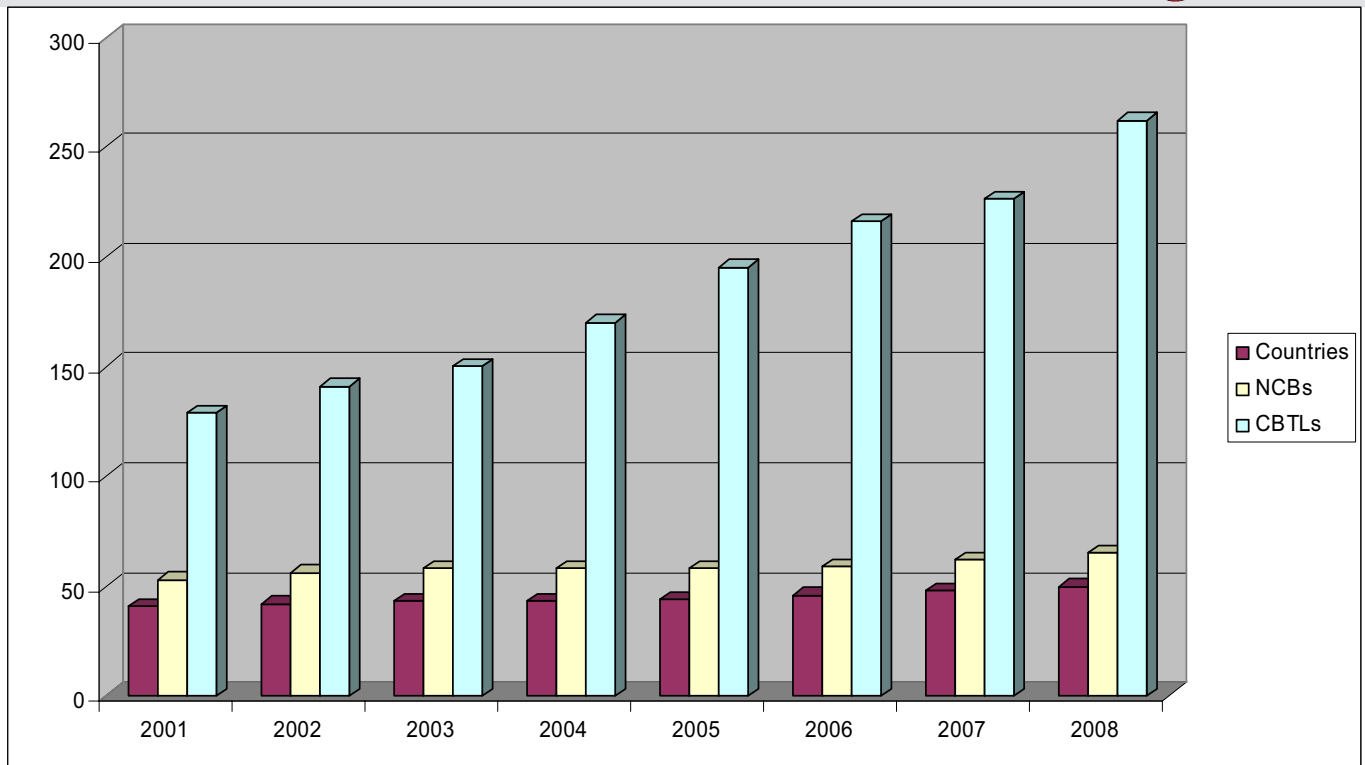


	Countries	NCBs	CBTLs	ACTLs
2001	41	53	129	0
2002	42	56	141	0
2003	43	58	150	0
2004	43	58	170	0
2005	44	58	195	0
2006	46	59	216	0
2007	49	62	234	10
2008 (so far....)	50	65	244	18

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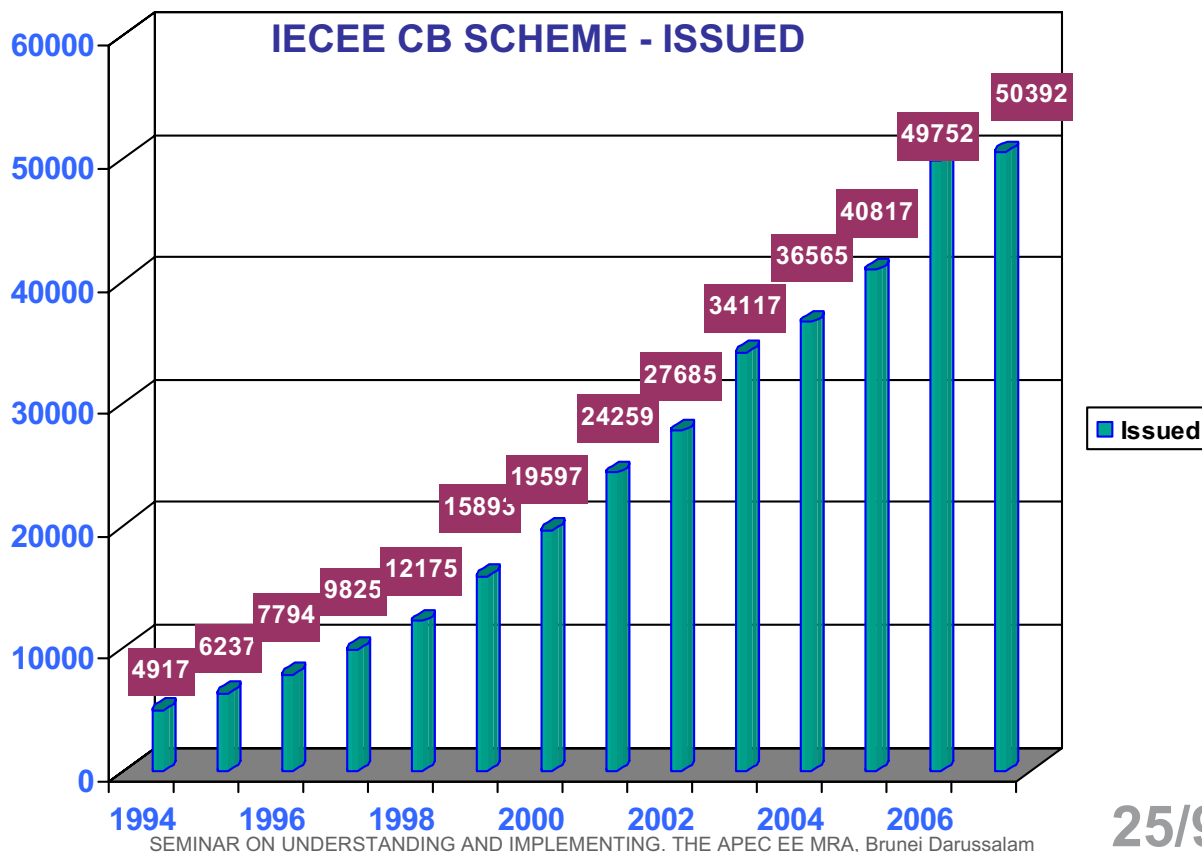
22/97



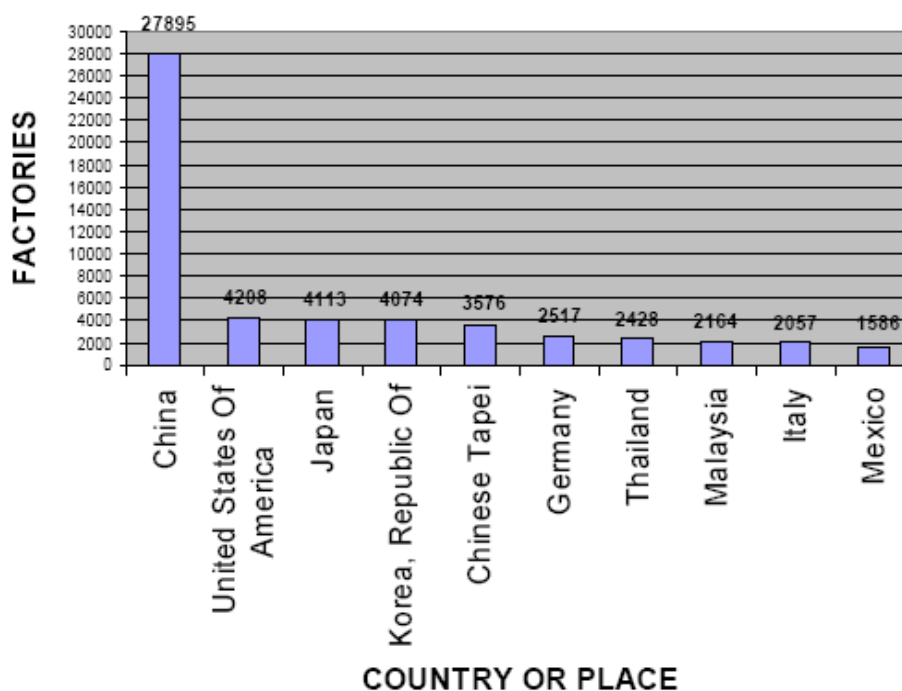
CB CERTIFICATES STATISTICS

With 50.392 Certificate, 2007 has resulted in another great year with a consolidation of Issued CB Test Certificates.

It has to be noted that a significant number of CB Test Certificates are directly recognized by Buyers, Retailers and Regulatory Authorities to provide direct access to the global markets.



Top 10 Countries – Factory Location





ISO Sytem 1

?

ISO Sytem 5



Which Scheme suits my needs?

The Manufacturer decides the most appropriate «vehicle» to be used for marketing his products in the market place



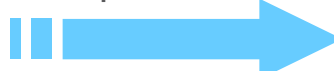
The CB Scheme => ISO System 1



The CB Scheme is the only Global recognized scheme for the safety of electrical equipment used in homes, offices, workshops and similar locations.



=> ISO System 1

REGULATORY
REQUIREMENTSCERTIFICATION
MARK REQUIREDRETAILER-
BUYER-VENDOR
REQUIREMENTSSELF
DETERMINATION
BY THE
MANUFACTURERGreen light by
the RegulatorThird party
Certification Mark in
the countryDirect
acceptanceThird party
Certification MarkMARKET
PLACE

The ideal target

One test

One certification

One mark





Today's IECEE achieved target

One test

One international certificate

One or more marks as needed



CB Scheme

This system includes testing; samples of the product are assessed for conformity. The sampling is representative of the entire product's family. A certificate of conformity is granted (**CB Test Certificate**) to each product represented by the sample.

This certification system includes the following:

- sample(s) requested by the Certification Body - NCB;
- determination of characteristics through testing the samples by the Testing Laboratory - CBTL ;
- evaluation of the Test Report;
- Decision by the Certification Body - NCB;
- CB Test Certificate.**

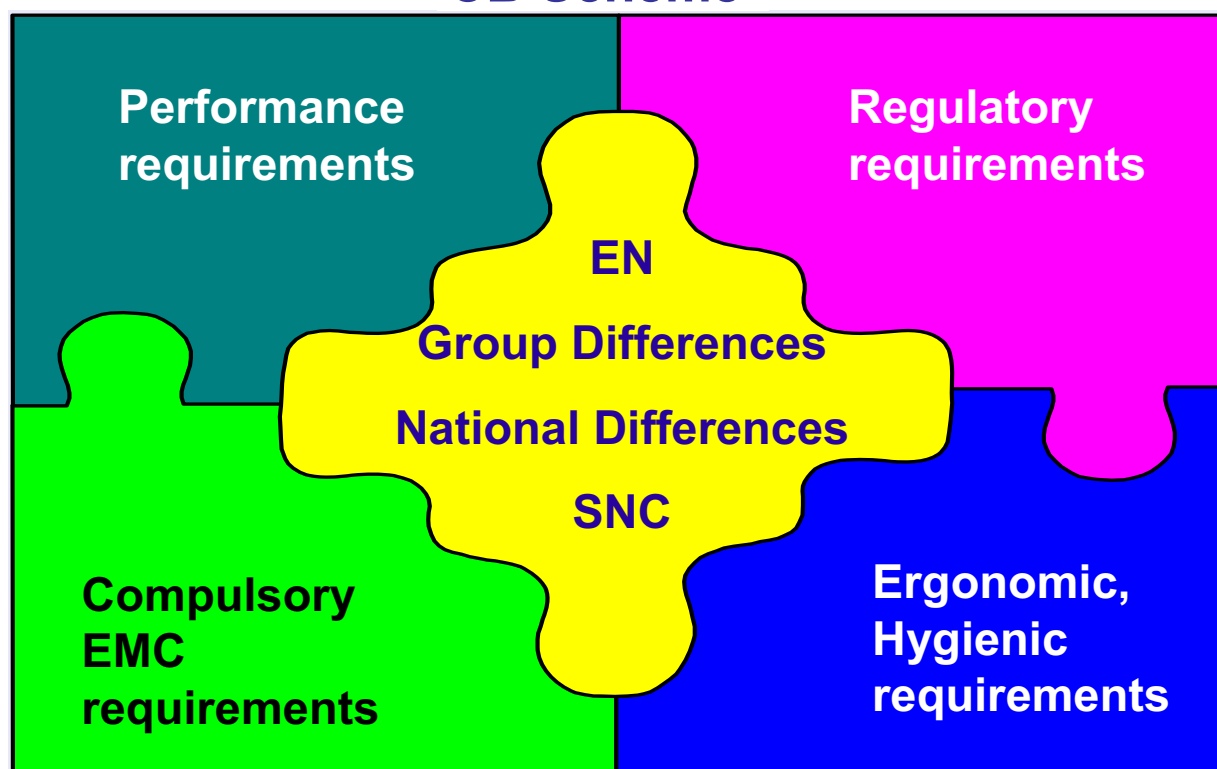


Highlights

- Products are tested to IEC standards with provision for supplementary testing for national differences.
- Reciprocal recognition of test results among all participating Certification Bodies simplifies the granting of certification or approval at national levels.
- CB Test Certificates and associated Test Reports facilitate obtaining secondary certifications.



CB Scheme





Advantages of CB Scheme

- More rapid testing and certification
- More universal product recognition
- Acceleration of Product Acceptance
- Direct acceptance by the Regulators & Authorities in many countries
- Direct acceptance by the Retailers and Buyers
- Expanded markets
- Faster product movement from plants to markets

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Scope



19 product categories ranging from Batteries, Cables and Cords, Capacitors as components, Switches for appliances and automatic controls for electrical household appliances, Electromagnetic Compatibility, Household and similar equipment, Installation accessories and connection devices, Lighting, Measuring instruments, Electrical equipment for medical use, Miscellaneous, IT and office equipment, Low voltage, high power switching equipment, Installation protective equipment, Photovoltaics, Safety transformers and similar equipment, Portable tools, Electric Toys and Electronics, entertainment ... representing more than 1000 standards

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BATT – Batteries:

IEC 60086, IEC 60099, IEC 61982...



CABL – Cables and Cords:

IEC 60227, IEC 60245, IEC 60502...



CAP – Capacitors as Components:

IEC 60252, IEC 60384, IEC 61048...



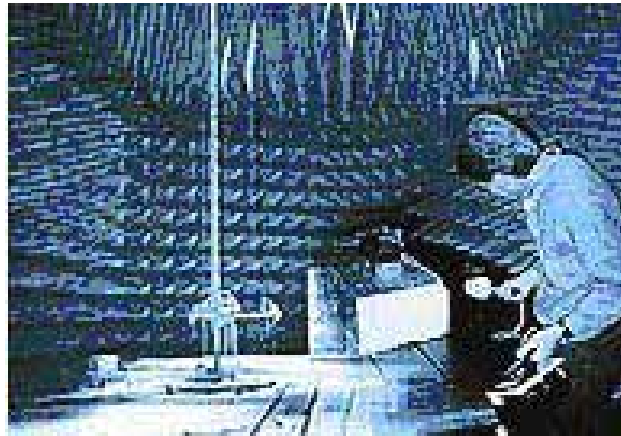
CONT - Switches for appliances and automatic controls for electrical household appliances:

IEC 60730, IEC 61058, IEC 61810...



EMC – Electromagnetic Compatibility:

CISPR11, IEC 61000, IEC 62236...



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HOUS – Household and similar equipment:

IEC 60335, IEC 60704, IEC 61770...



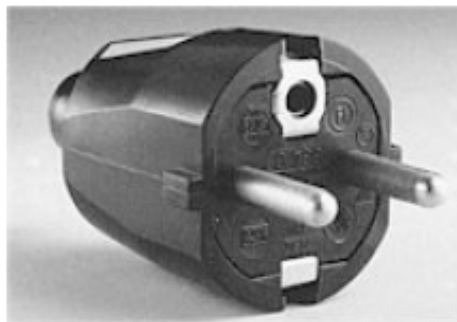
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INST – Installation accessories and connection devices:

IEC 60609, IEC 60320, IEC 60998...



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LITE – Luminaires:

IEC 60598, IEC 60928, IEC 61347...



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MEAS – Measuring Instruments:

IEC 61010, IEC 60414, IEC 61557...



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MED – Electrical equipment for medical use:

IEC 60601, IEC 61223...



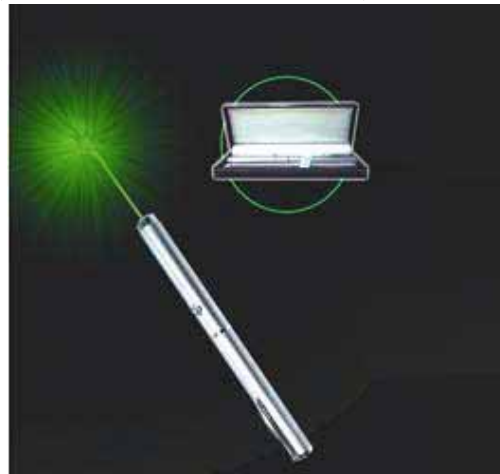
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MISC – Miscellaneous:

IEC 60077, IEC 60747, IEC 60938...



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OFF – IT and Office Equipment:

IEC 60950, IEC 60825, IEC 62040...



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POW – Low voltage, high power switching equipment:

IEC 60947, IEC 6019, IEC 62271...



PROT – Installation protective equipment:

IEC 60127, IEC 60269, IEC 61643...



PV – Photovoltaics:

IEC 60904, IEC 61215, PVRS6...



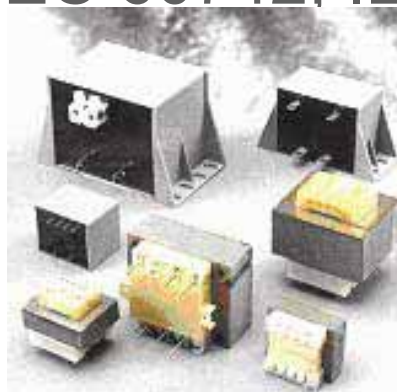
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SAFE – Safety transformers and similar equipment:

IEC 60044, IEC 60742, IEC 61558...



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TOOL – Portable Tools:

IEC 60745, IEC 61029, IEC 61939...



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Brunei Darussalam

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TOYS – Electronic Toys:

IEC 62115...



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TRON – Electronics Entertainment:

IEC 60065, IEC 61965, IEC 62103...



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Market changes...increasing flow of goods



- GLOBAL MARKETS
- INCREASING HARMONIZATION OF PRODUCT SPECIFICATIONS
- WORLDWIDE ACCEPTANCE OF TEST RESULTS

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Time to Market is essential



- In Manufacturing and Trade every day counts
- Buyers, Users and Governments need assurance of compliance



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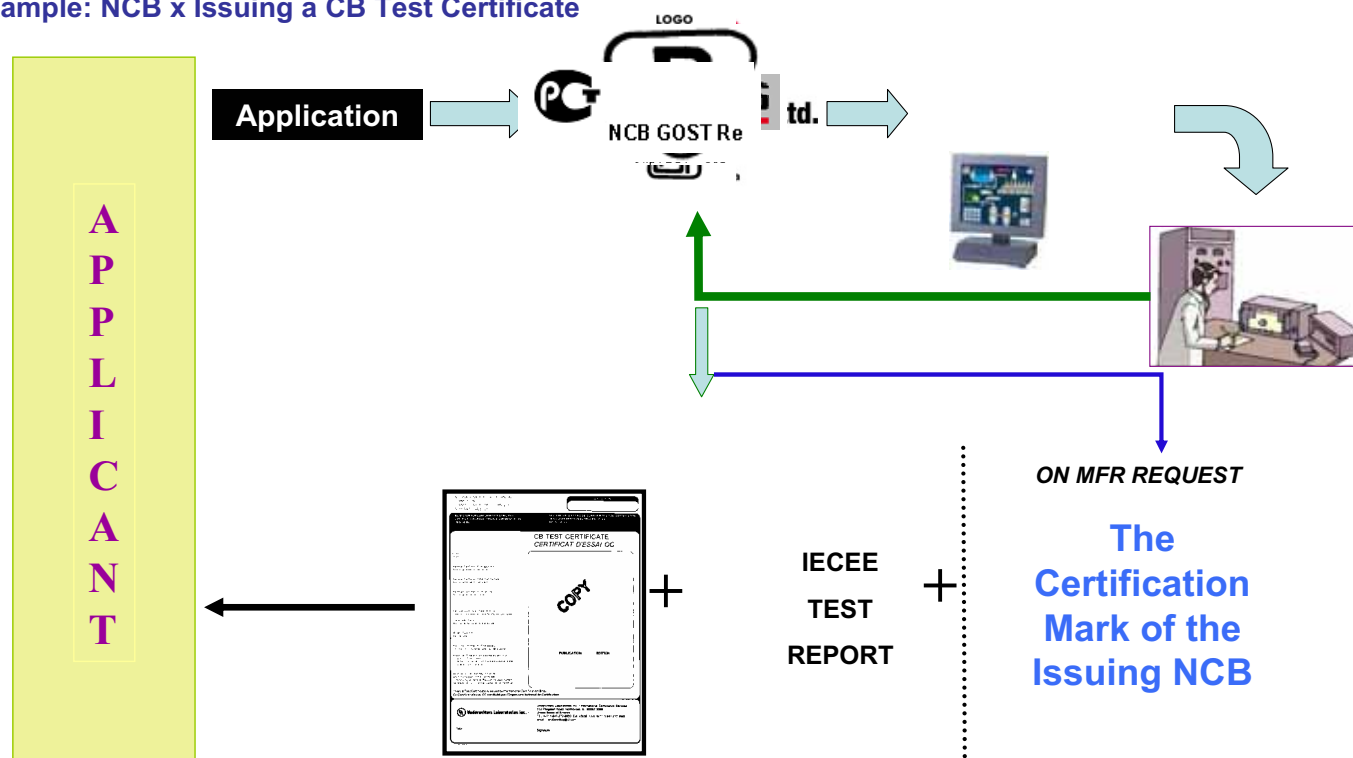
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Upstream level

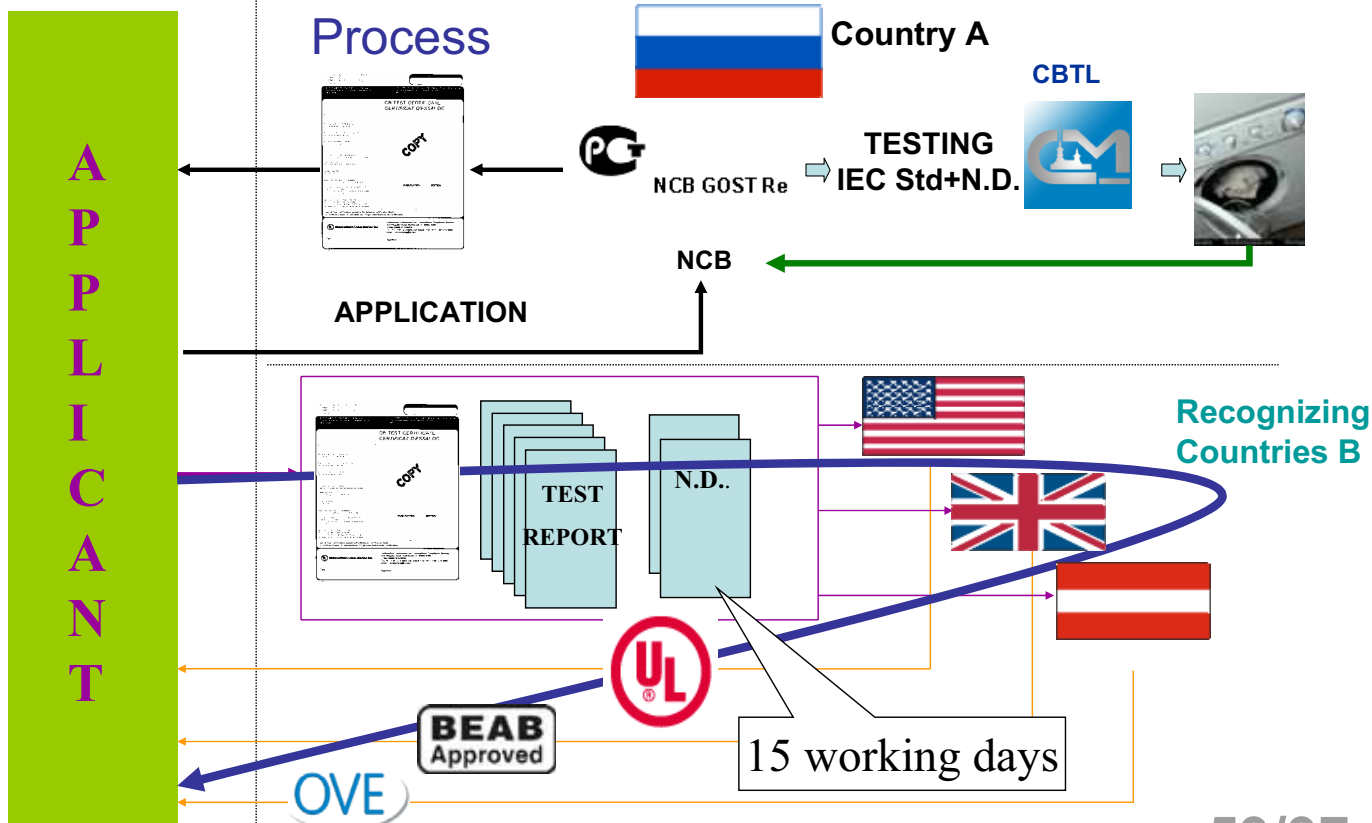
Example: NCB x Issuing a CB Test Certificate



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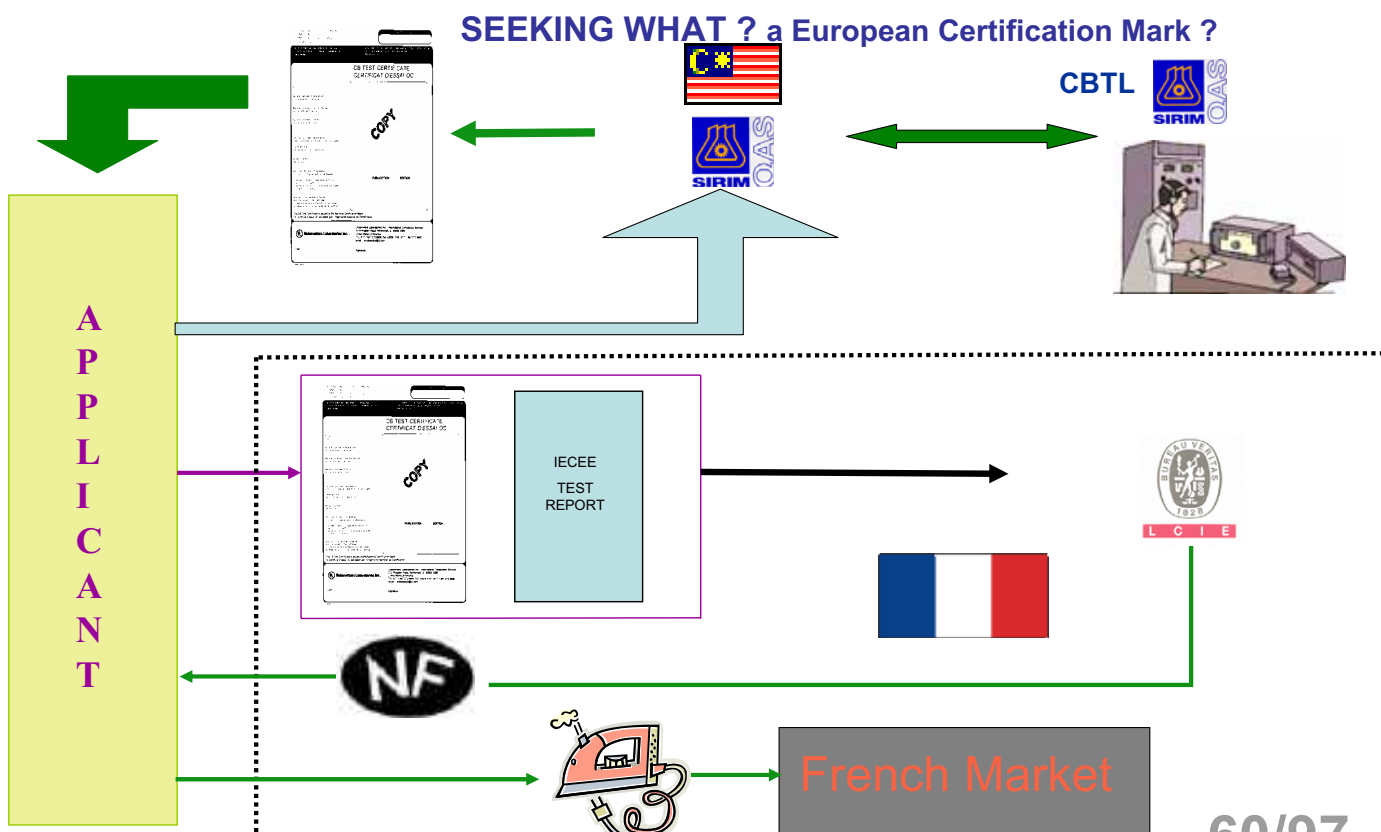
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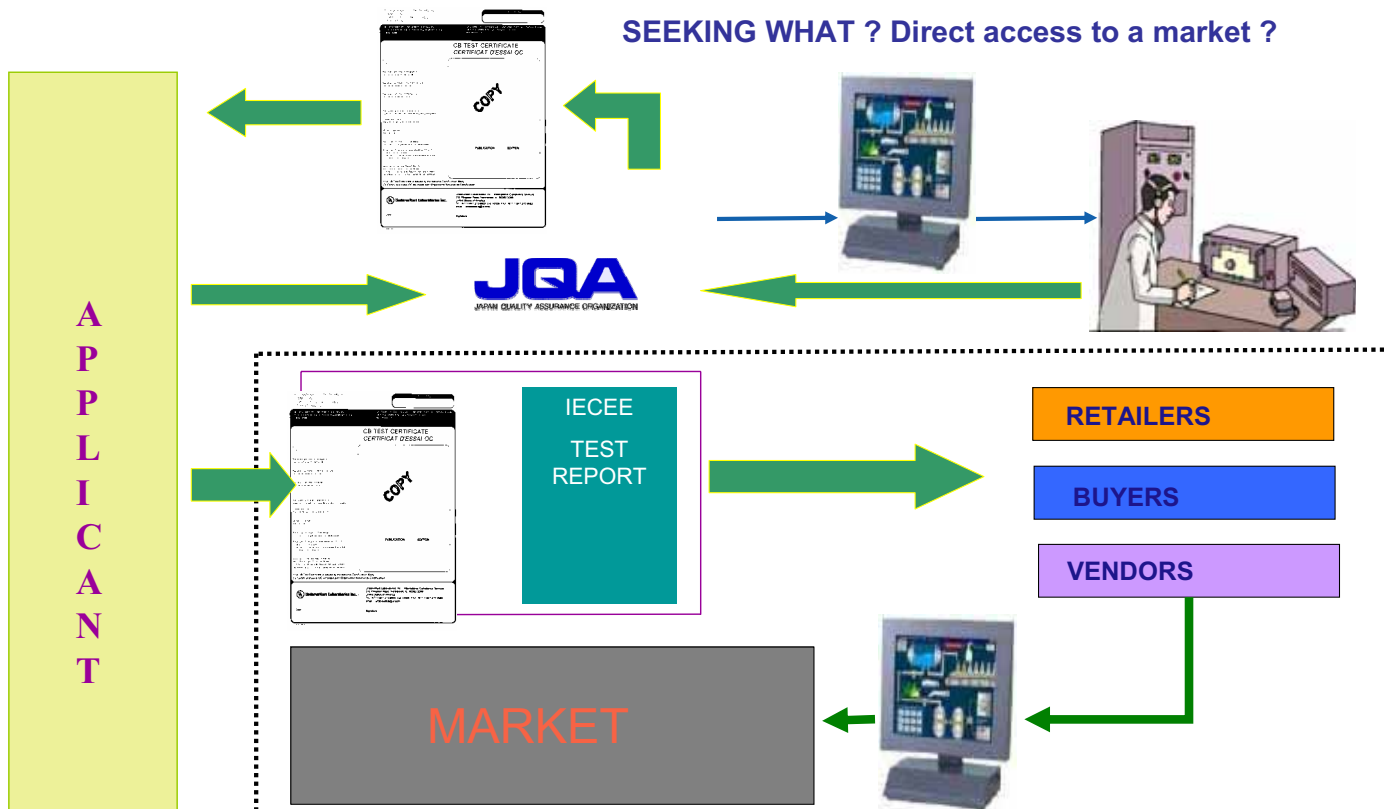
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SEEKING WHAT ? Direct access to a market ?



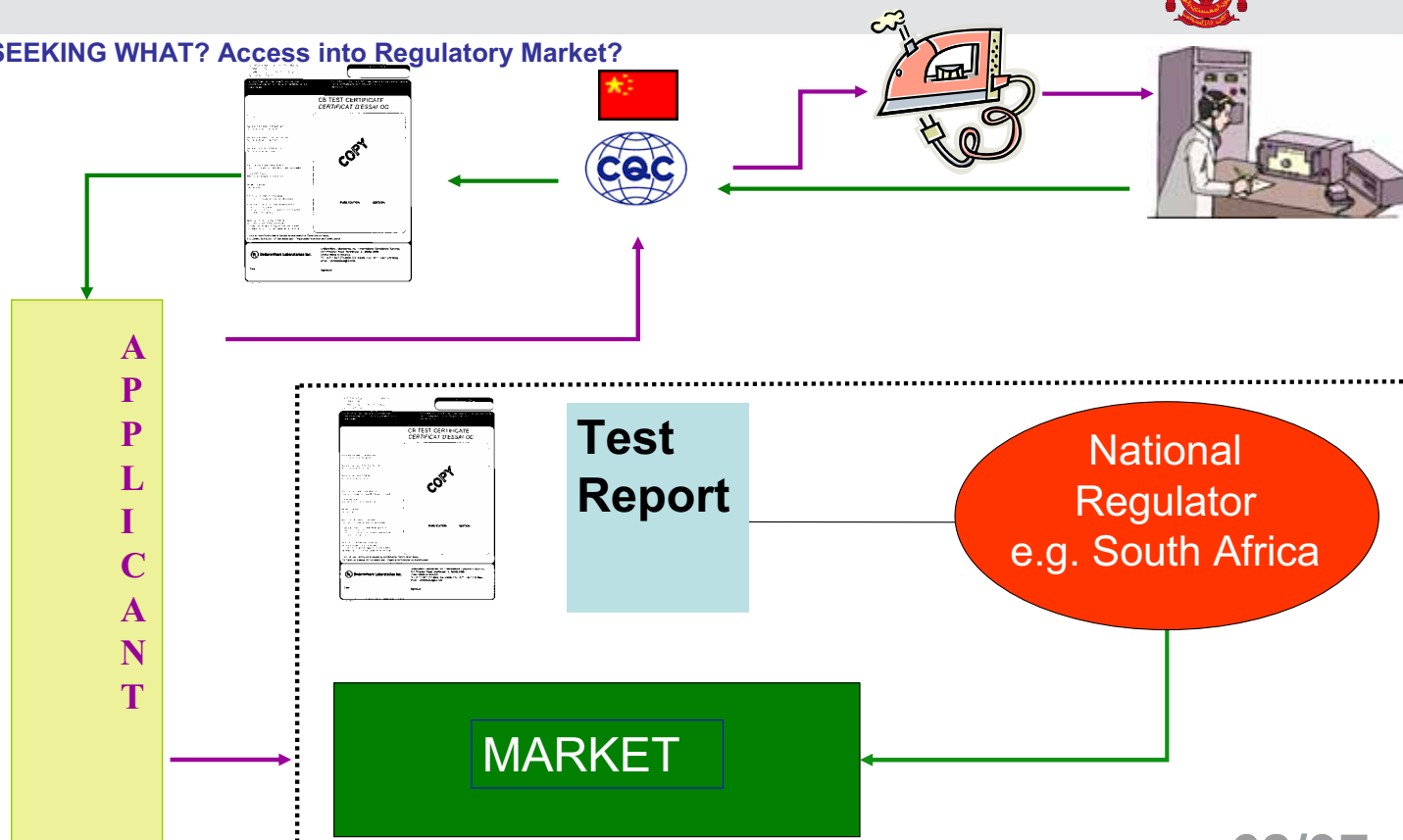
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SEEKING WHAT? Access into Regulatory Market?



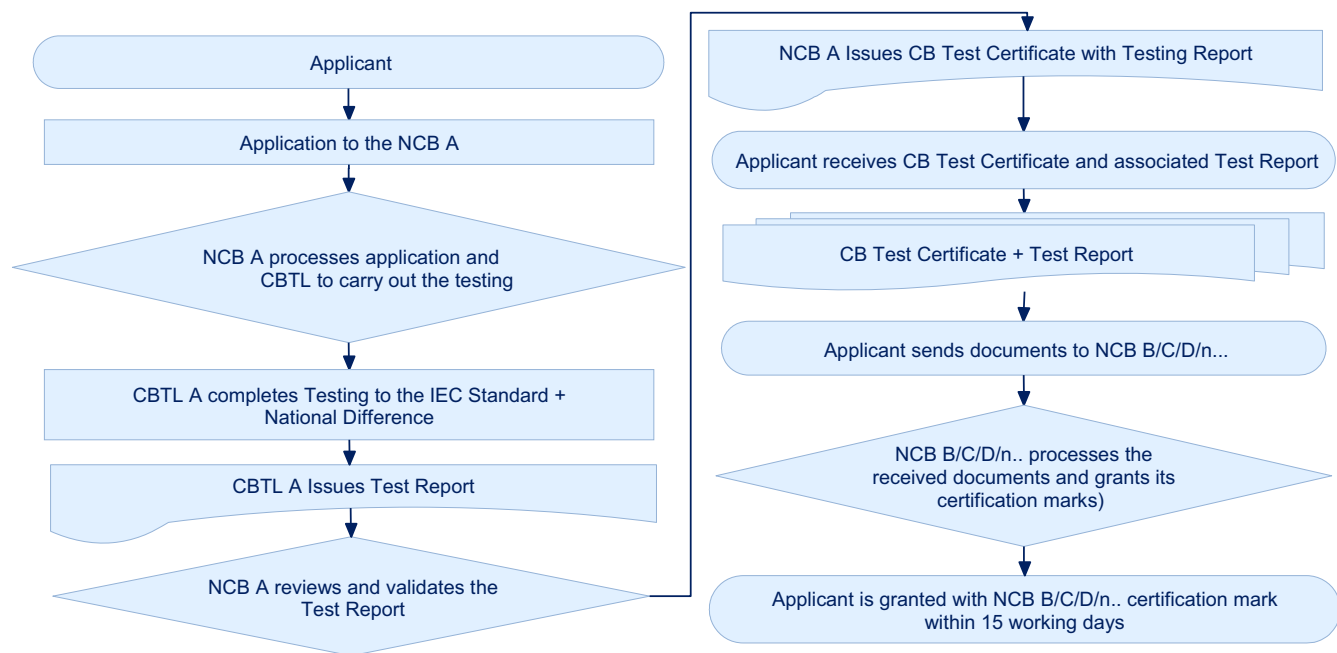
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IECEE CB-Scheme process



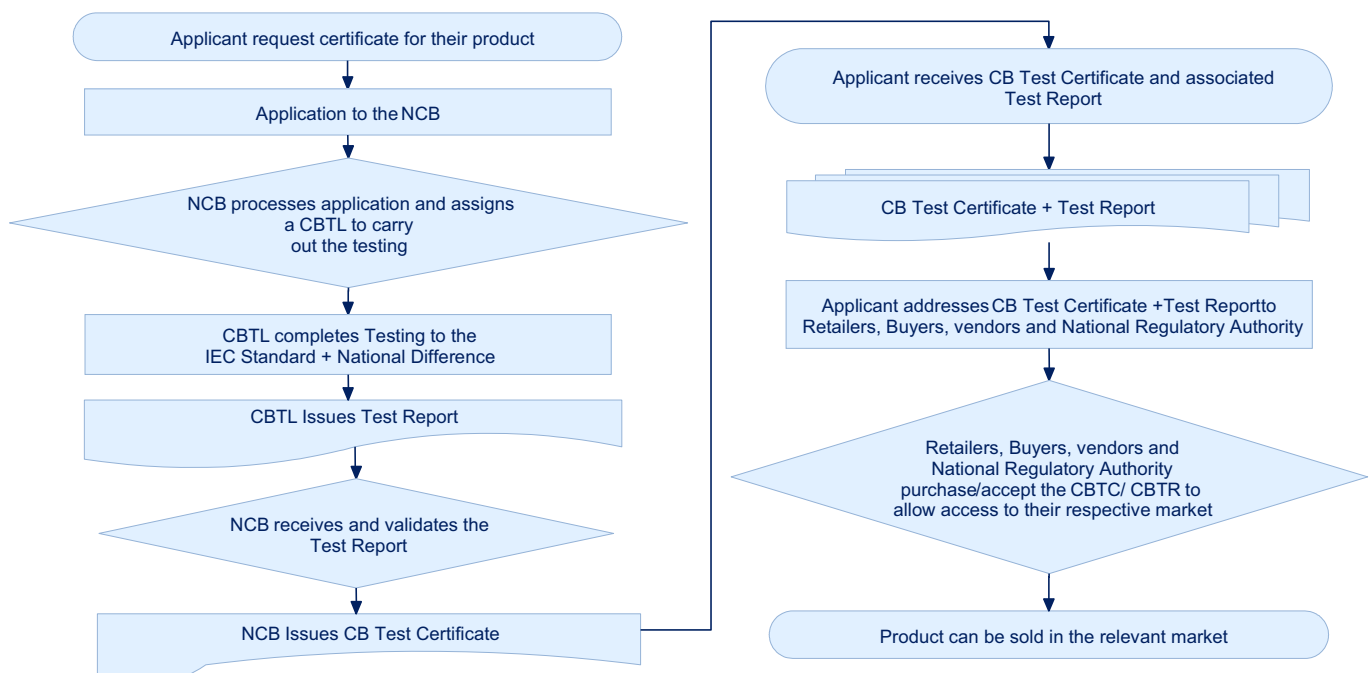
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CB-Scheme Direct acceptance by the market place



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IECEE CB Scheme benefits

- Leads to safer products on domestic market
- Needs to become even more efficient to provide fast time-to-market to suppliers

and will make the world's products available to your domestic professional buyer and consumer



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The CB Scheme=> ISO System 5



The CB FULL CERTIFICATION SCHEME "CB-FCS" is the Global recognized scheme for the safety of electrical equipment used in homes, offices, workshops and similar locations.



The IECEE-FCS Scheme

This system includes testing and assessment of the quality management system involved. Surveillance of the quality system is conducted and samples of the product may be taken from either the market or the site of production, or both, and are assessed for ongoing conformity.

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=> ISO System 5



**REGULATORY
REQUIREMENTS**

Green light by
the Regulator



**CERTIFICATION
MARK REQUIRED**

Third party
Certification Mark in
the country



**RETAILER-
BUYER-VENDOR
REQUIREMENTS**

Direct
acceptance



**SELF
DETERMINATION
BY THE
MANUFACTURER**

Third party
Certification Mark



**MARKET
PLACE**



THIRD PARTY FACTORY SURVEILLANCE & RE-TESTING

THIRD PARTY MARKET CONTROL

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"Always in service with God's guidance"



Allah Peliharakan Sultan - God Bless the Sultan



IEC - IECEE CB-FCS FULL CERTIFICATION SCHEME		CERTIFICATE NUMBER US-UL-04-0001-PV
CONFORMITY ASSESSMENT CERTIFICATE PHOTOVOLTAICS		
Product(s)	Crystalline silicon terrestrial photovoltaic (PV) modules	
Model / Type Ref.	BP3100, BP3150, and BP3140	
Name and address of the manufacturer	BP Solar 630 Solarix Court, Frederick, MD 21703, USA	
Name and address of the factory	1. BP Solar, 430 Solarix Ct., Frederick, MD 21703, USA 2. T&B BP Solar India Ltd., Electronic City Phase I, Plot 42 (P) 400 007, New Bell, Bangalore 560012, India 3. BP Solar España S.A., Avda de Pinar del Mar 12, 46100 Sagunto, Valencia 46100 Sagunto, Spain 4. Ba Co Electronics, Tu Huu Chuan, Ph. Cheng, Dongguan Guangdong, China 5. BP Solar, 2 Australia Ave., Homebush Bay, New South Wales 2127, Australia	
Ratings and principal characteristics	The Range of the certified values and characteristics are available in the Conformity Assessment Report Ref. N° 18811891	
Trademark (if any)		
Expiration date of this Certificate	24 May 2007	
Base of certification	PUBLICATION/STANDARD	EDITION
	IEC 61215 ISO 9001	1993 2000
Conformity Assessment Report Ref. N°	E146754-V1-51-20040517-CAR	
Factory Audit Report Ref. N°	Included in E146754-V1-51-20040517-CAR Report	
THE SAMPLE(S) OF THE PRODUCT(S) LISTED IN THIS C.A.C. HAS (HAVE) BEEN FOUND TO BE IN CONFORMITY WITH THE APPLICABLE REQUIREMENT OF THE PRODUCT'S STANDARD(S) LISTED ABOVE. THE QUALITY MANAGEMENT SYSTEM AT THE ABOVE PLACE HAS BEEN FOUND TO COMPLY WITH THE REQUIREMENTS OF THE IECEE RULES OF PROCEDURE (IECEE SR AND ISO 9001 (2000) IN RESPECT OF THE MANUFACTURING PROCESS OF THE PRODUCT(S) LISTED IN THIS C.A.C.		
This Conformity Assessment Certificate is issued by the National Certification Body: Underwriters Laboratories Inc., 333 Pingtan Road, Northbrook, IL 60062-2006, United States of America TEL: (847) 5-547-5772-5900 EMAIL: (JANIS.M.KROHN@UL.COM)		
Date: 24 May 2004	Signature:	

2008-05-12

SEMINAR ON UNDERSTANDING AND IMPLEMENTING THE APEC EE MRA, Brunei Darussalam

69/97



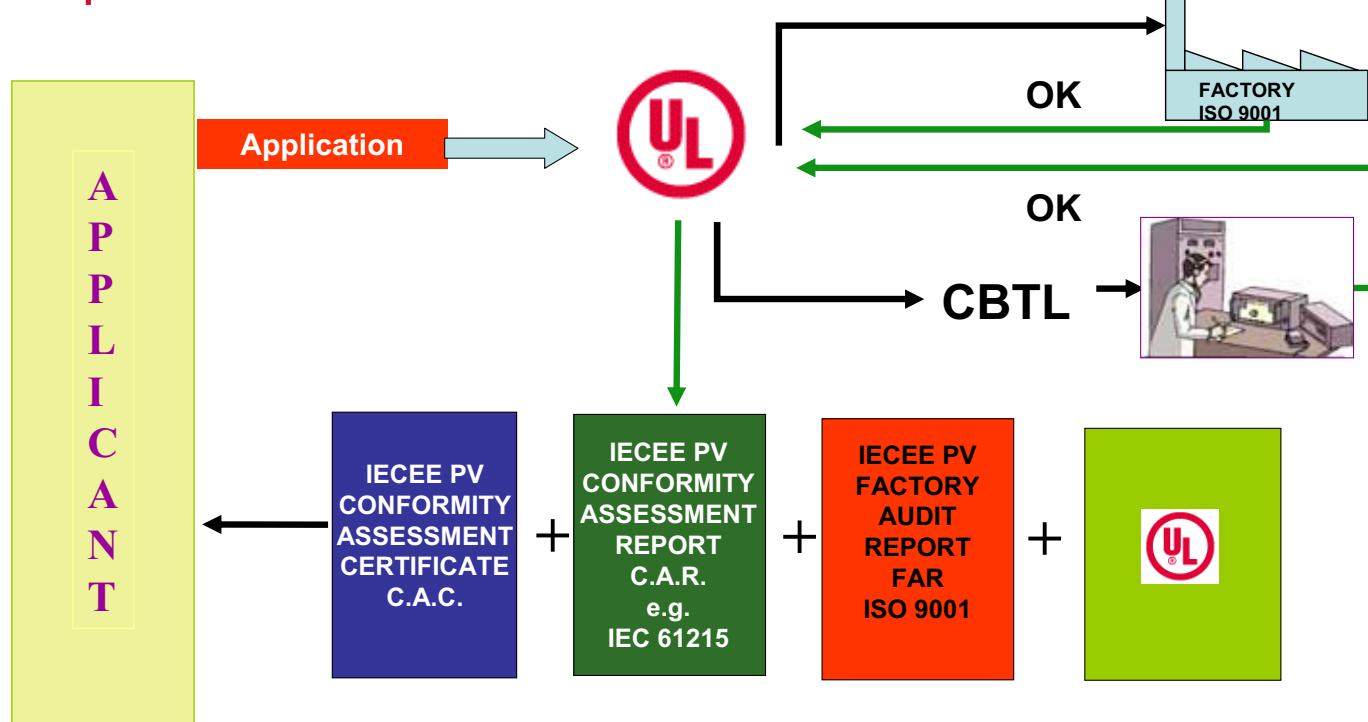
"Always in service with God's guidance"



Allah Peliharakan Sultan - God Bless the Sultan



Upstream level



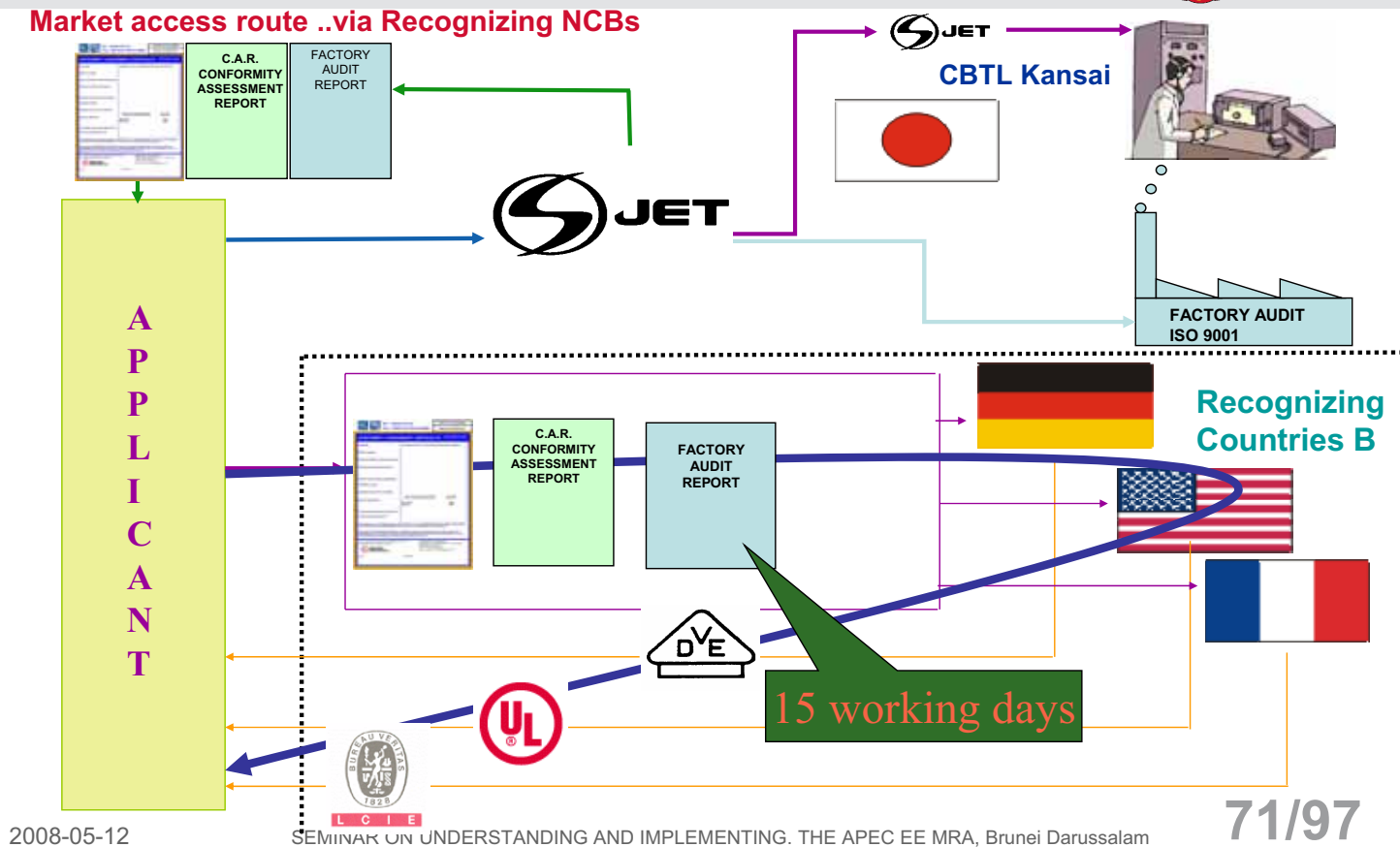
2008-05-12

SEMINAR ON UNDERSTANDING AND IMPLEMENTING THE APEC EE MRA, Brunei Darussalam

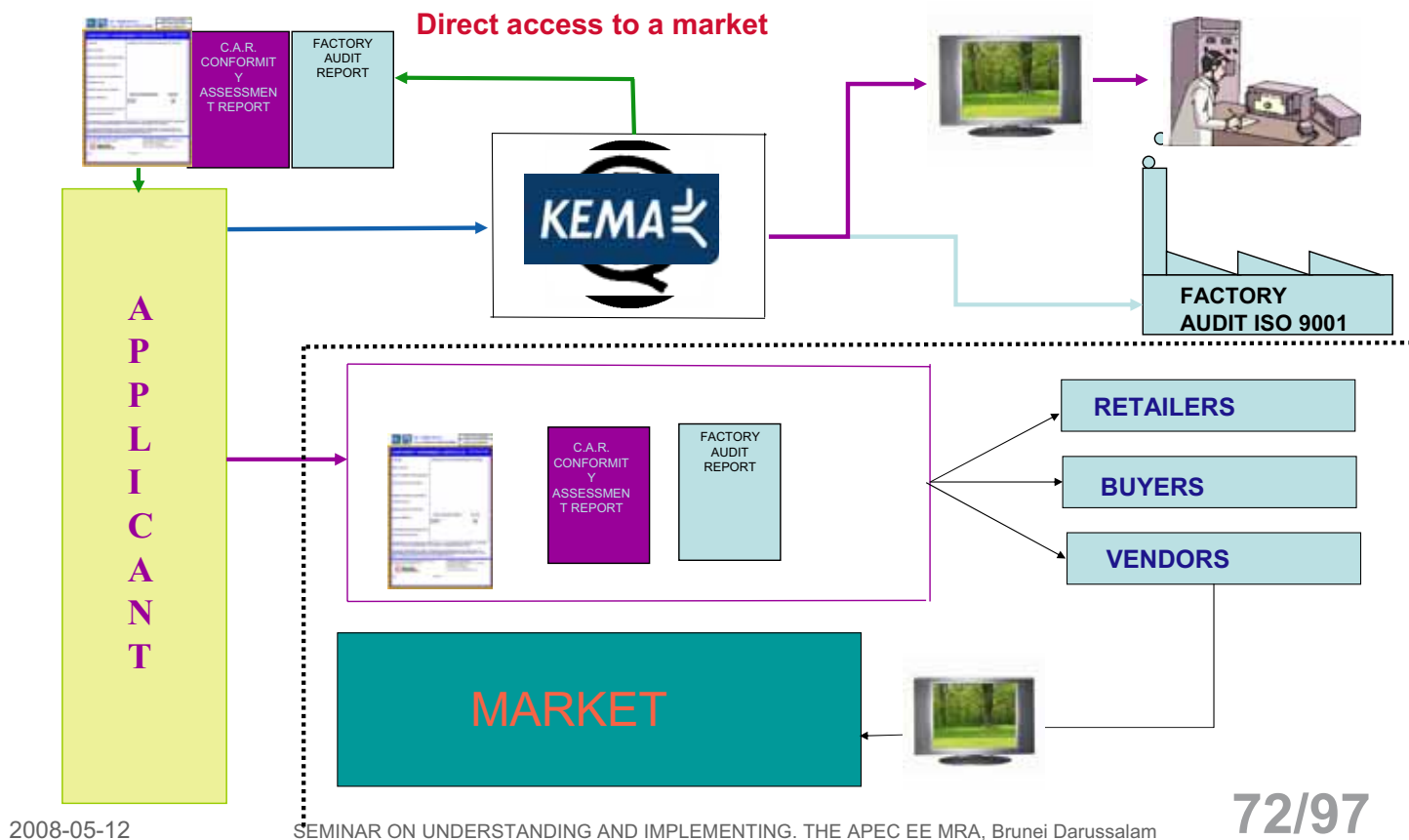
70/97

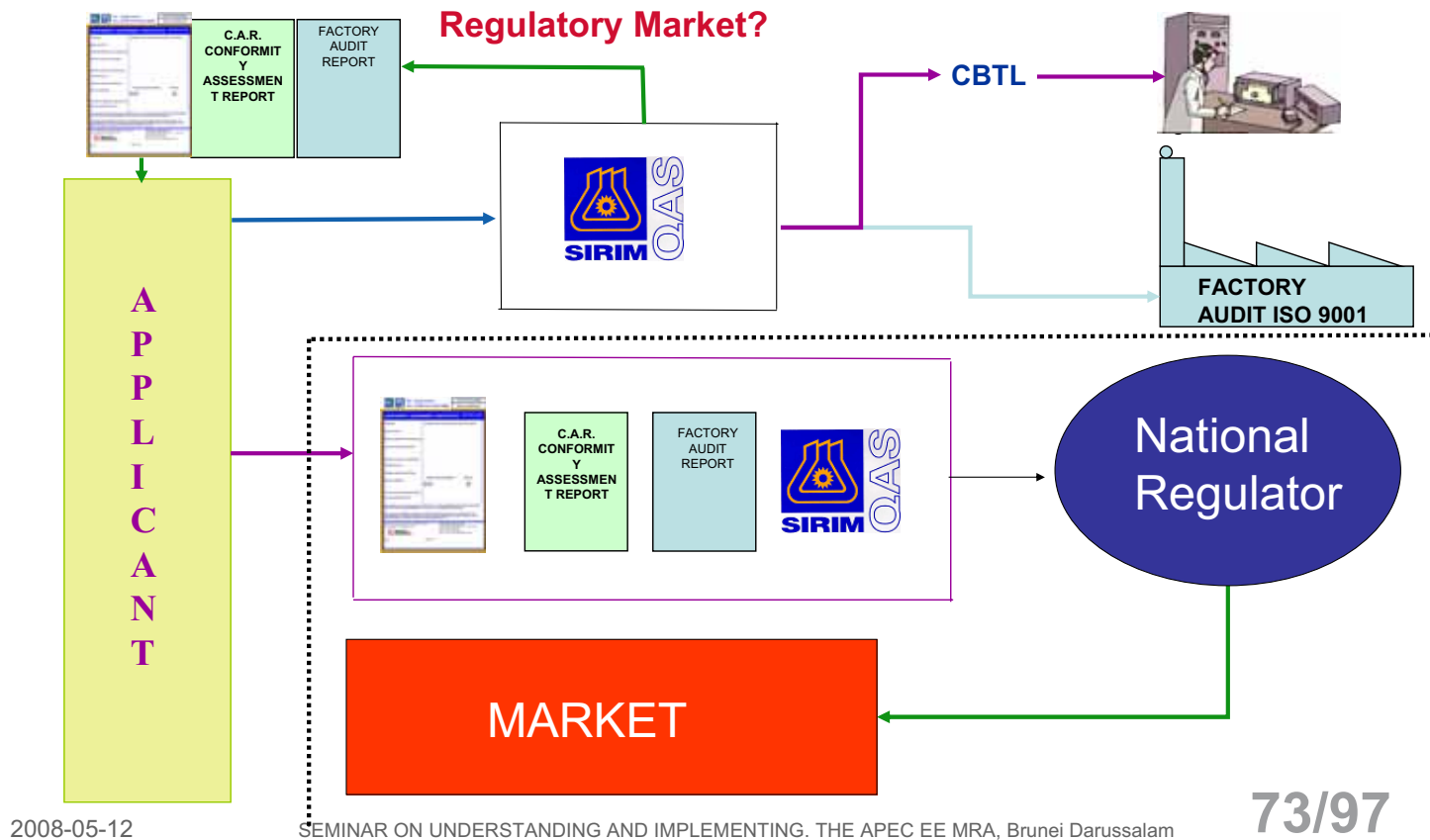


Market access route ..via Recognizing NCBs



Direct access to a market





MANUFACTURER TESTING LABORATORIES

NCB

National Certification Body

SMT

Supervised Manufacturer Testing

TMP

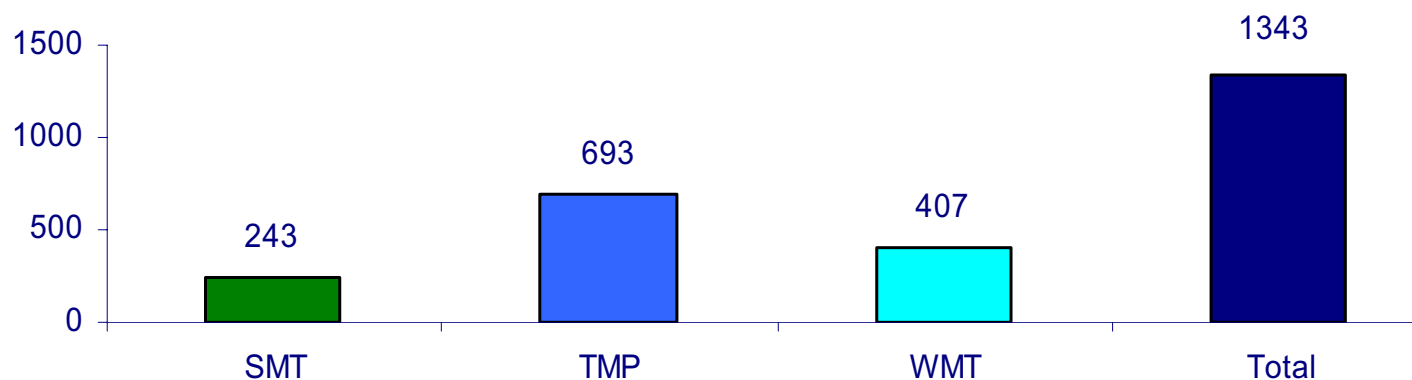
Testing at Manufacturer Premises

WMT

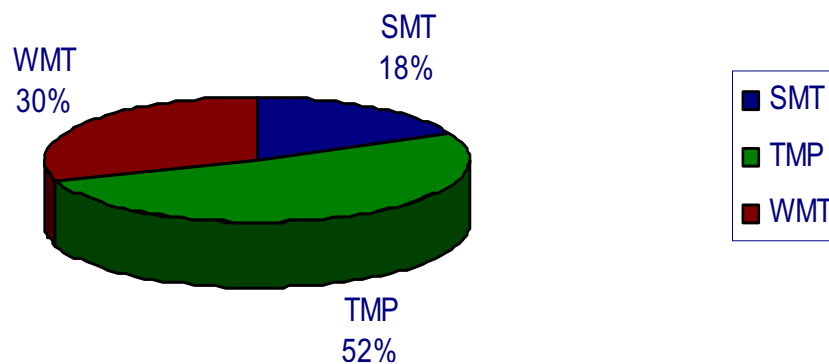
Witness Manufacturer Testing



IECEE Registered MTLs



IECEE Registered MTLs





BENEFITS for Countries

Protecting the Domestic Market from non-conforming products by importing safe electrical products, equipment and components

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BENEFITS for Countries

Joining the worldwide Conformity Assessment community and playing a Key role in the IECEE Management Committee

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78/97



BENEFITS for Countries

Building the structure to set a national level reputable and recognized Certification Bodies and Testing Laboratories fulfilling the highest standards worldwide such as ISO/IEC Guide 65, ISO/IEC 17025 and IECEE Rules

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BENEFITS for Countries

Accessing the restricted area of the IEC-IECEE Web Site and take advantage of the Publications, Test Report Forms, Procedures and Operational Documents that are used in the field of Conformity Assessment activities

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80/97



BENEFITS for Countries

Attending the World Committee of Testing Laboratories, Forums and Workshops thus sharing and exchanging with the best experts in Certification and Testing activities

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BENEFITS for local Industry

Opening up the worldwide Global Market

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BENEFITS for local Industry

Optimization of certification costs

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BENEFITS for local Industry

Expanded development of technologies within the Country

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The right Passport to access worldwide market

Because Globalization and competition are leading to rapid changes, technical barriers to trade remain a serious problem and the industry is anxious about time to market, the shortening life cycle of products and the need to reduce costs...



The right Passport to access worldwide market

The CB Scheme offers de facto the true “**passport**” to market electrical goods worldwide



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The right Passport to access worldwide market

The CB Scheme answers de facto the market needs to have a Test Certificate **tailored** to be recognized worldwide.

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88/97



The right Passport to access worldwide market

The CB Scheme, in its fullest extent, proves de facto that certification and testing costs can be reduced through the use of...

1 stop testing.

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89/97



The IECEE opens the door to welcome :

- BRUNEI DARUSSALAM
- CHILE
- PAPUA NEW GUINEA
- PERU
- PHILIPPINES
- VIETNAM

to join the Most Efficient Transportable Model of Conformity Assessment Worldwide.

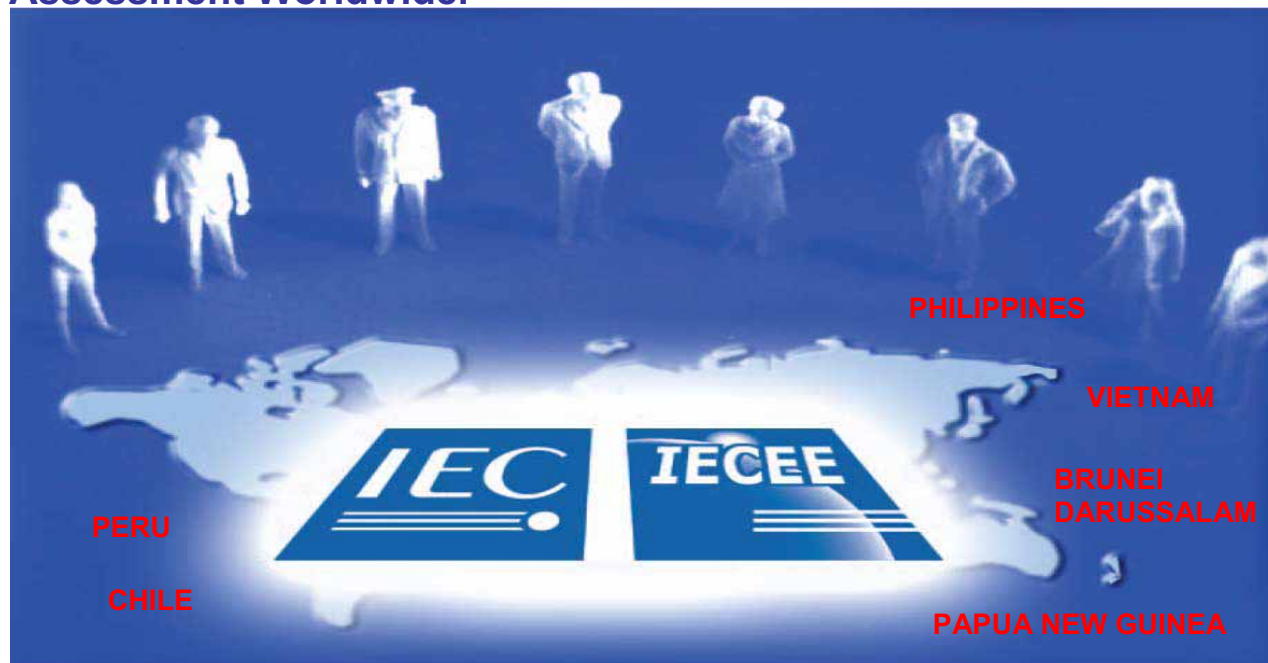
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90/97



The IECEE opens the door to welcome the APEC Economies to join the Most Efficient Transportable Model of Conformity Assessment Worldwide.



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91/97



**WORLDWIDE SYSTEM FOR
CONFORMITY TESTING AND CERTIFICATION
OF ELECTROTECHNICAL EQUIPMENT AND COMPONENTS (IECEE)**



...any questions ?



Thank you!



- **IECEE Website:** www.iecee.org

- **IECEE Executive Secretary:**

Mr Pierre de RUVO

E-mail: pro@iec.ch

Direct Line: +41 22 919 02 07

APLAC Multilateral MLA – Meeting the needs of industry and government regulators

Chang Kwei Fern
Director, Accreditation
SPRING Singapore

12/5/08

1

Outline

Part 1: APLAC Framework for MRA

- Background
 - Role & Structure
 - Accreditation
- APLAC MRA
 - Supporting G2G MRAs and trade in the APEC region

Part 2: Perspective from APLAC Member – SAC

- Background
 - Role & Structure
 - Accreditation Programmes
- SAC MRA Status
 - Regulatory Acceptance

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2

Asia Pacific Laboratory Accreditation Cooperation

- Established in 1992
- Incorporated in 2006: APLAC Constitution

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3

APLAC's Role

- Development of laboratory, inspection body and RMP accreditation procedures and practices in the APEC region
- Promotion of laboratory, inspection body and RMP accreditation as a trade facilitation tool
- Assistance to developing accreditation systems
- Recognition of competent test and calibration facilities, inspection bodies and reference material producers in the APEC region

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4

APLAC's Role

- Cooperation with other regional laboratory and inspection body accreditation organisations such as EA, IAAC, SADCA, CAC-MAS-Q
- Strong links with APEC SCSC & other APEC Specialist Regional Bodies, APLMF, APMP, PAC, PASC
- APLAC is a recognised Regional Cooperation Body Member of ILAC

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5

APLAC - Primary Objective

- Acceptance of test, calibration and inspection reports and reference material certificates amongst all signatories' economies
 - demands mutual confidence in technical competence
- Confidence cannot be legislated

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6

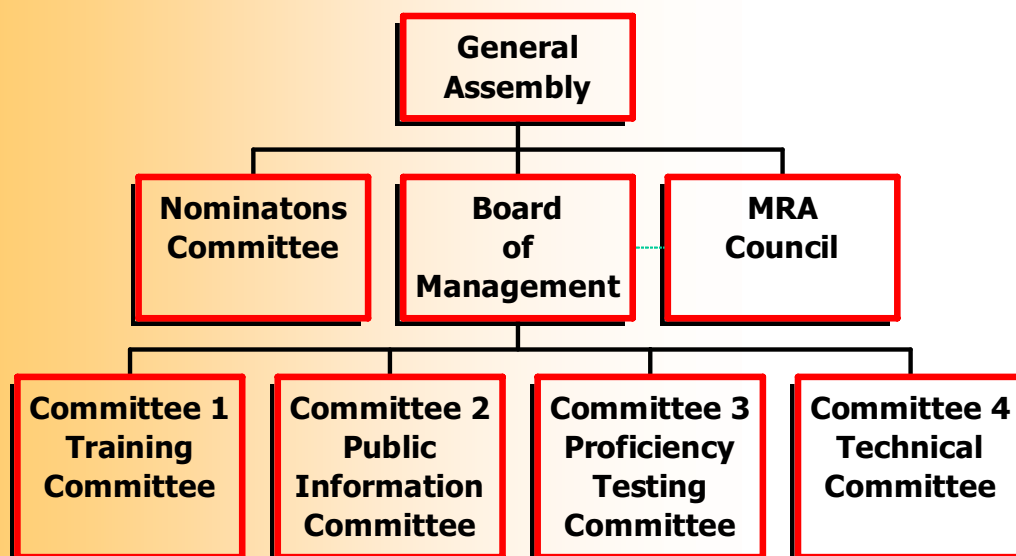
APLAC - Subsidiary Objectives

- Information exchange
- Exchange of experts
- Training
- Proficiency Testing

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7

APLAC's Structure



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8

Current APLAC Membership

- All APEC economies except Chile, Peru
- Also Bangladesh, India, Mongolia, Pakistan, Sri Lanka
- 36 full members
- 4 associate members

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9

APLAC Membership

- Laboratory, inspection body and reference material producer (RMP) accreditation bodies in APEC economies
- Laboratory, inspection body and reference material producer (RMP) accreditation bodies in other economies with approval of two-thirds majority
- Commitment to compliance with ISO/IEC 17011

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10

Accreditation

- Assessment of laboratory, inspection body and RMP performance against international criteria (ISO/IEC 17025; ISO/IEC 17020; ISO Guide 34)
- Means of determining **competence** of laboratories, inspection bodies and RMPs to perform **specific** measurements, calibrations, tests or inspections, or to certify reference materials competently
- Formal recognition of that competence
 - Data are accurate, traceable and reproducible – critical components in governmental decision-making

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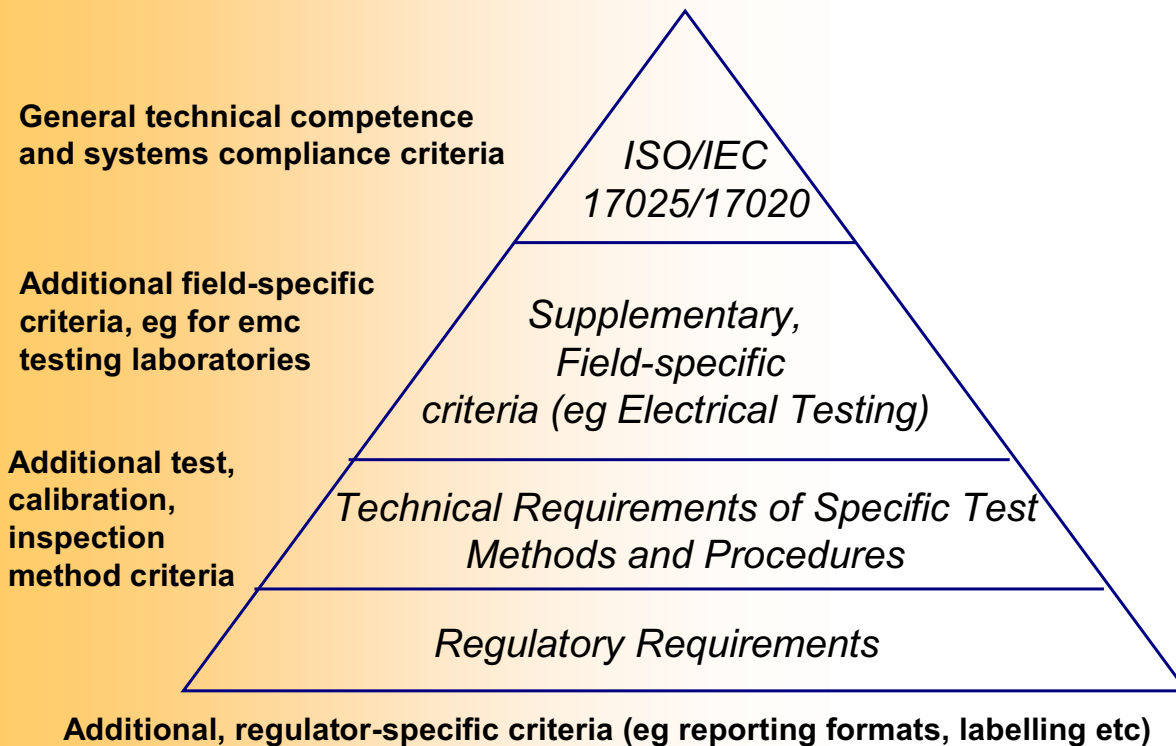
Accreditation ..ctd

- Technical competence
- Integrity
- Transparency (as defined by WTO TBT)
- Fairness
- Scope of accreditation
 - products; types of test parameters types of inspections; matrices
 - measurement techniques, range, accuracy
 - test specification; test method

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12

Accreditation Hierarchy of Criteria



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13

Benefits of Accreditation

- Increasing confidence in data
 - Comparable data from multiple facilities
- Reducing uncertainties associated with decisions that affect the protection of human health and the environment
- Increasing public confidence
 - Recognisable mark of approval
- Eliminating redundant reviews and improving the efficiency of assessment process
- Minimising costs associated with re-testing, re-sampling

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APLAC MRA Signatories

- NATA
- CAEAL
- SCC
- CNAL
- HKAS
- NABL
- KAN
- JAB
- IAJapan
- VLAC
- KOLAS
- DSM
- ema
- IANZ
- PAO
- SAC
- TAF
- DSS
- DMSc
- TLAS
- A2LA
- ACLASS
- LAB
- IAS
- NVLAP
- BoA
- JAS-ANZ

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APLAC MRA

- Single multilateral MRA for testing and calibration, 1997
- Extended to include inspection, 2003
- ISO 15189 separated out, 2007
- Extended to include RMP, 2007
- Replaced network of bilateral MRAs
- Regional component of global ILAC Arrangement, November 2000 (test and calibration only)

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APLAC MRA ..ctd

- Facility accredited by one MRA partner has equivalent competence to facility accredited by other partners
- **Each signatory acknowledges equivalence of all other signatories**
- Signatories demonstrate compliance with ISO/IEC 17011
- Procedure: APLAC MR 001
- Re-evaluation every 4 years maximum
 - shorter interval for various causes

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APLAC Procedure MR 001

- Application; pre-evaluation; evaluation
- Maintenance of signatory status
- Criteria for accreditation bodies
 - ISO/IEC 17011
- Qualifications of evaluators
 - Expanded on in APLAC MR 004
- Criteria for accredited bodies
 - ISO/IEC 17025: laboratories
 - ISO/IEC 17020: inspection bodies
 - ISO Guide 34 in combination with ISO/IEC 17025: RMPs

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APLAC MRA - Supplementary Requirements

- Access to appropriate measurement traceability system
- Avoidance of conflict of interest
- Confidentiality
- Access to adequate comprehensive proficiency testing programmes

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APLAC MRA - Evaluation Team

- Peer review
- Balance of skills and technical expertise
- Evaluators
 - experienced in laboratory accreditation
 - technical expertise
 - proficiency testing experience
 - free from conflict of interest

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20

APLAC MRA - Evaluation

- Preparation
- On-site visit
 - accreditation body
 - accredited & applicant facilities
- Report
 - corrective actions identified
 - acceptance of corrective actions
 - schedule for implementation
- Full review by APLAC MRA Council

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21

APLAC MRA - Maintenance of Signatory Status

- Accreditation body notifies changes
 - name; legal status; organisation structure
 - key staff
 - operational procedures
- Re-evaluation
 - maximum every 4 years
 - after a shorter period with due cause
 - focus on changes
 - new team leader

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APLAC MRA - Assisting Trade

- APLAC MRA enhances acceptance of test, calibration and inspection reports, and RM certificates amongst signatory economies
- APLAC MRA signatories recognise equivalence of each others' accredited facilities
- APLAC MRA is an international recognition for accredited laboratories, inspection bodies and RMPs
- APLAC MRA reduces or eliminates need for re-testing or re-inspection of imported goods
- Entry into global ILAC Arrangement (for testing and calibration only)

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APLAC MRA & Regulators

- Laboratories and inspection bodies accredited for compliance with domestic & foreign regulations
- MRA evaluations assure competence to assess to domestic & foreign regulations
- APLAC MRA underpins APEC G2G MRAs

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24

Contact APLAC

- web site: <http://www.aplac.org>
- email: aplac@nata.asn.au

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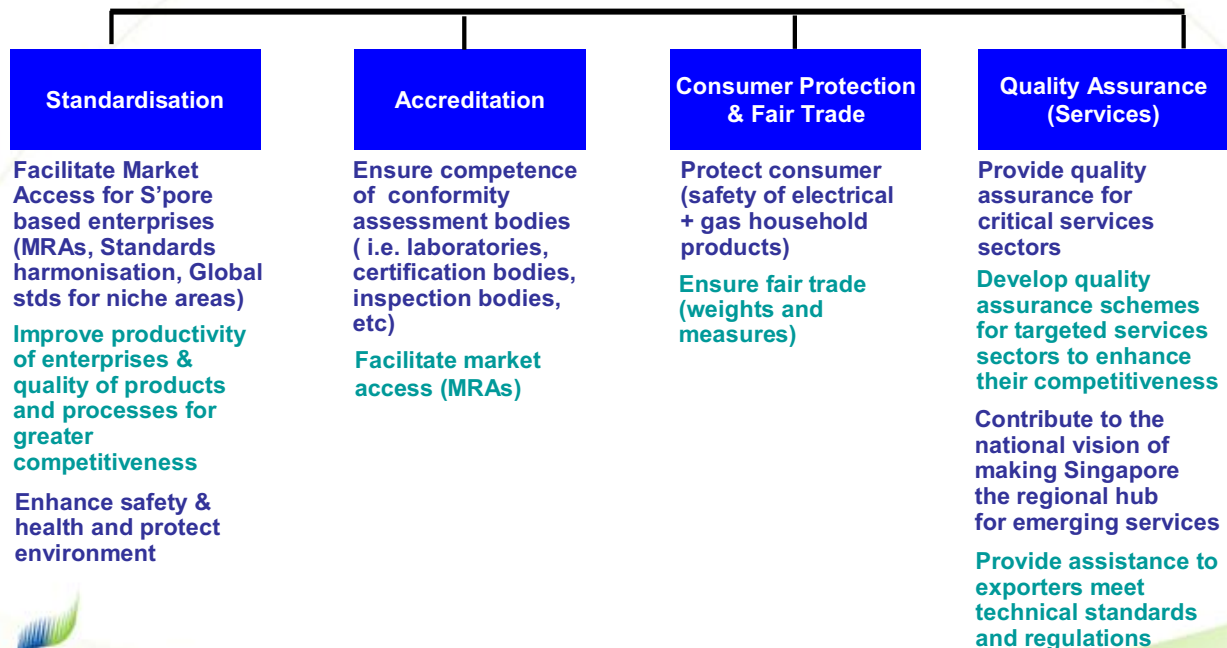
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Overview of SAC



Quality and Standards Group

Quality & Standards Group



Singapore Accreditation Council (SAC)

Functions

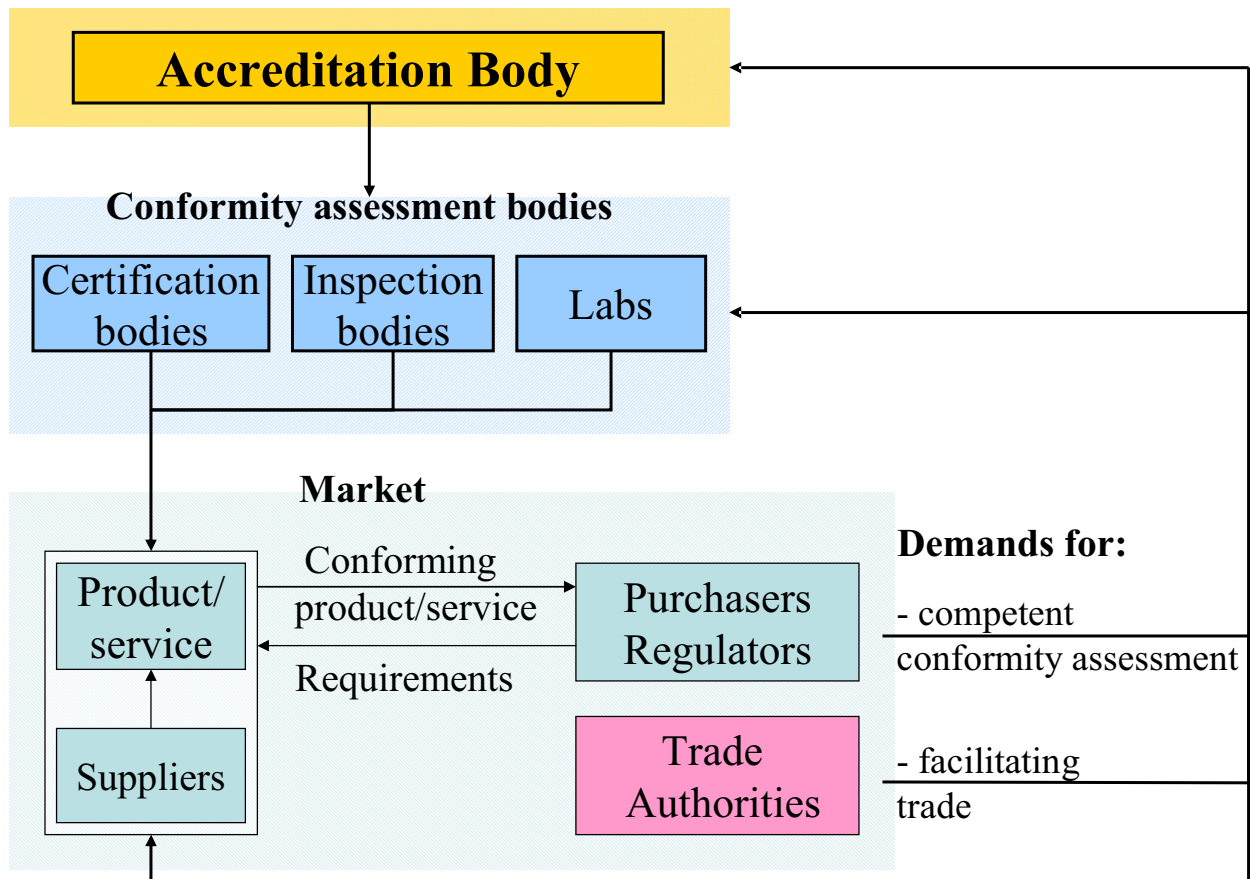
National accreditation authority

Accreditation of conformity assessment bodies for activities such as:

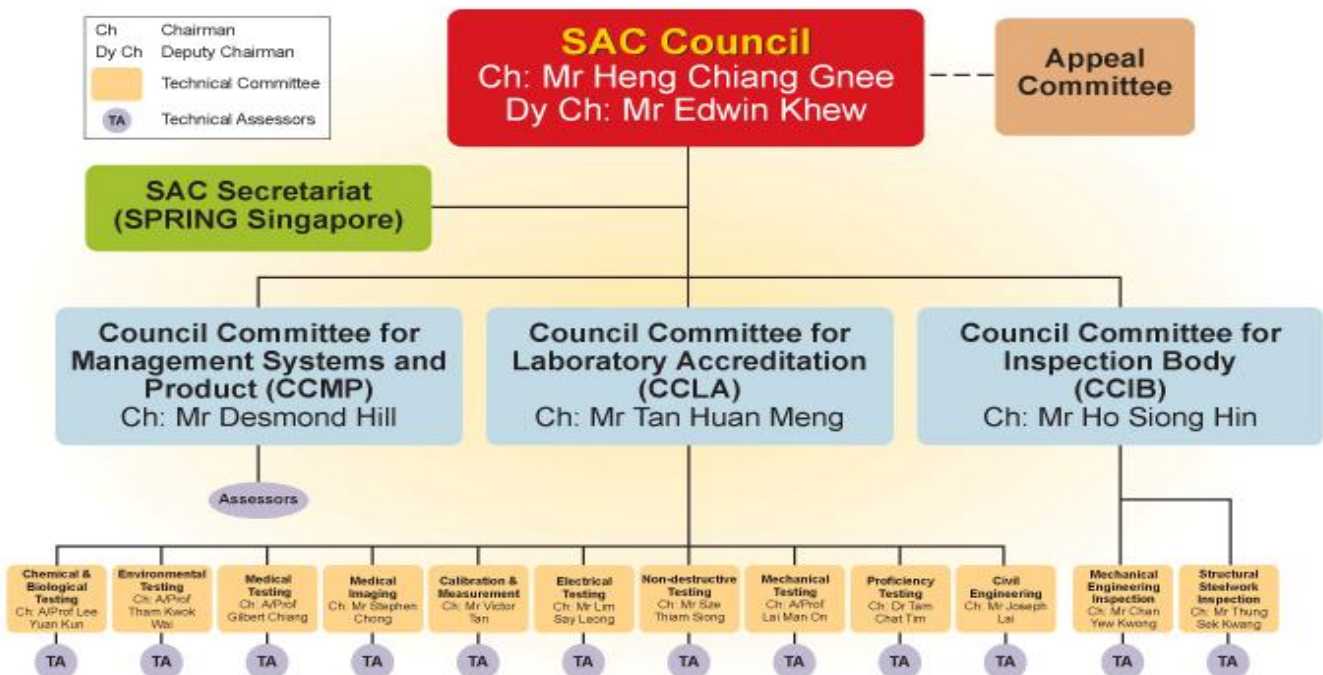
- Calibration
- Testing (ISO/IEC 17025 & ISO 15189)
- Inspection
- Product certification
- Management systems certification (ISO 9001, ISO 14001, HACCP, OSHMS)



Conformance Framework & Supervision in the Market



SAC Organisation Chart



Accreditation Schemes

Laboratories

(using ISO/IEC 17025, ISO 15189)

Inspection Bodies

(using ISO/IEC 17020)

ISO 9001 Certification Bodies

(using ISO/IEC Guide 62; ISO/IEC 17021)

ISO 14001 Certification Bodies

(using ISO/IEC Guide 66; ISO/IEC 17021)

Product Certification Bodies

(using ISO/IEC Guide 65)

HACCP Certification Bodies

(using ISO/IEC Guide 62 + SAC Doc 1)

OSHMS Certification Bodies

(using SS 506 Pt1:2004)

ISO 22000 Certification Bodies

(using ISO/IEC Guide 62; ISO TS2203)

*Operation of
programmes
bounded by
international
standards and
guidelines from
ISO, ILAC, IAF*

-Impartiality

-access to expertise

*-competency of staff &
assessors*

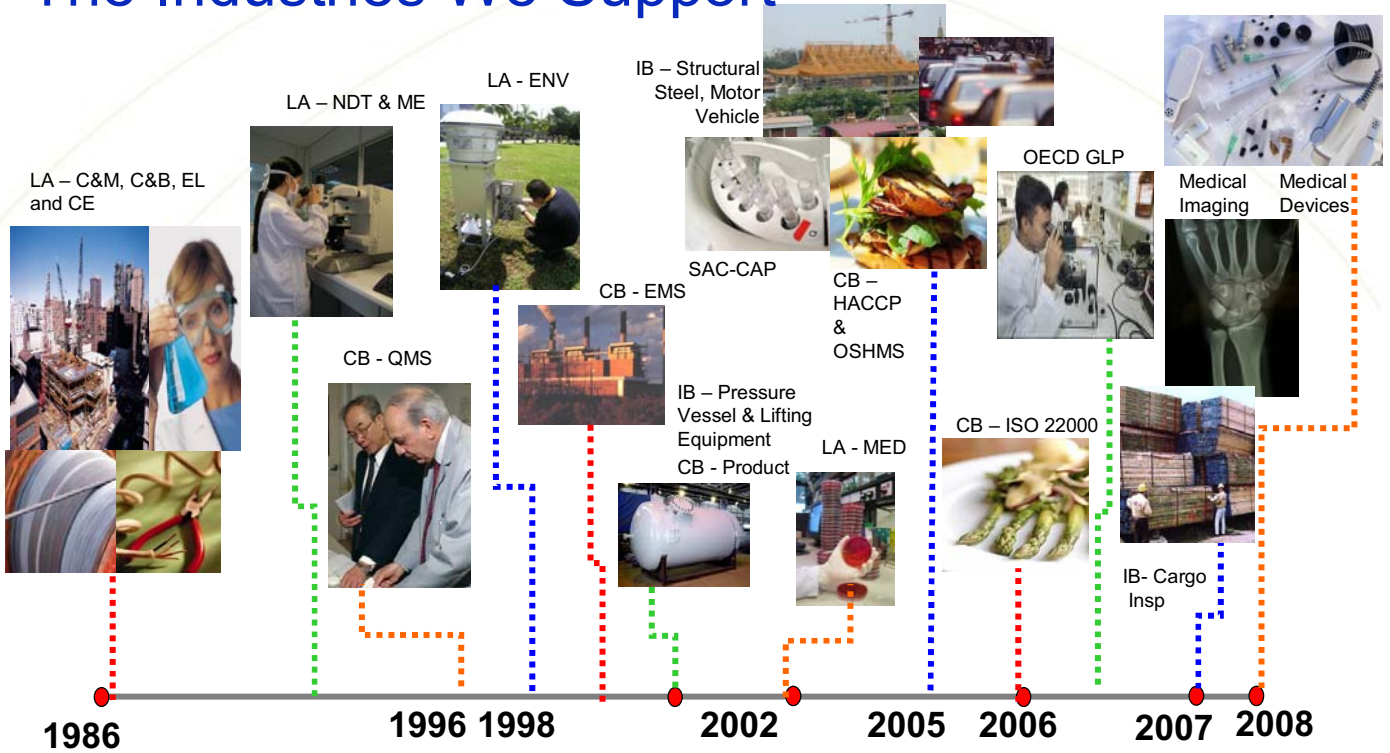
-management system



Accreditation Marks



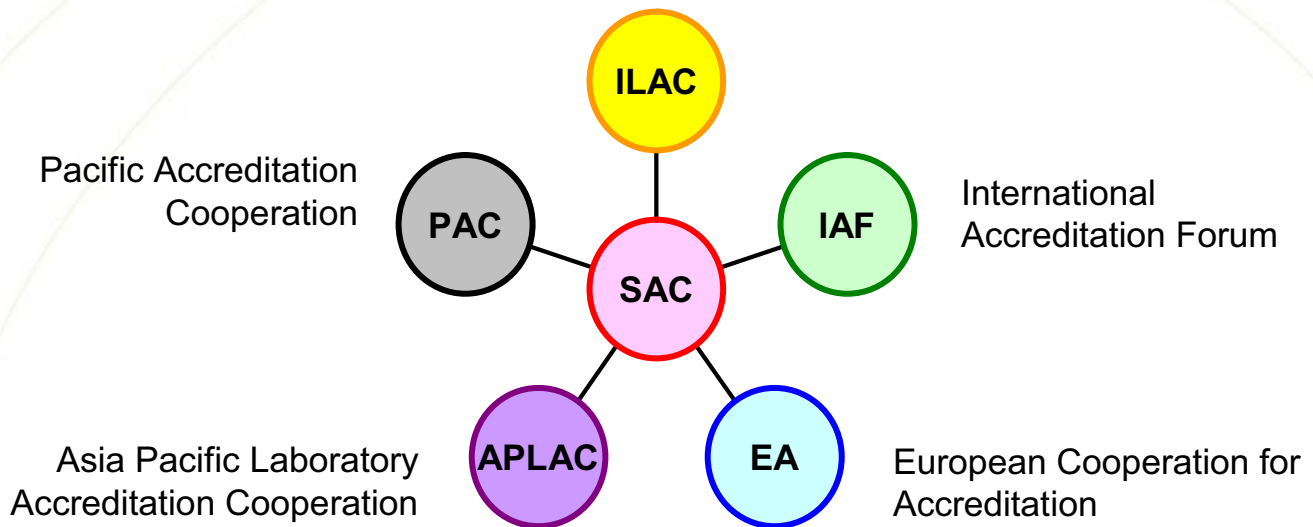
The Industries We Support



International Linkages

Achieving Recognition Globally

International Laboratory Accreditation Cooperation

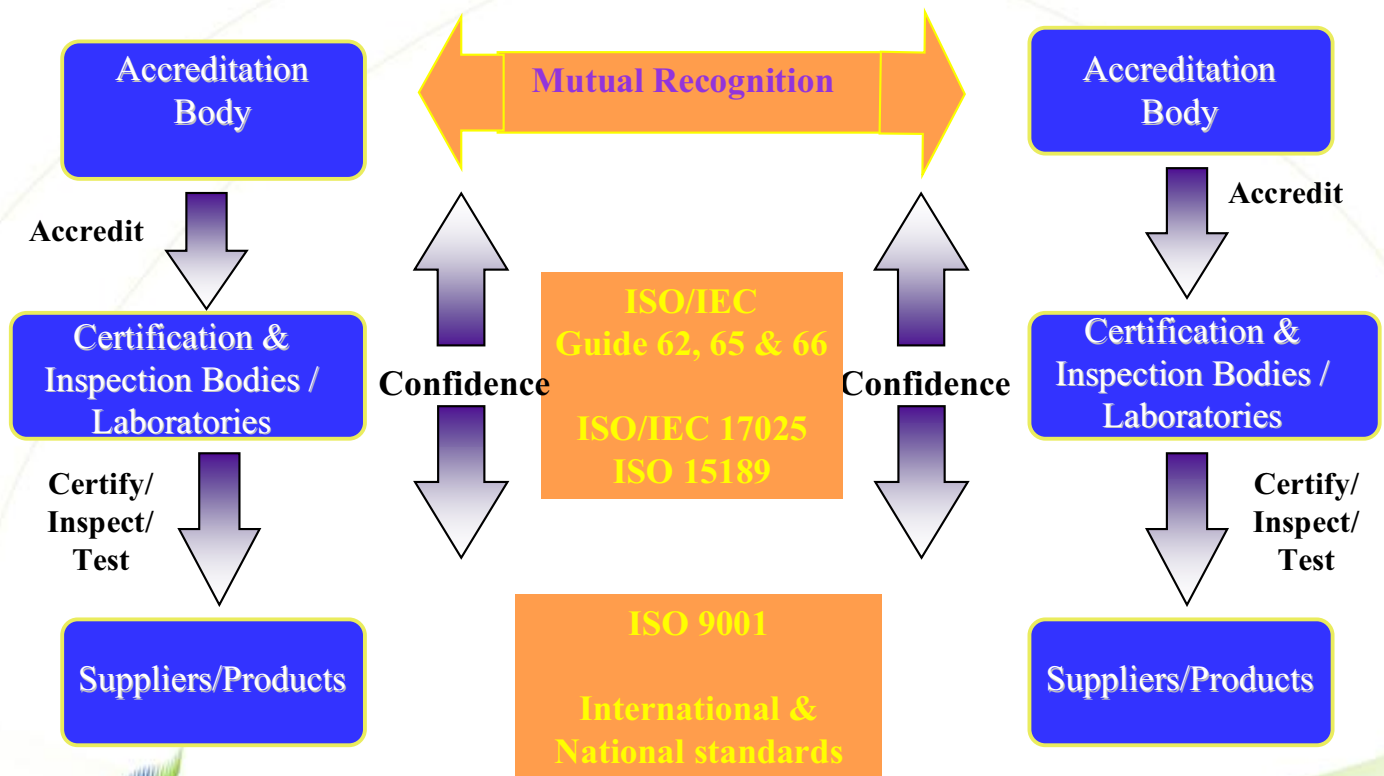


Mutual Recognition Arrangements (MRAs)

SAC is signatory to :

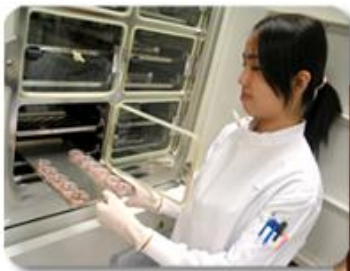
- | | | |
|--------------------|---|---|
| • <i>APLAC</i> MRA |) | Testing, Calibration,
Inspection & Medical |
| • <i>EA</i> MLA |) | Testing & |
| • <i>ILAC</i> MRA |) | Calibration |
| • <i>PAC</i> MLA |) | QMS & Product |
| • <i>IAF</i> MLA |) | Certification |

Mutual Recognition Objective



Accreditation - Achievements

- Accredited 255 laboratories, 20 certification bodies and 9 inspection bodies who in turn test, calibrate and certify for the whole industry
- Signatory to more than 130 accreditation systems in more than 45 economies



Gaining Support Locally

AVA



CAAS



NEA & PUB



CPS



FSSD



HSA



MPA



HDB & BCA



MOM



HPB

Thank You



Pacific
Accreditation
Cooperation

Introduction to the PAC Multilateral Mutual Recognition Arrangement (MLA) and its success in meeting the needs of industry and government regulators

12 May 2008

Prepared by

Pu-Hsien Li

TAF, Chinese Taipei



Outline

- What is PAC and MLA operation
- The PAC & IAF/ILAC Cooperation
- How does mutual recognition work and its application

What is PAC

Organization:

An **association of Accreditation Bodies** for certification in the APEC member economies and other interested parties

Mission:

To represent the interests of Asia and/or Pacific economies nationally, regionally and internationally in the area of certification / registration body accreditation and related activities, in support of APEC, IAF and WTO/TBT aims and objectives.

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What is PAC

Objectives:

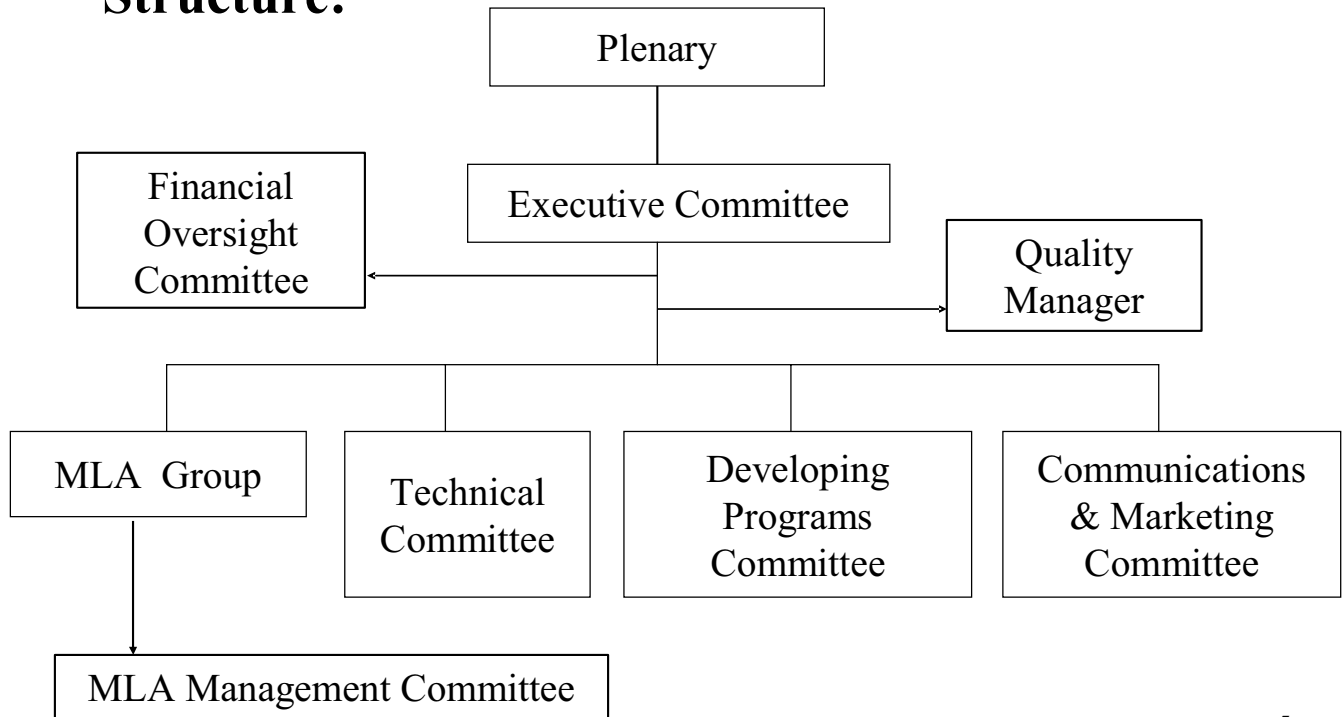
- to facilitate trade and commerce among economies in the Asia and/or Pacific region.
- to create of **a global system** that grants international recognition of certification or registration of management systems, products, services, personnel and other programs of **conformity assessment**.

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4

What is PAC

Structure:



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5

What is the PAC MLA

- The PAC MLA is a formal agreement/arrangement between PAC members
- The MLA (Multilateral Mutual Recognition Arrangement) is based on the **equivalence** of accreditation programs operated by accreditation body members, verified through **peer review** among those accreditation body members

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PAC MLA Programs

- QMS MLA for Quality Management Systems
- EMS MLA for Environmental Management Systems
- Product MLA for Product Certification Systems

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PAC MoU Signatories

Full Members

JAS-ANZ (Australia & New Zealand)
SCC (Canada)
CNAS (P.R. China)
HKAS (Hong Kong, China)
NABCB (India)
KAN (Indonesia)
IAS (Iran)
JAB (Japan)
JASC (Japan)
JIPDEC (Japan)
KAB (Korea, R.)
KAS (Korea, R.)
STANDARDS MALAYSIA (Malaysia)
EMA (Mexico)

PNAC (Pakistan)
PAO (Philippines)
SAC (Singapore)
TAF (Chinese Taipei)
NAC (Thailand)
ANSI (USA)
BoA (Vietnam)

(21 full members)

Associate Members

AACBF (Asia Accredited
CBs Federation)
IIOC (Int'l Association of
CBs)
(2 associate members)

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PAC MLA Programs & Signatories

(as of April 2008)

Organization	QMS MLA	EMS MLA	Product MLA
JAS-ANZ (Anstralia and New Zealand)	1998/1/24	2003/11/27	2004/7/8
SCC (Canada)	1998/1/24	2003/11/27	2004/7/8
CNAS(China)	1998/11/5	2004/7/8	
HKAS (Hong Kong)	2003/11/27		
NABCB (India)	2002/8/7	2007/7/12	
KAN(S.Korea)	2000/8/24	2004/7/8	
JAB(Japan0	1998/1/24	2003/11/27	
KAB(Indionia0	1999/7/29	2004/7/8	
STANDARDS MALAYSIA	1998/11/5	2005/12/31	
EMA(Mexico)	2001/9/6	2004/7/8	2004/7/8
PAO(Philipin0	2002/8/7	2007/7/12	
SAC(Singarpore0	1998/11/5		2006/12/20
TAF(Chinese Taipei)	2002/8/7	2004/7/8	2007/7/12
NAC(Thailand)	2000/8/24	2003/11/27	
BoA(Vietnam)	2007/7/12		
ANSI(U.S.A.)			2007/7/12
KAS(S. korea)			2007/7/12

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The Goal of the PAC MLA

Standards

Harmonize

Conformity Assessments

MLA

**Certified Once,
Accepted
Everywhere**

Deregulate

Simplify

Accredit

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10

Definition (ISO/IEC 17000:2004)

Conformity Assessment:

demonstration that **specified requirements** related to a product, process, system, person or body **are fulfilled**.

Accreditation:

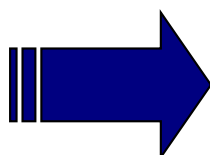
third-party attestation related to a conformity assessment body conveying formal demonstration of its **competence** to **carry out** specific conformity assessment task.

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Principles of Conformity Assessment

1. Objectivity
2. Impartiality
3. Competency
4. Independence
5. Transparency
6. Consistency



Confidence



supported by
robust **peer evaluations**

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MLA Peer Assessment Process



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PAC MLA Programs - Requirements

PAC MLA members are required:

- To maintain conformance with ISO/IEC 17011;
- To assess the conformity of certification bodies with ISO/IEC 17021 in the field of QMS (ISO 9001) & EMS(ISO 14001);
- To assess the conformity of certification bodies with ISO/IEC Guide 65 in the field of product certification;

MLA members have to assess CBs to ensure that CBs comply with ISO 17021 before 14 Sep. 2008.

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PAC MLA Programs - Consistency of Peer Evaluation

Requirements for Peer Evaluators

- Experienced accreditation assessors
- Attending PAC training courses & individual performance is evaluated
- Participating into a peer evaluation as a trainee & **individual performance is evaluated**
- **On-going evaluation of performance**

Requirements for Evaluation Reports

- Description of the approaches of ABs
- Independent Committee reviews the report and makes recommendation

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The PAC & IAF/ILAC Cooperation

- IAF focuses on accreditation of Management System Certification, Product Certification, Personnel Certification & Inspection Body
- ILAC focuses on Laboratory Accreditation, Inspection Body Accreditation

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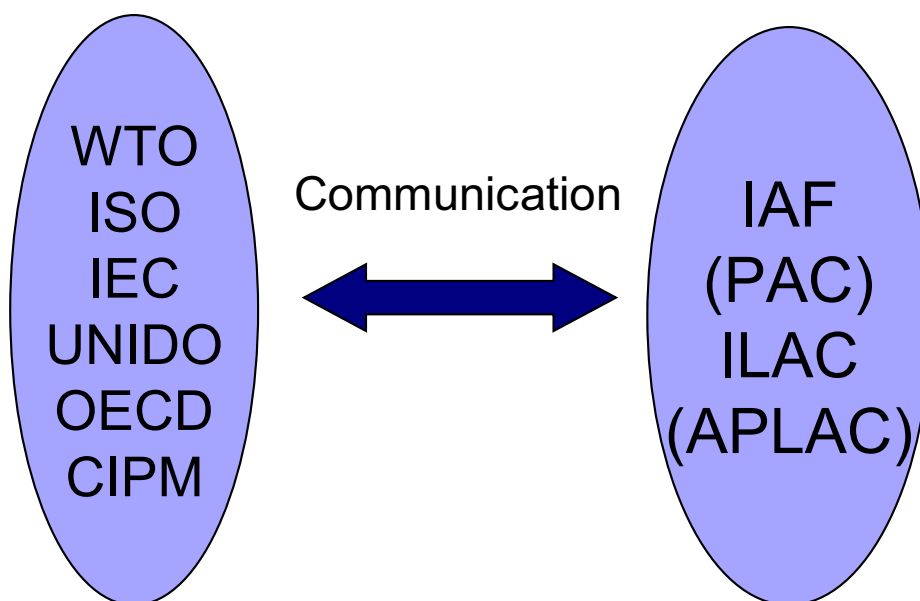
The PAC & IAF Cooperation



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17

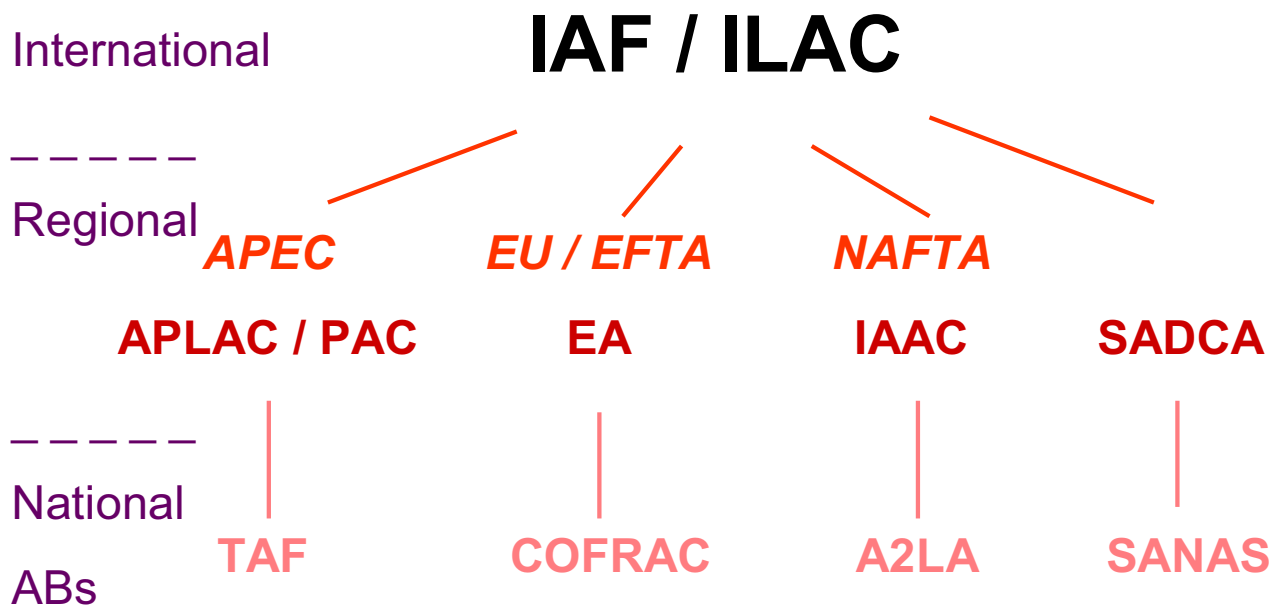
Cooperation



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Cooperation



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IAF MoU & MLA Signatories

- **MoU Members: 45 ABs (43 Economies)**
- **MLA Signatories:**
 - QMS MLA: 3 Regional Accreditation Groups (EA, **PAC** & IAAC) and 39 ABs
 - EMS MLA: 2 Regional Accreditation Groups (EA & **PAC**) and 36 ABs
 - Product MLA: 2 Regional Accreditation Groups (EA & **PAC**) and 28 ABs

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PAC & IAF/ILAC Joint Activities

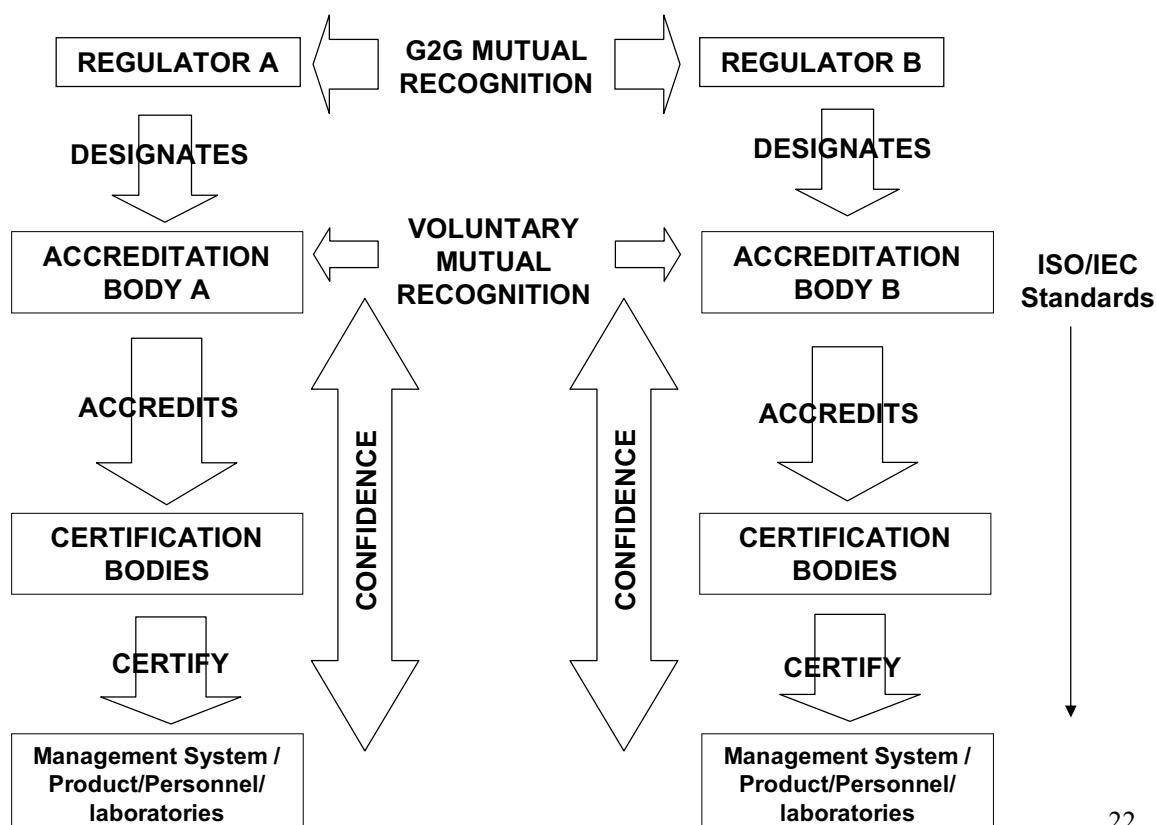
Activities for consistency;

1. IAF/ILAC Joint Working Group for Training Peer Evaluators
2. IAF/ILAC Joint Working Group for Developing Guidance on Application of ISO/IEC 17011 and related standards
3. Conducting IAF/ILAC Joint Peer Evaluations
4. Enhancing communication with end-user.

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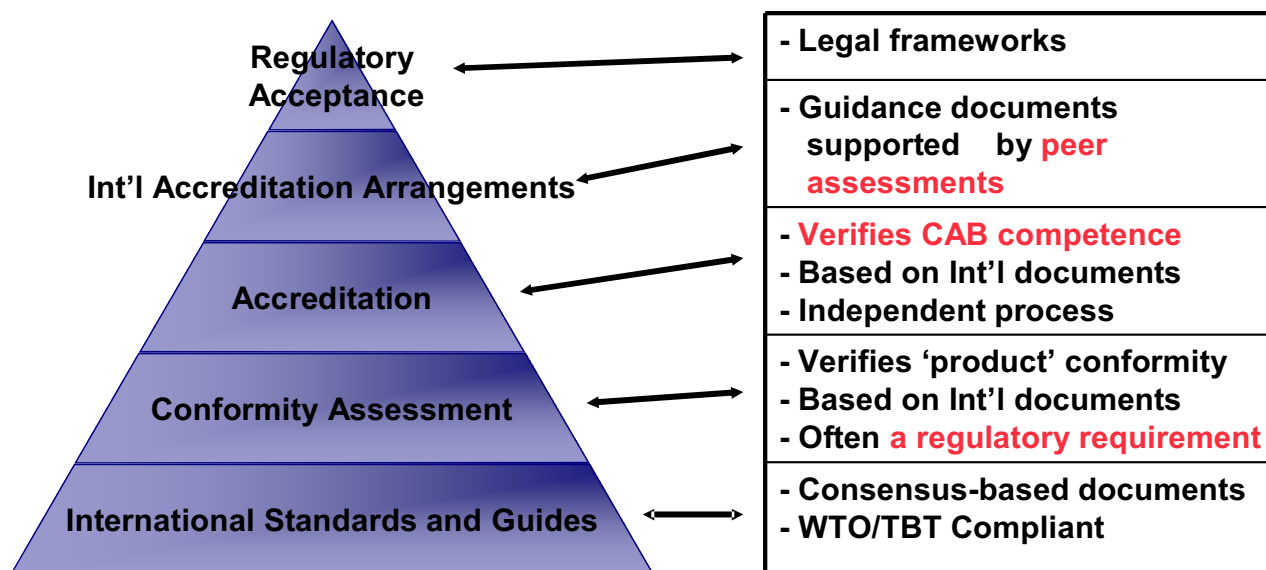
How does mutual recognition work



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Level of Conformance & Acceptance



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2 ways to employ accreditation

- Before accepting the **certificate issued by AB to CB**, regulator can work with AB, eg observing AB assessment, to increase confidence in the AB
- Regulator accept AB **report for CB** and issue its own certificate to CB.

Note: The AB assessment team include assessor from Regulator.

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MLA application in PAC members

- Accepting and employing MLA:
Canada, Australia, Chinese Taipei

Area to be improved:

- no confidence with 3rd party assessment(AB)
- Regulators need to amend the regulation.
- Regulators do not fully understand accreditation

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Benefits of APEC EE MRA

- Facilitate trade of Electrical and Electronic Equipment :
 - Reduce cost and time to market
 - No retesting and re-certification
 - Provide market access certainty
 - Regulator does not exercise 'approval' or 'rejection'

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APEC EE MRA – Potential for more participation

	APEC
1.Information Exchange	15 out of 21
2.Acceptance of Test Reports	4 out of 21
3.Acceptance of Certification	3 out of 21

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Where can EE MLA start?

- Information Technology Equipments (ITE) have less technical difference among members.
- ITE are based on IEC and ISO standards.
- Most members economics have accreditation body for testing and certification.

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Ultimate Goal of PAC MLA Activities

“One World, One Accreditation”
- Certified once,
Accepted everywhere -

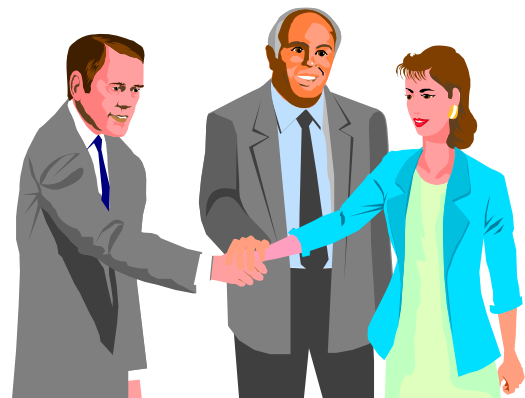
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Thank you for attention

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