

出國報告（出國類別：其他）

參與ISO/IEC JTC1/SC31/WG3/SG1及 WG4/SG3會議報告

服務機關：經濟部標準檢驗局

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派赴國家：美國

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報告日期：97年10月2日

摘要

本次ISO/IEC JTC1/SC31/WG3/SG1及WG4/SG3會議於美國匹茲堡大學舉辦，WG3/SG1會議出席人數27人，WG4/SG3會議出席人數41人。

WG3/SG1會議內容主要包括技術報告草案(Draft Technical Report, DTR) 24769及24770之討論、空中介面工作組之報告、建議案(New Project, NP)18046 RFID性能測試及18047 RFID符合性測試之審查、新工作項目(New Work Item, NWI)報告等；WG4/SG3會議內容主要包括草案(Committee Draft, CD)18000-2及18000-7之討論、18000系列標準工作報告、匹茲堡大學RFID中心實驗室實作展示等。

藉由參與工作組會議可掌握相關國際標準制修訂情形，觀察技術走向及發展趨勢，以及瞭解其他各國及國際通訊大廠所關切議題，有助於我國產業及早掌握主流技術發展趨勢，亦有助於無線射頻識別國家標準發展架構與時程之規劃及擬定。

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一、會議名稱

ISO/IEC/JTC1/SC31/W3/SG1及WG 4/SG 3會議

二、參加會議目的及效益

- (一) ISO/IEC JTC1/SC31係國際標準組織專責自動識別及資料擷取技術標準之子委員會，主要制定無線射頻識別(RFID)相關標準，包括ISO/IEC 18000系列等。WG3及WG4工作組分別負責硬體之符合性測試及應用於品項管理無線射頻識別。
- (二) 參與工作組會議可掌握相關國際標準制修訂情形，觀察技術走向及發展趨勢，以及瞭解其他各國及國際通訊大廠所關切議題，有助於我國產業及早掌握主流技術發展趨勢，亦有助於無線射頻識別國家標準發展架構與時程之規劃及擬定。
- (三) 另本次會議針對ISO/IEC 18000系列標準安排相關展示，以檢驗標準內容相關數據與參數是否正確，並可藉此瞭解相關技術之實作與驗測情形。
- (四) 對非屬ISO會員國之我國，本次會議可藉由合作組織之身分參與，以瞭解國際標準組織之運作情形。

三、會議時間

2008年8月 18日至19日

四、會議地點

Benedum Hall, 美國匹茲堡大學

五、會議過程：會議議程及會議記要

(一)會議議程

<8月18日>

0900 宣布會議開始(BRM_DTR24769) (Call to Order)

- 1 主席致歡迎詞(Chairman's welcome)
- 2 簡介及各代表自我介紹(Introductions – Named Delegates from National Bodies)
未出席代表由主席代為說明及致歉(Apologies for absence) (略)
- 3 會議議程 N0373 (DTR 24769)之核可 (文件: N0373))
- 4 投票結果討論(Ballot resolution)
公布投標結果，並對各會員國代表所提書面意見，加註秘書處之處理意見並加以討論。
結果之核可(Approval of resolutions)

0930 宣布會議開始(BRM_DTR24770)

- 1 主席致歡迎詞(略)
- 2 簡介及各代表自我介紹、未出席代表由主席代為說明及致歉(略)
- 3 會議議程之核可 N0374 (DTR 24770)
- 4 投票結果討論(Ballot resolution)
結果之核可(Approval of resolutions)

1000 宣布會議開始(WG3/SG1)

- 1 主席致歡迎詞(略)
- 2 簡介及各代表自我介紹、未出席代表由主席代為說明及致歉(略)
- 3 會議議程之核可(文件: N0360)
- 4 前次會議會議紀錄之核可(文件: N0376)

- 5 前次會議所提出之事項與行動
- 6 智慧財產權(IP) 議題：新 IP 之宣告
- 7 空中介面工作組之報告
 - 7.1 WG4/SG3 RFID
 - 7.2 WG5 RTLS
- 8 新提案 NP18046 RFID Performance testing 之審查
 - 8.1 ISO/IEC 18046-1
 - 8.2 ISO/IEC 18046-2
- 9 新提案 NP18047 RFID Conformance testing 之審查
 - 9.1 ISO/IEC 18047-6 REV 1
 - 9.2 ISO/IEC 18047-7 REV 1
- 10 新工作項目報告
 - 10.1 ISO/IEC 24769 "RTLS Device Conformance Test Methods
 - 10.2 ISO/IEC 24770 "RTLS Device Performance Test Methods
- 11 EPCglobal
- 12 下次會議日期與地點
- 13 投票結果之核可
- 14 其他事務
- 1700 休會

<8月19日>

0900 宣布會議開始(空中介面 18000-2 CD 投票表決會議)

- 1 簡介及各代表自我介紹
- 2 議程之核可(文件: SG3_200804_677_PIT_BRM_18000-2_MtgAg.doc)

- 3 ISO/IEC 18000-2. Information technology — Radio frequency identification for item management — Part 2: Parameters for air interface communications below 135 kHz

CD 投票結果 – Steve Lazar and Dominique Paret

0930 休會

0930 宣布會議開始(空中介面 18000-7 CD 投票表決會議)(略)

- 1 簡介及各代表自我介紹(略)
- 2 議程之核可(文件: SG3_200804_678_PIT_BRM_18000-7_MtgAg.doc)
- 3 ISO/IEC 18000-7. Information technology — Radio frequency identification for item management — Part 7: Parameters for active air interface communications at 433 MHz

CD 投票結果 – Craig Harmon

1000 休會

1000 宣布會議開始(WG4/SG3)

- 1 簡介及各代表自我介紹(略)
- 2 議程之核可(文件: SG3_200804_676_PIT_MtgAg.doc)
- 3 前次會議會議紀錄之核可-奧地利維也納，2007年4月7日至8日 (Document: SG3_200804_674_VIE_Mins.doc)
- 4 前次會議產生之行動項目(文件: SG3_200804_674_VIE_Mins.doc)
- 5 智慧財產權(IP) 議題：新 IP 之宣告
- 6 目前工作項目報告
 - 6.1 18000 系列之變更
 - 6.1.1 Part 1 – Steve Halliday

- 6.1.2 Part 2 – Steve Lazar and Dominique Paret
- 6.1.3 Part 3 – Ken Laing and Franz Amtmann
- 6.1.4 SG3_200807_695_18000-3rev2v0713d.pdf.zip
- 6.1.5 Part 4 – Josef Preishuber-Pflügl
- 6.1.6 Part 6 – Josef Preishuber-Pflügl and Farron Dacus
 - 6.1.6.1 SG3_200807_687_RFID_tag_clock_synchronization_PIT_aug-08.ppt – Turner
 - 6.1.6.2 SG3_200807_692_18000-6_StatusReport_Aug19_08_VIP0.zip - Dacus
- 6.1.7 Part 7 – Craig Harmon
- 7 法規議題 – Josef Preishuber-Pflügl
- 8 WG 3 /SG 1 之報告 - Josef Preishuber-Pflügl
- 9 WG 4 /SG 1 之報告 – Rick Schuessler
- 10 WG 6 報告- Craig Harmon
- 11 其他事項
 - 11.1 RFID security
 - 11.1.1 SG3_200807_688_NWIP Air Interface for File Management and Security-0_1.pdf – Austria
 - 11.1.2 SG3_200807_689_20080718-WhitePaper-Enhancing Security in ISO18000-6C.doc – Austria
 - 11.1.3 SG3_200807_686_SG5n0062r_24729-4_Text_wPDTR_DoC_20080604.doc – Harmon
 - 11.1.4 SG3_200807_685_Guidelines_for_Securing_RFID_Tags.pdf – Harmon
 - 11.1.5 SG3_200807_684_eur22770en.pdf – Harmon
 - 11.1.6 SG3_200807_691_Security-Approach-YSK-20080720.ppt – You Sung Kang

11.1.7 SG3_200807_690_RFIDsecurity requirements

20080700.ppt – Pretorius

11.1.8 SG3_200807_693_Security-ThreatAnalysis-Tyco-

20080720.ppt – Patterson

11.1.9 SG3_200807_694_Hitachi_UHF_RFID_080820.pdf -

Honzawa

11.2 未來會議 – 子工作組及子委員之未來會議時程

1600 參觀 RFID Center Laboratory 展示

展示 1: Conformance Testing a Reader Command and
analyzing Errors – ISO/IEC 18000-7

展示 2: Conformance Testing a Tag Reply and analyzing
Errors – ISO/IEC 18000-7

展示 3: Collect all Tags in Field with GOLD Reader and test
for conformance – ISO/IEC 18000-7

展示 4: Command Detector and RF Signal Generator with
GOLD Tag – ISO/IEC 18000-7

展示 5: Simulator for ISO/IEC 18000-6c

1700 休會

(二) 會議記要

1. 由匹茲堡大學提供的會議室具門禁安全控管，並禁止與會者於會議室飲食，會議室不具無線上網功能，而以連接網路線之桌上型電腦，使用會場提供之臨時使用者帳號與通行碼達到連網功能，另秘書單位以行動碟傳檔方式提供參與者會議資料，參與者則以依序報出單位名稱、簽名及投遞名片之方式讓秘書單位掌握出席者資訊。

2. 各工作組會議正式開始前，皆先進行相關標準草案之投票結果討論會議，宣布投票之結果，並由秘書單位將各代表之書面意見整理並回應，各代表若對回應內容有意見，則於會議上進行討論；工作組會議主要討論工作項目、合作方式、未來組織之變更、草案負責代表之指定等。

3. WG3/SG1 會議決議解散 WG3/SG1 子工作組另建立 WG4/SG6 子工作組，由臨時(ad-hoc)工作組持續進行 ISO/IEC 18046-1 及 18046-2 等工作草案，未來將要求 JTC1 SC31 秘書處指定 WG4/SG6 子工作組接手進行 ISO/IEC TR 18046、18046-1~3、18047-1~6 等標準(如下表)之後續制修訂工作，

ISO/IEC TR	18046:2005	Information technology -- Automatic identification and data capture techniques -- Radio frequency identification device performance test methods
ISO/IEC	18046:2006	Information technology -- Automatic identification and data capture techniques -- Radio frequency identification device performance test methods
ISO/IEC NP	18046-1	Information technology -- Radio frequency identification device performance test methods -- Part 1: Test methods for system performance
ISO/IEC NP	18046-2	Information technology -- Radio frequency identification device performance test methods -- Part 2: Test methods for interrogator performance
ISO/IEC	18046-3:2007	Information technology -- Radio frequency identification device performance test methods -- Part 3: Test methods for tag performance
ISO/IEC TR	18047-2:2006	Information technology -- Radio frequency identification device conformance test methods -- Part 2: Test methods for air interface communications below 135 kHz
ISO/IEC TR	18047-3:2004	Information technology -- Radio frequency identification device conformance test methods -- Part 3: Test methods for air interface communications at 13,56 MHz
ISO/IEC TR	18047-3:2004 /Cor 1:2007	Information technology -- Radio frequency identification device conformance test methods -- Part 3: Test methods for air interface communications at 13,56 MHz -- Technical Corrigendum 1
ISO/IEC	18047-	Information technology -- Radio frequency identification

TR	3:2004 /Cor 2:2008	device conformance test methods -- Part 3: Test methods for air interface communications at 13,56 MHz -- Technical Corrigendum 2
ISO/IEC NP TR	18047-3	Information technology -- Radio frequency identification device conformance test methods -- Part 3: Test methods for air interface communications at 13,56 MHz
ISO/IEC TR	18047-4:2004	Information technology -- Radio frequency identification device conformance test methods -- Part 4: Test methods for air interface communications at 2,45 GHz
ISO/IEC TR	18047-6:2006	Information technology -- Radio frequency identification device conformance test methods -- Part 6: Test methods for air interface communications at 860 MHz to 960 MHz
ISO/IEC DTR	18047-6	Information technology -- Radio frequency identification device conformance test methods -- Part 6: Test methods for air interface communications at 860 MHz to 960 MHz
ISO/IEC WD TR	18047-6	Information technology -- Automatic identification and data capture techniques -- RFID device conformance test methods -- Part 6: Test methods for air interface communications at 860 MHz to 930 MHz
ISO/IEC TR	18047-7:2005	Information technology -- Radio frequency identification device conformance test methods -- Part 7: Test methods for active air interface communications at 433 MHz
ISO/IEC NP TR	18047-7	Information technology -- Radio frequency identification device conformance test methods -- Part 7: Test methods for active air interface communications at 433 MHz

並指定 WG5 接手進行 24769、24770 等標準(如下表)之後續制修訂工作。

ISO/IEC DTR	24769	Information Technology -- Automatic Identification and Data Capture Techniques -- RTLS Device Conformance Test Methods -- Test methods for air interface communication at 2.4 GHz
ISO/IEC DTR	24770	Information Technology -- Automatic Identification and Data Capture Techniques -- RTLS Device Performance Test Methods -- Test methods for air interface communication at 2.4 GHz

4. WG3/SG1 邀請所有對 RFID 性能與符合性測試方法有興趣之專家持續參與 WG4/SG6 之工作；亦邀請所有對 RTLS 性能與符合性測試方法有興趣之專家持續參與 WG5 之工作。
5. ISO/IEC DTR 24769 「Information technology – Automatic identification and data capture techniques – RTLS device conformance test methods for air interface communication at 2.4G Hz」通信投票通過此技術報告草案，其中 26 個會員國投票、14 個會員國未投票。
6. ISO/IEC DTR 24770 「Information technology – Automatic identification and data capture techniques – RTLS device performance test methods for air interface communication at 2.4G Hz」通信投票通過此技術報告草案，其中 26 個會員國投票、14 個會員國未投票。
7. ISO/IEC DTR 24769 及 24770 之投票表決會議中韓國代表所提標準中數值之表示法，逗號應以小數點取代，經與會代表討論後，決議遵照 ISO/IEC JTC1 Directive 第 2 部第 6.6.8.1 節之規定，予以駁回。
8. WG4/SG3 會議同意 ISO/IEC CD 18000-2 提升至 ISO/IEC FCD 18000-2，並同意 ISO/IEC CD 18000-7 提升至 ISO/IEC FCD 18000-7；會議建議標準草案 18000-1 及 18000-4 之制修定工作應彼此配合同時進行；並要求標準草案 18000-7 及 24753 內有關感應器(sensor)之規定，應符合目前正制定中的 IEEE 1451.7 之規格定義。
9. 有關 RFID 裝置對醫療照護應用之影響，由於美國醫學期刊 (JAMA)2008 年 6 月之一篇研究報導「Electromagnetic Interference from Radio Frequency Identification Inducing

Potentially Hazardous Incidents in Critical Care Medical

Equipment」顯示 123 個 EMI 試驗中，34 例會造成影響，其中 22 例為危險的，2 例為顯著的，10 例為輕微的。由於該項試驗報導之結果，有相當大之比例將造成不良影響，因此工作組會議討論發展符合美國藥物管理局(FDA)之測試協定，在類似的條件下以現有市售之 RFID 商品，委託喬治亞理工學院或匹茲堡大學再進行另一次試驗。

10. WG4/SG3 法規議題中，有代表指出 ITU 之相關會議中，有中東國家代表建議將短距裝置 (SRD、RFID) 使用之頻段移出 ISM 頻段，此舉將影響 RFID 之應用與未來發展，因此會議主席建議各會員體應瞭解相關緣由及發展情形，在未來 ITU 會議前及早準備因應。
11. 有關射頻標籤同步(synchronisation)方式應採廣播同步或個別對話同步之問題，工作組之簡報作出若干結論：(1)RFID 品項管理所使用標籤之時間精確度為 1 秒應已足夠。(2)廣播同步方式可達到 1 秒之精確度。(3)在供應鏈環境中，廣播同步方式是最具效益的。
12. 匹茲堡大學 RFID 中心實驗室之數項展示主要為研究生以 Labview 應用軟體所發展之虛擬儀器(virtual instrument, VI)，透過介面可依使用者需求及標準規定來設定參數，使用者可輸入命令波形檔並觀察其對應之同相位與垂直相位(IQ)資料檔，藉由命令輸入及性能輸出，可分析讀取器及標籤是否符合標準，並可分析錯誤有助於讀取器及標籤之開發；另有實驗室展示高速環境之設備，以馬達推動之環狀履帶載體及以空氣槍推動之

直線軌道載體可模擬無線射頻標籤於高速進行的環境中被讀取器識別之能力表現。

六、心得及建議

- (一)國際標準組織工作組會議多由美國、英國、德國、奧地利等國代表參與，亞洲地區參與國家計有日本、韓國、新加坡及我國等參與，且多由通訊廠商或標準組織代表參與，WG3及WG4工作組分別負責硬體之符合性測試及應用於品項管理無線射頻識別，我國政府大力推展公領域RFID之應用實有需要瞭解該等技術之發展趨勢。
- (二)參與國際標準組織工作組會議可瞭解國際標準組織之工作組架構、如何進行國際標準之制修訂作業、會議之運作等，可作為我國各級標準組織運作時之參考。
- (三)國際標準之形成由新提案(New Project, NP)、核可之新工作項目(Approved new Work Item, AWI)、工作草案(Working Draft, WD)、委員會草案(Committee Draft, CD)、最終委員會草案(Final Committee Draft, FCD)、國際標準草案(Draft International Standard, DIS)、最終國際標準草案(Final Draft International Standard, FDIS)、國際標準(International Standard, IS)等，經過許多階段。若能掌握各階段之發展，便可瞭解標準中技術之取捨，也就是何項為主流技術，何項技術被排除，有助於產業技術發展之選擇，縮短商品上市時間，以掌握商機。對國家標準組織而言，也可儘早掌握標準之公布時程，並於草案階段即可預做準備，可縮短相對應的國家標準之公布時程。
- (四)RFID與感應器(sensor)之結合及與行動裝置(mobile device)之結

合已逐漸形成趨勢，相關議題陸續被提出討論，也有新的工作組形成，因此相關標準內容及技術型態皆可能需做調整，該等技術結合值得國內產業觀察，是否有我國廠商之強項技術，或是可以快速跟進以擴大產品市佔率。

(五)RFID應用於醫療領域所引起電磁干擾效應在本次會議也得到相當大之關注，由於該技術若廣泛應用須考量與其他電子儀器相互干擾、人體安全等問題，後續宜持續觀察相關試驗之結果，以提供衛生署等相關單位參考。

(六)本次會議係由美國匹茲堡大學RFID中心所承辦，並將接受RFID技術標準相關研究計畫，由此可瞭解學界在標準制定活動中亦扮演重要之角色，藉由提供研究設備及研究人員，可連結標準與實作，以及驗證概念產品對於標準之符合性，有助於標準之發展與應用。

七、附件

本次會議所蒐集與整理之相關資料檢附如下：

1. 匹茲堡大學 RFID 中心實驗室展示資料
2. 美國醫學期刊(JAMA)「Electromagnetic Interference from Radio Frequency Identification Inducing Potentially Hazardous Incidents in Critical Care Medical Equipment」摘要
3. ISO/IEC JTC1 SC31 標準制修訂現況整理表
4. ISO/IEC JTC1 SC31 Program of Work

附件 1

University of Pittsburgh
RFID Center Laboratory Demonstrations
August 19, 2008
4:00PM (Approximately)
Room 365 Benedum Hall (3rd Floor)

Demo 1: Conformance Testing a Reader Command and analyzing Errors - ISO 18000 - 7

In this Demo the procedure to operate a VI (program in Labview software) for conformance testing a reader command will be explained. When the VI is opened, all the inputs are set to the default values as specified by the standard. The input values can be easily adjusted to user requirements. User will input the command waveform file and its corresponding IQ data file. With the click of a single button analysis is performed on the reader command signal and simple pass or fail indicators will display conformance results. A detailed analysis report is also displayed on the screen and is also printed to a text file.

This VI will also display every error that has caused the reader command signal to fail. This will aid in the development of the Reader.

Demo 2: Conformance Testing a Tag Reply and analyzing Errors - ISO 18000 - 7

In this Demo the procedure to operate a VI (program in Labview software) for conformance testing a tag reply will be explained. The features and functionality will be similar to the previous VI.

Demo 3: Collect all Tags in Field with GOLD Reader and test for conformance - ISO 18000 - 7

In this Demo the GOLD Reader will issue a collection command and all tags in field will be collected. Then there is an option of the user to test all of these tags or test each tag individually. Test report text file for every tag tested will be in a directory selected by user with the tag manufacturer ID and Tag serial number in the file name.

Demo 4: Command Detector and RF Signal Generator – The GOLD Tag - ISO 18000 - 7

In this Demo the command detector will be sent a collection command from the GOLD reader. The command detector will decode the collection command, select a random slot and send a trigger to an external RF signal generator. This RF signal generator will send a signal similar to a tag's reply to collection command. The command detector and the RF signal generator together will form the GOLD Tag for conformance testing a reader for receiver accuracy and turn around time.

Gen – 2 Simulator for ISO 18000-6c

The Gen-2 simulator is easy to use software with simple GUI that will enable the user to simulate the time required for different read and/or write scenarios in a field of tags conforming to ISO 18000-6c standard. The model is being developed so that the user, with minimum knowledge of the standard, can decide upon the different parameters of a passive RFID system that will best suit the requirement. These parameters include the TARI value, the number of bits to read and write per instruction and most importantly the organization of the memory and its capacity in the tag. The simulator will calculate the minimum time required to read and/or write data depending on the inputs chosen by the user and will display the entire sequence of minimum reader instructions and tag responses and their corresponding times.

附件2

Electromagnetic Interference From Radio Frequency Identification Inducing Potentially Hazardous Incidents in Critical Care Medical Equipment

Remko van der Togt, MSc; Erik Jan van Lieshout, MD; Reinout Hensbroek, MSc; E. Beinat, PhD; J. M. Binnekade, PhD; P. J. M. Bakker, MD, PhD

JAMA. 2008;299(24):2884-2890.

Context Health care applications of autoidentification technologies, such as radio frequency identification (RFID), have been proposed to improve patient safety and also the tracking and tracing of medical equipment. However, electromagnetic interference (EMI) by RFID on medical devices has never been reported.

Objective To assess and classify incidents of EMI by RFID on critical care equipment.

Design and Setting Without a patient being connected, EMI by 2 RFID systems (active 125 kHz and passive 868 MHz) was assessed under controlled conditions during May 2006, in the proximity of 41 medical devices (in 17 categories, 22 different manufacturers) at the Academic Medical Centre, University of Amsterdam, Amsterdam, the Netherlands. Assessment took place according to an international test protocol. Incidents of EMI were classified according to a critical care adverse events scale as hazardous, significant, or light.

Results In 123 EMI tests (3 per medical device), RFID induced 34 EMI incidents: 22 were classified as hazardous, 2 as significant, and 10 as light. The passive 868-MHz RFID signal induced a higher number of incidents (26 incidents in 41 EMI tests; 63%) compared with the active 125-kHz RFID signal (8 incidents in 41 EMI tests; 20%); difference 44% (95% confidence interval, 27%-53%; $P < .001$). The passive 868-MHz RFID signal induced EMI in 26 medical devices, including 8 that were also affected by the active 125-kHz RFID signal (26 in 41 devices; 63%). The median distance between the RFID reader and the medical device in all EMI incidents was 30 cm (range, 0.1-600 cm).

Conclusions In a controlled nonclinical setting, RFID induced potentially hazardous incidents in medical devices. Implementation of RFID in the critical care environment should require on-site EMI tests and updates of international standards.

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附件3

WG1: 資料載體

標準編號	標準名稱	標準狀態
15417	Information technology - Automatic identification and data capture techniques - Code 128 bar code symbology specification	IS Ed2: 2007
15420	Information technology - Automatic identification and data capture techniques - Bar code symbology specification - EAN/UPC	FCD
15424	Information technology - Automatic identification and data capture techniques - Data Carrier Identifiers (including Symbology Identifiers)	IS: 2008
15438	Information technology - Automatic identification and data capture techniques - PDF417 bar code symbology specification	IS Ed2: 2006
16022	Information technology - Automatic identification and data capture techniques - Data Matrix bar code symbology specification	IS Ed2: 2006
16023	Information technology - International symbology specification – MaxiCode	IS: 2000
16388	Information technology - Automatic identification and data capture techniques - Code 39 bar code symbology specification	FDIS 投票
16390	Information technology - Automatic identification and data capture techniques - Interleaved 2 of 5 bar code symbology specification	FDIS 投票
18004	Information technology - Automatic identification and data capture techniques - QR Code 2005 bar code symbology specification	IS Ed2 更名為"QR Code 2005"
24723	Information technology - Automatic identification and data capture techniques - EAN.UCC Composite bar code symbology specification	IS: 2006
24724	Information technology - Automatic identification and data capture techniques - Reduced Space Symbology (RSS) bar code symbology specification	IS: 2006
24728	Information technology - Automatic identification and data capture techniques - MicroPDF417 bar code symbology specification	IS: 2006
24778	Information technology - Automatic identification and data capture techniques - Reduced Space Symbology (RSS) bar code symbology specification	IS: 2008

WG2: 資料結構

標準編號	標準名稱	標準狀態
15418	Information technology - Automatic identification and data capture techniques - GS1 Application identifiers and ASC MH 10 data identifiers and maintenance	NP, 進行修訂與更名作業
15434	Information technology - Automatic identification and data capture techniques - Syntax for high-capacity ADC media	IS Ed3: 2006
15459-1	Information technology - Unique identifiers - Part 1: Unique identifiers for transport units	IS Ed2: 2006
15459-2	Information technology - Unique identifiers - Part 2: Registration procedures	IS Ed2: 2006
15459-3	Information technology - Unique identifiers - Part 3: Common rules for unique identifiers	IS: 2006
15459-4	Information technology - Unique identifiers - Part 4: Individual items	IS: 2006
15459-5	Information technology - Unique identifiers - Part 5: Unique identifier for returnable transport items (RTIs)	IS: 2007
15459-6	Information technology - Unique identifiers - Part 6: Unique identifier for product groupings	IS: 2007
15459-8	Information technology - Unique identifiers - unique identifiers Part 8: Transport shipments	CD

WG3: 符合性

標準編號	標準名稱	標準狀態
15415	Information technology - Automatic identification and data capture techniques - Bar code print quality test specification - Two-dimensional symbols	IS: 2004 /Cor 1
15416	Information technology - Automatic identification and data capture techniques - Bar code print quality test specification - Linear symbols	IS: 2000
15419	Information technology - Automatic identification and data capture techniques - Bar code digital imaging and printing performance testing	IS: 2001/Ed2 FCD
15421	Information technology - Automatic identification and data capture techniques - Bar code master test specifications	IS: 2000/Ed2 CD
15423	Information technology - Automatic identification and data capture techniques -	IS: 2004/Ed2 FCD

	Bar code scanner and decoder performance testing	
15426-1	Information technology - Automatic identification and data capture techniques - Bar code verifier conformance specification - Part 1: Linear symbols	IS Ed2: 2006
15426-2	Information technology - Automatic identification and data capture techniques - Bar code verifier conformance specification - Part 2: Two-dimensional symbols	IS: 2005/Cor 1: 2008
19782	Information technology - Automatic identification and data capture techniques - Effects of gloss and low substrate opacity on reading of bar code symbols	TR: 2006
24720	Information technology - Automatic identification and data capture techniques - Guidelines for direct part marking (DPM)	TR: 2008
24769	Information Technology - Automatic Identification and Data Capture Techniques - RTLS Device Conformance Test Methods - Test methods for air interface communication at 2.4 GHz	DTR
24770	Information Technology - Automatic Identification and Data Capture Techniques - RTLS Device Performance Test Methods - Test methods for air interface communication at 2.4 GHz	DTR
18046	Information technology - Automatic identification and data capture techniques - Radio frequency identification device performance test methods	IS: 2006
18046-1	Information technology - Radio frequency identification device performance test methods - Part 1: Test methods for system performance	NP
18046-2	Information technology - Radio frequency identification device performance test methods - Part 2: Test methods for interrogator performance	NP
18046-3	Information technology - Radio frequency identification device performance test methods - Part 3: Test methods for tag performance	IS: 2007
18047-2	Information technology - Radio frequency identification device conformance test methods - Part 2: Test methods for air interface communications below 135 kHz	TR: 2006
18047-3	Information technology - Radio frequency identification device conformance test methods - Part 3: Test methods for air	TR: 2004/ Cor 1: 2007/Cor2: 2008

	interface communications at 13,56 MHz	
18047-4	Information technology - Radio frequency identification device conformance test methods - Part 4: Test methods for air interface communications at 2,45 GHz	TR: 2004
18047-6	Information technology - Radio frequency identification device conformance test methods - Part 6: Test methods for air interface communications at 860 MHz to 960 MHz	TR: 2006 /Ed2·DTR
18047-7	Information technology - Radio frequency identification device conformance test methods - Part 7: Test methods for active air interface communications at 433 MHz	TR: 2005 /Ed2 NP

WG4: 無線射頻識別品項管理

標準編號	標準名稱	標準狀態
18001	Information technology - Radio frequency identification for item management - Application requirements profiles	TR: 2004
24729-1	Information technology - Radio frequency identification for item management - Implementation guidelines - Part 1: RFID-enabled labels and packaging supporting ISO/IEC 18000-6C	TR: 2008
24729-2	Information technology - Radio frequency identification for item management - Implementation guidelines - Part 2: Recycling and RFID tags	TR: 2008
24729-3	Information technology - Radio frequency identification (RFID) for item management Implementation guidelines - Part 3: Implementation and operation of UHF RFID Interrogator systems in logistics applications.	CD TR
24729-4	Information technology - Radio frequency identification for item management - Implementation guidelines - Part 4: RFID guideline on tag data security	DTR
15961	Information technology - Radio frequency identification (RFID) for item management - Data protocol: application interface	IS: 2004
15961-1	Information technology - Radio frequency identification (RFID) for item management - Data protocol - Part 1: Application interface	CD
15961-2	Information technology - Radio frequency identification (RFID) for item management - Data protocol - Part 2: Registration of	FCD, 定義 Registration Authority

	RFID data constructs	
15961-3	Information technology - Radio frequency identification (RFID) for item management - Data protocol - Part 3: RFID data constructs	FCD
15961-4	Information technology - Automatic Identification and Data Capture Techniques - Radio Frequency Identification (RFID) for Item Management - Part 4: Application interface commands for battery assist and sensor functionality	NP
15962	Information technology - Radio frequency identification (RFID) for item management - Data protocol: data encoding rules and logical memory functions	IS: 2004 /Ed2 CD
15963	Information technology - Radio frequency identification for item management - Unique identification for RF tags	IS: 2004 /Ed2 CD
24753	Automatic identification and data capture techniques - Radio frequency identification (RFID) for item management - Application protocol: encoding and processing rules for sensors and batteries	CD
24791-1	Information technology - Automatic Identification and Data Capture Techniques - Radio-Frequency Identification (RFID) for Item Management - System Management Protocol - Part 1: Architecture	FCD
24791-2	Information technology - Automatic Identification and Data Capture Techniques - Radio-Frequency Identification (RFID) for Item Management - System Management Protocol - Part 2: Data management	NP
24791-3	Information technology - Automatic Identification and Data Capture Techniques - Radio-Frequency Identification (RFID) for Item Management - System Management Protocol - Part 3: Device management	NP
24791-4	Information technology - Automatic Identification and Data Capture Techniques - Radio-Frequency Identification (RFID) for Item Management - System Management Protocol - Part 4: Application interface	NP
24791-5	Information technology - Automatic Identification and Data Capture Techniques - Radio-Frequency Identification (RFID) for Item Management - System Management Protocol - Part 5: Device interface	CD
24791-6	Information technology - Automatic	CD

	Identification and Data Capture Techniques - Radio-Frequency Identification (RFID) for Item Management - System Management Protocol - Part 6: Security	
18000-1	Radio frequency identification for item management -Reference architecture and definition of parameters to be standardized	IS Ed2: 2008
18000-2	Information technology - Radio frequency identification for item management - Part 2: Parameters for air interface communications below 135 kHz	IS: 2004/ Ed2 CD
18000-3	Information technology - Radio frequency identification for item management - Part 3: Parameters for air interface communications at 13,56 MHz	IS: 2004/ Ed2 IS:2008
18000-4	Information technology - Radio frequency identification for item management - Part 4: Parameters for air interface communications at 2,45 GHz	IS: 2004/ Ed2 IS:2008
18000-6	Information technology - Radio frequency identification for item management - Part 6: Parameters for air interface communications at 860 MHz to 960 MHz	IS: 2004/Amd: 2006 / Ed2 CD
18000-7	Information technology - Radio frequency identification for item management - Part 7: Parameters for active air interface communications at 433 MHz	IS Ed2: 2008
24710	Information technology - Radio frequency identification for item management - Elementary tag licence plate functionality for ISO/IEC 18000 air interface definitions	TR: 2005

WG5: 即時定位系統

標準編號	標準名稱	標準狀態
24730-1	Information technology - Real-time locating systems (RTLS)-Part 1:Application Programming Interface (API)	IS: 2006
24730-2	Information technology - Real-time locating systems (RTLS) - Part 2: 2,4 GHz air interface protocol	IS: 2006
24730-5	Information technology - real time locating systems (RTLS) - Part 5: Chirp Spread Spectrum (CSS) at 2.4 GHz	CD



Program of Work

Working Group on Data Carriers (SC 31/WG 1)

Convener: Sprague Ackley (United States), E-Mail: sackley@compuserve.com

Secretariat: To Be Assigned

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 15420: Information technology -- Automatic identification and data capture techniques -- Bar code symbology specification -- EAN/UPC (ITTF Project ID: 27663)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Jan 97	Aug 98	Aug 99	Nov 00	Dec 00
PE: Sprague Ackley	N/A 20.99	N0359 30.99	N0572 40.99	N/A 50.99	N/A 90.92
First Revision		Aug 07	Nov 08		
PE: Sprague Ackley	N/A	N2339 30.99	N/A 40.20		

2. ISO/IEC 15417: Information technology -- Automatic identification and data capture techniques -- Bar code symbology specification -- Code 128 (ITTF Project ID: 43896)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Dec 97	Jun 98	Mar 99	Apr 00	Jun 00
PE: Chris Swindin	N/A 20.99	N0344 30.99	N0479 40.99	N/A 50.99	N/A 90.92
First Revision			Apr 06	Apr 07	May 07
PE: Sprague Ackley	N/A	N/A	N2042 40.99	N/A 50.99	N/A 60.60

3. ISO/IEC 15438: Information technology -- Automatic identification and data capture techniques -- PDF417 bar code symbology specification (ITTF Project ID: 43816)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Jan 97	Sept 98	Aug 00	Dec 00	Sept 01
PE: Harry Clark	N/A 20.99	N0374 30.99	N0574 40.99	N/A 50.99	N/A 90.92
First Revision		Nov 04	Aug 05	Apr 06	May 06
PE: Sprague Ackley	N/A	N1730 30.99	N1924 40.99	N/A 50.99	N/A 60.60

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4. ISO/IEC 15424: Information technology -- Automatic identification and data capture techniques -- Data Carrier Identifiers (including Symbology Identifiers) (ITTF Project ID: 27667)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Chris Swindin	Jan 97 N/A 20.99	Sept 98 N0376 30.99	Aug 99 N0573 40.99	Apr 00 N/A 50.99	Jun 00 N/A 90.92
First Revision PE: Sprague Ackley	N/A	May 07 N2273 30.99	Sept 07 N2345 40.99	Jun 08 N2556 50.99	Jul 08 N/A 60.60

5. ISO/IEC 16023: Information technology -- International symbology specification -- MaxiCode (ITTF Project ID: 29835)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Sprague Ackley	N/A	N/A	N/A	Oct 98 N/A 50.99	May 00 N/A 90.93
First Reaffirmation PE: Sprague Ackley	N/A	N/A	N/A	N/A	Apr 06 N2053 60.60

6. ISO/IEC 16022: Information technology -- Automatic identification and data capture techniques -- Data Matrix bar code symbology specification (ITTF Project ID: 44230)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Sprague Ackley	N/A	N/A	N/A	Oct 98 N/A 50.99	May 00 N/A 90.92
First Revision PE: Sprague Ackley	N/A	Sept 04 N1711 30.99	Oct 05 N1947 40.99	Jul 06 N/A 50.99	Sept 06 N/A 60.60
Technical Corrigendum 1 PE: Sprague Ackley	N/A	N/A	N/A	N/A	Jul 08 N2571 60.00

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7. ISO/IEC 16388: Information technology -- Automatic identification and data capture techniques -- Bar code symbology specifications -- Code 39 (ITTF Project ID: 43897)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Sprague Ackley	N/A	N/A	N/A	Aug 98 N/A 50.99	Oct 99 N/A 90.92
First Revision PE: Sprague Ackley	N/A	N/A	Apr 06 N2043 40.99	Apr 07 N/A 50.99	May 07 N/A 60.60

8. ISO/IEC 16390: Information technology -- Automatic identification and data capture techniques -- Bar code symbology specifications -- Interleaved 2 of 5 (ITTF Project ID: 43898)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Sprague Ackley	N/A	N/A	N/A	Aug 98 N/A 50.99	Oct 99 N/A 90.92
First Revision PE: Sprague Ackley	N/A	N/A	Apr 06 N2044 40.99	Apr 07 N/A 50.99	Jun 07 N/A 60.60

9. ISO/IEC 18004: Information technology -- Automatic identification and data capture techniques -- QR Code 2005 bar code symbology specification (ITTF Project ID: 43655)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Chris Swindin	N/A	Sept 98 N0375 30.99	Aug 99 N0578 40.99	May 00 N/A 50.99	Jun 00 N/A 90.92
First Revision PE: Chris Swindin	Mar 05 N1802 20.99	Mar 05 N1803 30.99	Dec 05 N1974 40.99	Jul 06 N/A 50.99	Aug 06 N/A 60.60
Technical Corrigendum 1 PE: Sprague Ackley	N/A	N/A	N/A	N/A	Aug 08 N2613 60.00

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10.ISO/IEC 24723: Information technology -- Automatic identification and data capture techniques -- EAN.UCC Composite bar code symbology specification (ITTF Project ID: 38833)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Glenn Spitz	Nov 03 N1530 20.99	Dec 04 N1740 30.99	Aug 05 N1922 40.99	Mar 06 N/A 50.99	Apr 06 N/A 60.60
First Revision PE: Glenn Spitz	Jun 08 N2567 20.20	Jun 08 N2568 30.60			

11.ISO/IEC 24724: Information technology -- Automatic identification and data capture techniques -- Reduced Space Symbology (RSS) bar code symbology specification (ITTF Project ID: 38834)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Glenn Spitz	Nov 03 N1518 20.99	Dec 04 N1741 30.99	Aug 05 N1921 40.99	Mar 06 N/A 50.99	Sept 06 N/A 60.60
First Revision PE: Glenn Spitz	Jun 08 N2569 20.20	Jun 08 N2570 30.60			

12.ISO/IEC 24728: Information technology -- Automatic identification and data capture techniques -- MicroPDF417 bar code symbology specification (ITTF Project ID: 38838)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Sprague Ackley	Jun 03 N1469 20.99	Nov 04 N1731 30.99	Aug 05 N1923 40.99	Apr 06 N/A 50.99	May 06 N/A 60.60

13.ISO/IEC 24778: Information technology -- Automatic Identification and Data Capture Techniques -- Bar Code Symbology Specification -- Aztec Code (ITTF Project ID: 41548)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Not Yet Assigned	Feb 06 N2008 20.99	Dec 06 N2168 30.99	Jun 07 N2293 40.99	Jan 08 N/A 50.99	Feb 08 N/A 60.60

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Working Group on Data Structure (SC 31/WG 2)

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Secretariat: David Buckley (GS1), E-Mail: david.buckley@gs1.org

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 15418: Information technology -- Automatic identification and data capture techniques -- GS1 Application Identifiers and ASC MH 10 Data Identifiers and Maintenance (ITTF Project ID: 45944)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: David Buckley	Dec 97 N/A 20.99	Jun 98 N0347 30.99	Mar 99 N0478 40.99	Oct 99 N/A 50.99	Dec 99 N/A 90.93
First Reaffirmation PE: David Buckley	N/A	N/A	N/A	N/A	May 04 N/A 60.60
Second Reaffirmation PE: David Buckley	N/A	N/A	N/A	N/A	Apr 08 N2507 60.60

2. ISO/IEC 15434: Information technology -- Automatic identification and data capture techniques -- Syntax for high capacity ADC media (ITTF Project ID: 43692)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	Jan 97 N/A 20.99	Sept 97 N0228 30.99	Aug 98 N0365 40.99	Aug 99 N/A 50.99	Oct 99 N/A 90.92
First Revision PE: Craig Harmon	N/A	May 04 N1640 30.99	Dec 04 N1742 40.99	Aug 05 N/A 50.99	Nov 05 N/A 60.60
Second Revision PE: Craig Harmon	Dec 04 N1736 20.99	Jul 05 N1908 30.99	Mar 06 N2025 40.99	Aug 06 N/A 50.99	Oct 06 N/A 60.60

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3. ISO/IEC 15459-1: Information technology -- Automatic identification and data capture techniques -- Unique identifiers Part 1: Transport units (ITTF Project ID: 43347)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: David Buckley	Dec 97 N/A 20.99	Jun 98 N0345 30.99	Mar 99 N0476 40.99	Oct 99 N/A 50.99	Dec 99 N/A 90.92
First Revision PE: Craig Harmon	Oct 03 N1516 20.99	Oct 03 N1517 30.99	May 05 N1855 40.99	Feb 06 N/A 50.99	Mar 06 N/A 60.60

4. ISO/IEC 15459-2: Information technology -- Automatic identification and data capture techniques -- Unique identifiers Part 2: Registration procedures (ITTF Project ID: 43348)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: David Buckley	Dec 97 N/A 20.99	Jun 98 N0346 30.99	Mar 99 N0477 40.99	Oct 99 N/A 50.99	Dec 99 N/A 90.92
First Revision PE: Craig Harmon	Oct 03 N1516 20.99	Oct 03 N1517 30.99	May 05 N1856 40.99	Feb 06 N/A 50.99	Mar 06 N/A 60.60

5. ISO/IEC 15459-3: Information technology -- Automatic identification and data capture techniques -- Unique identifiers Part 3: Common rules (ITTF Project ID: 43349)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	Oct 03 N1516 20.99	Oct 03 N1517 30.99	May 05 N1857 40.99	Feb 06 N/A 50.99	Mar 06 N/A 60.60

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6. ISO/IEC 15459-4: Information technology -- Automatic identification and data capture techniques -- Unique identifiers Part 4: Unique items (ITTF Project ID: 43455)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Oct 03 N1516	Oct 03 N1517	May 05 N1858	Feb 06 N/A	Mar 06 N/A
PE: Craig Harmon	20.99	30.99	40.99	50.99	60.60

7. ISO/IEC 15459-5: Information technology -- Automatic identification and data capture techniques -- Unique identifiers Part 5: Returnable transport items (RTIs) (ITTF Project ID: 43346)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Aug 05 N1925	Aug 05 N1926	Apr 06 N2049	Apr 07 N/A	May 07 N/A
PE: Craig Harmon	20.99	30.99	40.99	50.99	60.60

8. ISO/IEC 15459-6: Information technology -- Automatic identification and data capture techniques -- Unique identifiers Part 6: Product groupings (ITTF Project ID: 44149)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Feb 06 N2017	Feb 06 N2018	Oct 06 N2134	Apr 07 N/A	May 07 N/A
PE: Wakaizumi Kazuhiko	20.99	30.99	40.99	50.99	60.60

9. ISO/IEC 15459-7: Information technology -- Automatic identification and data capture techniques -- Unique identification Part 7: Unique identification of product packaging (ITTF Project ID: 44149)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	May 08 N2510	May 08 N2509			
PE: Not Yet Assigned	20.60	30.60*			
*This project has failed and is withdrawn within the SC 31 Program of Work.					

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10.ISO/IEC 15459-8: Information technology -- Automatic identification and data capture techniques -- Unique identification Part 8: Grouping of transport units (ITTF Project ID: 51399)

	<u>Stage 1</u> NWIP	<u>Stage 2</u> CD/PDTR/PDAM	<u>Stage 3</u> FCD/FPDAM	<u>Stage 4</u> FDIS/DTR/FDAM	<u>Stage 5</u> IS/TR/AMD
International Standard PE: David Buckley	Jun 08 N2553 20.98	Oct 08 N 30.20			

11.ISO/IEC 29162: Information Technology -- Automatic identification and data capture techniques -- Guidelines for using data structures in AIDC media (ITTF Project ID: 45241)

	<u>Stage 1</u> NWIP	<u>Stage 2</u> CD/PDTR/PDAM	<u>Stage 3</u> FCD/FPDAM	<u>Stage 4</u> FDIS/DTR/FDAM	<u>Stage 5</u> IS/TR/AMD
International Standard PE: Craig Harmon, Heinrich Oehlmann, and Kazuniko Wakaizumi	Jun 08 N2555 20.60				

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Working Group on Conformance (SC 31/WG 3)

Convener: Tina Barkan (United States), E-Mail: tina@webscaninc.com

Secretariat: **Vacant**

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 15415: Information technology -- Automatic identification and data capture techniques -- Bar code print quality test specification -- Two-dimensional symbols (ITTF Project ID: 27658)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Glenn Spitz	Apr 00 N/A 20.99	Jan 03 N1350 30.99	Jul 03 N1471 40.99	Apr 04 N1603 50.99	Jun 04 N/A 60.60
Technical Corrigendum 1 PE: Glenn Spitz	N/A	N/A	N/A	N/A	Nov 07 N2364 60.00

2. ISO/IEC 15416: Information technology -- Automatic identification and data capture techniques -- Bar code print quality test specification -- Linear symbols (ITTF Project ID: 27659)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Chuck Biss	Dec 97 N/A 20.99	Jun 98 N0348 30.99	Oct 99 N0586 40.99	Jun 00 N/A 50.99	Jun 00 N/A 90.60
First Reaffirmation PE: To Be Assigned	N/A	N/A	N/A	N/A	Jun 05 N1894 60.60

3. ISO/IEC 15419: Information technology -- Automatic identification and data capture techniques -- Bar code digital imaging and printing performance testing (ITTF Project ID: 27662)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Scott Gray	May 99 N/A 20.99	Oct 99 N0591 30.99	Aug 00 N0760 40.99	Feb 01 N/A 50.99	Mar 01 N/A 90.93
First Reaffirmation PE: Mr. George Wright, III and Mr. Peter Hicks	N/A	N/A	N/A	N/A	Jan 07 N2185 60.60
First Revision PE: Mr. George Wright, III and Mr. Peter Hicks	N/A	N/A	Jul 08 N2588 40.60		

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4. ISO/IEC 15421: Information technology -- Automatic identification and data capture techniques -- Bar code master test specifications (ITTF Project ID: 27664)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: George Wright, III & Peter Hicks	Jan 98 N/A 20.99	Dec 98 N0444 30.99	Oct 99 N0585 40.99	Jun 00 N/A 50.99	Sept 00 N/A 90.93
First Reaffirmation: PE: George Wright, III & Peter Hicks	N/A	N/A	N/A	N/A	Jan 07 N2186 60.60
First Revision: PE: George Wright, III & Peter Hicks	N/A	May 08 N2523 30.60			

5. ISO/IEC 15423: Information technology -- Automatic identification and data capture techniques -- Bar code scanner and decoder performance testing (ITTF Project ID: 36316)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Not Yet Assigned	Dec 00 N/A 20.99	Jan 03 N1351 30.99	Jul 03 N1472 40.99	Mar 04 N1604 50.99	Jun 04 N/A 90.93
First Reaffirmation: PE: Not Yet Assigned	N/A	N/A	N/A	N/A	Jan 07 N2187 60.60
Second Reaffirmation: PE: Not Yet Assigned	N/A	N/A	Aug 08 N/A 40.20		

6. ISO/IEC 15426-1: Information technology -- Automatic identification and data capture techniques -- Bar code verifier conformance specification -- Part 1: Linear symbols (ITTF Project ID: 43643)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Chuck Biss	Dec 97 N/A 20.99	Jun 98 N0349 30.99	Oct 99 N0587 40.99	Mar 00 N/A 50.99	Jul 00 N/A 90.92
First Revision PE: Chuck Biss	N/A	N/A	Dec 04 N1749 40.99	May 06 N/A 50.99	Jun 06 N/A 90.93
First Reaffirmation: PE: Chuck Biss	N/A	N/A	N/A	N/A	Jan 07 N2188 60.60

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7. ISO/IEC 15426-2: Information technology -- Automatic identification and data capture techniques -- Bar code verifier conformance specification Part 2: Two-dimensional symbols (ITTF Project ID: 28804)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Glenn Spitz	Jun 99 N/A 20.99	Jan 03 N1352 30.99	Mar 04 N1577 40.99	Jan 05 N1766 50.99	May 05 N/A 90.93
First Reaffirmation: PE: Glenn Spitz	N/A	N/A	N/A	N/A	Jan 07 N2189 60.60
Technical Corrigendum 1 PE: Glenn Spitz	N/A	N/A	N/A	N/A	Feb 08 N2257 60.60

8. ISO/IEC 19782: Information technology -- Automatic identification and data capture techniques -- Effects of gloss and low substrate opacity on reading of bar code symbols (ITTF Project ID: 33920)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: John Kessler	Aug 02 N1215 20.99	May 05 N1884 30.99	N/A	Jan 06 N/A 50.99	Jun 06 N/A 60.60

9. ISO/IEC 24720: Information technology -- Automatic identification and data capture techniques -- Guidelines for direct part marking (DPM) (ITTF Project ID: 38830)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Marsha Harmon & Hiromitsu Takai	Dec 03 N1537 20.99	Dec 05 N1978 30.99	N/A	Jul 07 N8635* 50.60	May 08 N/A 60.60

10. ISO/IEC 29133: Information technology -- Automatic identification and data capture techniques -- Quality test specification for rewritable hybrid media data carriers (ITTF Project ID: 45156)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Paul Chartier and Rie Taketomi	Oct 07 N2349 20.60				

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11. ISO/IEC 29158: Information technology -- Automatic identification and data capture techniques -- Direct Part Mark (DPM) Quality Guideline (ITTF Project ID: 45237)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/EDAM	Stage 5 IS/TR/AMD
International Standard PE: Sprague Ackley	Apr 08 N2535 20:60				

**Working Group on Conformance, Sub Group 1 (SC 31/WG 3/SG 1)
 Disbanded per Resolution 3 of the 2008 ISO/IEC JTC 1/Sc 31 Plenary Meeting**

Convener: **Vacant**

Secretariat: **Vacant**

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

Working Group on RFID for Item Management (SC 31/WG 4)

Convener: Henri Barthel (Belgium), E-Mail: henri.barthel@qs1.org

Secretariat: Gertjan van den Akker (Netherlands), E-Mail: gertjan.vandenakker@nen.nl

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 15963: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification (RFID) for item management -- Unique identification for RF tag (ITTF Project ID: 30530)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/EDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	N/A	Mar 02 N1094 30:99	Aug 03 N1489 40:99	Jul 04 N1660 50:99	Sept 04 N/A 60:60
First Revision PE: Craig Harmon	N/A	Sep 08 N/A 30:20			

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Working Group on RFID for Item Management, Sub Group 1 (WG 4/SG 1)

Convener: Rick Schuessler (United States), E-Mail: Rick.Schuessler@symbol.com

Secretariat: Barba A. Hickman (United States), E-Mail: barbahickman@appliedclarity.com

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

- 1. ISO/IEC 15961-1: Information technology -- Radio frequency identification (RFID) for item management -- Data protocol -- Part 1: Application interface (ITTF Project ID: 43458)**

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Nov 02 N1318	Jul 03 N1467	Mar 04 N1571	Sept 04 N1701	Oct 04 N/A
PE: Paul Chartier	20.99	30.99	40.99	50.99	90.92
First Revision	Sept 05 N1937	Apr 08 N2481			
PE: Not Yet Assigned	10.99	30.60			

- 2. ISO/IEC 15961-2: Information technology -- Radio frequency identification (RFID) for item management -- Data protocol -- Part 2: Registration of RFID data constructs (ITTF Project ID: 43631)**

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	N/A	Feb 06 N2007			
PE: Paul Chartier		30.60			

- 3. ISO/IEC 15961-3: Information technology -- Radio frequency identification (RFID) for item management -- Data protocol -- Part 3: RFID data constructs (ITTF Project ID: 43632)**

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Feb 06 N2005	Feb 06 N2006			
PE: Paul Chartier	20.99	30.60			

- 4. ISO/IEC 15961-4: Information technology -- Radio Frequency Identification (RFID) for Item Management -- Data protocol -- Part 4: Application interface commands for battery assist and sensor functionality**

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	May 07 N2264				
PE: Paul Chartier	20.99				

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5. ISO/IEC 15962: Information technology -- Radio frequency identification (RFID) for item management -- Data protocol: data encoding rules and logical memory functions (ITTF Project ID: 43459)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Paul Chartier	Nov 02 N1319 20.99	Jul 03 N1468 30.99	Mar 04 N1572 40.99	Sept 04 N1702 50.99	Oct 04 N/A 60.60
First Revision PE: Not Yet Assigned	Sept 05 N1938 10.99	Apr 08 N2480 30.60			

6. ISO/IEC 24753: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification (RFID) for item management -- Application protocol: encoding and processing rules for sensors and batteries (ITTF Project ID: 41523)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Paul Chartier	Apr 05 N1828 20.99	Jan 07 N2172 30.60			

7. ISO/IEC 24791-1: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification (RFID) for item management -- Software system infrastructure Part 1: Device management (ITTF Project ID: 44321)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Scott Barvick	Sept 06 N2124 20.99	Jul 08 N2575 30.60			

8. ISO/IEC 24791-2: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification (RFID) for item management -- Software system infrastructure Part 2: Data management (ITTF Project ID: 44321)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Scott Barvick & Masaki Ehara	Sept 06 N2124 20.60				

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9. ISO/IEC 24791-3: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification (RFID) for item management -- Software system infrastructure Part 3: Application management (ITTF Project ID: 44321)

	<u>Stage 1</u> NWIP	<u>Stage 2</u> CD/PDTR/PDAM	<u>Stage 3</u> FCD/FPDAM	<u>Stage 4</u> FDIS/DTR/FDAM	<u>Stage 5</u> IS/TR/AMD
International Standard PE: Scott Barwick & Luke Donnelly	Sept 06 N2124 20.60				

10. ISO/IEC 24791-4: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification (RFID) for item management -- Software system infrastructure Part 4: Application interface (ITTF Project ID: 44321)

	<u>Stage 1</u> NWIP	<u>Stage 2</u> CD/PDTR/PDAM	<u>Stage 3</u> FCD/FPDAM	<u>Stage 4</u> FDIS/DTR/FDAM	<u>Stage 5</u> IS/TR/AMD
International Standard PE: Not Yet Assigned	Sept 06 N2124 20.60				

11. ISO/IEC 24791-5: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification (RFID) for item management -- Software system infrastructure Part 5: Device interface (ITTF Project ID: 44321)

	<u>Stage 1</u> NWIP	<u>Stage 2</u> CD/PDTR/PDAM	<u>Stage 3</u> FCD/FPDAM	<u>Stage 4</u> FDIS/DTR/FDAM	<u>Stage 5</u> IS/TR/AMD
International Standard PE: Tony Carter	Sept 06 N2124 20.60				

12. ISO/IEC 24791-6: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification (RFID) for item management -- Software system infrastructure Part 6: Security (ITTF Project ID: 44321)

	<u>Stage 1</u> NWIP	<u>Stage 2</u> CD/PDTR/PDAM	<u>Stage 3</u> FCD/FPDAM	<u>Stage 4</u> FDIS/DTR/FDAM	<u>Stage 5</u> IS/TR/AMD
International Standard PE: Curtis Rozeboom & Ho-Won Kim	Sept 06 N2124 20.60	Oct 08 N/A 30.20			

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Working Group on RFID for Item Management, Sub Group 3 (WG 4/SG 3)

Convener: Steve Halliday (United States), E-Mail: steve@hightechaid.com

Secretariat: Barba A. Hickman (United States), E-Mail: barbahickman@appliedclarity.com

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 18001: Information technology -- Radio frequency identification for item management -- Application requirements profiles (ITTF Project ID: 40733)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Craig Harmon	N/A	Feb 01 N0827 30.99	N/A	Apr 04 N1590 50.92	Oct 04 N/A 60.60

2. ISO/IEC 18000-1: Information technology -- Radio frequency identification for item management -- Part 1: Reference architecture and definition of parameters to be standardized (ITTF Project ID: 34112)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: A. Watanabe	Sept 00 N/A 20.99	Jul 01 N0936 30.99	Feb 03 N1357 40.99	Aug 04 N1680 50.99	Sept 04 N/A 90.92
First Revision PE: Steve Halliday	May 05 N1841 20.99	May 07 N2265 30.99	Sept 07 N2351 40.60	May 08 N/A 50.20	

3. ISO/IEC 18000-2: Information technology -- Radio frequency identification for item management -- Part 2: Parameters for air interface communications below 135 kHz (ITTF Project ID: 34113)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Alain Berthon	Jan 02 N1031 20.99	Feb 02 N1058 30.99	Feb 03 N1358 40.99	Jul 04 N1678 50.99	Sept 04 N/A 60.60
First Revision PE: Steve Lazar & Dominique Paret	May 05 N1842 20.99	Jul 08 N2587 30.60			

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4. ISO/IEC 18000-3: Information technology -- Radio frequency identification for item management -- Part 3: Parameters for air interface communications at 13,56 MHz (ITTF Project ID: 34114)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Nov 01	Feb 02	Feb 03	Aug 04	Sept 04
PE: Robert Williams	N0997 20.99	N1059 30.99	N1359 40.99	N1681 50.99	N/A 90.92
First Revision	May 05	May 07	Nov 07	Apr 08	Aug 08
PE: Ken Laing & Franz Amtmann	N1843 20.99	N2268 30.99	N2371 40.99	N/A 50.99	N/A 60.60
Second Revision	Jun 08	Dec 08			
PE: Ken Laing & Franz Amtmann	N/A 20.99	N 30.20			

5. ISO/IEC 18000-4: Information technology -- Radio frequency identification for item management -- Part 4: Parameters for air interface communications at 2,45 GHz (ITTF Project ID: 34115)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Jan 02	Feb 02	Feb 03	May 04	Sept 04
PE: Josef Preishuber-Pflugl	N1032 20.99	N1060 30.99	N1360 40.99	N1645 50.99	N/A 90.92
First Revision	May 05	Mar 07	Aug 07	Apr 08	Aug 08
PE: Josef Preishuber-Pflugl	N1844 20.99	N2205 30.99	N2340 40.60	N/A 50.99	N/A 60.60

6. ISO/IEC 18000-6: Information technology -- Radio frequency identification for item management -- Part 6: Parameters for air interface communications at 860 MHz to 960 MHz (ITTF Project ID: 43923)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Sept 00	Jan 03	Aug 03	May 04	Sept 04
PE: Alfio Grasso	N/A 20.99	N1349 30.99	N1487 40.99	N1646 50.99	N/A 90.92
First Amendment	Nov 04	May 05	Nov 05	May 06	Jun 06
PE: Josef Preishuber-Pflugl & Chris Diorio	N1729 20.99	N1879 30.99	N1964 40.99	N/A 50.99	N/A 60.60
First Revision	May 05	Nov 07	Oct 08		
PE: Not Yet Assigned	N1854 20.99	N2363 30.99	N/A 40.20		

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7. ISO/IEC 18000-7: Information technology -- Radio frequency identification for item management -- Part 7: Parameters for active air interface communications at 433 MHz (ITTF Project ID: 43892)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	Jan 03 N1347 20.99	Jan 03 N1346 30.99	Aug 03 N1488 40.99	May 04 N1647 50.99	Sept 04 N/A 90.92
First Revision PE: Craig Harmon	May 05 N1845 20.99	Mar 06 N2026 30.99	Aug 06 N2121 40.99	Dec 07 N/A 50.99	Jan 08 N/A 60.60
Second Revision PE: TBD	Nov 07 N2372 20.99	Jul 08 N2586 30.99	Dec 08 N/A 40.20		

8. ISO/IEC 24710: Information technology -- Radio frequency identification for item management -- Elementary tag license plate functionality for ISO/IEC 18000 air interface definitions (ITTF Project ID: 38820)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Richard Rees	Jul 03 N1476 20.99	Aug 04 N1695 30.99	N/A	Jan 05 N1767 50.99	Oct 05 N/A 60.60

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Working Group on RFID for Item Management, Sub Group 5 (WG 4/SG 5)

Convener: Toshihiro Yoshioka (Japan), E-Mail: toshihiro.yoshioka@ai--soken.com

Secretariat: **Vacant**

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 24729-1: Information technology -- Radio frequency identification for item management -- Implementation guidelines -- Part 1: RFID-enabled labels and packaging supporting ISO/IEC 18000-6C

(ITTF Project ID: 41881)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Craig Harmon	Jan 05 N1552 20.99	Sept 06 N2130 30.60	N/A	Jul 07 N8662* 50.99	Apr 08 N/A 60.60

2. ISO/IEC 24729-2: Information technology -- Radio frequency identification (RFID) for item management -- Implementation guidelines -- Part 2: Recycling and RF tags
(ITTF Project ID: 41882)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Craig Harmon	Jan 05 N1552 20.99	Sept 06 N2131 30.60	N/A	Jul 07 N8661* 50.60	Apr 08 N/A 60.60

3. ISO/IEC 24729-3: Information technology -- Radio frequency identification for item management -- Implementation guidelines -- Part 3: Implementation and operation of UHF RFID Interrogator systems in logistic applications
(ITTF Project ID: 41883)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Craig Harmon	Jan 05 N1552 20.99	Jun 08 N/A 30.20	N/A	Nov 08 N* 50.20	

4. ISO/IEC 24729-4: Information technology -- Radio frequency identification for item management -- Implementation guidelines -- Part 4: RFID guideline on tag data security
(ITTF Project ID: TBD)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: TBD	Apr 08 N2508 20.60	Apr 08 N/A 30.60	N/A	Oct 08 N/A 50.20	

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**5. ISO/IEC 29160: Information technology -- Automatic identification and data capture techniques -- RFID emblem
 (ITTF Project ID: 45239)**

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	NWIP	CD/PDTR/PDAM	FCD/FPDAM	FDIS/DTR/FDAM	IS/TR/AMD
Technical Report	Jun 08	Nov 08			
PE: TBD	N2542 20.60	N 30.20			

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Program of Work

Working Group on RFID Conformance, Sub Group 6 (WG 4/SG 6)

Convener: Josef Preishuber-Pflügl (Austria), E-Mail: josef.preishuber--pfluegl@CISC.at

Secretariat: **Vacant**

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 18046: Information technology -- Automatic identification and data capture techniques -- Radio frequency identification device performance test methods (ITTF Project ID: 43174)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Michael Guillory	Jul 00 N0734 20.99	Mar 04 N1573 30.99	N/A	Aug 04 N1682 50.99	Oct 06 N/A 60.60

2. ISO/IEC 18046-1: Information technology - Automatic identification and data capture techniques - Radio frequency identification (RFID) device performance test methods -- Part 1: Test methods for system performance

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Gérard Dessenne	Jun 06 N2109 20.60				

3. ISO/IEC 18046-2: Information technology - Automatic identification and data capture techniques - Radio frequency identification (RFID) device performance test methods -- Part 2: Test methods for interrogator performance

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Julia Zhu	Jun 06 N2109 20.60				

4. ISO/IEC 18046-3: Information technology - Automatic identification and data capture techniques - Radio frequency identification (RFID) device performance test methods -- Part 3: Test methods for tag performance (ITTF Project ID: 45832)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Gérard Dessenne	Jun 06 N2109 20.99	Jul 06 N2118 30.99	Jan 07 N2170 40.99	Sept 07 N/A 50.99	Sept 07 N/A 60.60

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5. ISO/IEC 18047-2: Information technology -- Radio frequency identification device conformance test methods -- Part 2: Test methods for air interface communications below 135 kHz
 (ITTF Project ID: 41917)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report	May 03	Sept 05		Dec 05	Jun 06
PE: Josef Preishuber-Pflügl	N/A 20.99	N1932 30.99	N/A	N/A 50.99	N/A 60.60

6. ISO/IEC 18047-3: Information technology -- Radio frequency identification device conformance test methods -- Part 3: Test methods for air interface communications at 13,56 MHz
 (ITTF Project ID: 45500)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report	May 03	Oct 03		Mar 04	Sept 04
PE: Josef Preishuber-Pflügl	N/A 20.99	N1502 30.99	N/A	N1591 50.99	N/A 60.60
Technical Corrigendum 1					Feb 07
PE: Josef Preishuber-Pflügl	N/A	N/A	N/A	N/A	N2184 60.60
Technical Corrigendum 2					Apr 08
PE: Josef Preishuber-Pflügl	N/A	N/A	N/A	N/A	N2471 60.60
First Revision	Aug 08				
PE: Josef Preishuber-Pflügl	N2598 20.60				

7. ISO/IEC 18047-4: Information technology -- Radio frequency identification device conformance test methods -- Part 4: Test methods for air interface communications at 2,45 GHz
 (ITTF Project ID: 39493)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report	May 03	Mar 04		Jun 04	Nov 04
PE: Josef Preishuber-Pflügl	N/A 20.99	N1570 30.99	N/A	N1661 50.99	N/A 60.60

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8. ISO/IEC 18047-6: Information technology -- Radio frequency identification device conformance test methods -- Part 6: Test methods for air interface communications at 860 MHz to 960 MHz
 (ITTF Project ID: 41916)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Gérard Dessenne	May 03 N/A 20.99	Sept 05 N1933 30.99	N/A	Dec 05 N/A 50.99	Jun 06 N/A 90.92
First Revision PE: Gérard Dessenne	Dec 06 N2166 20.99	Sept 07 N2348 30.99	N/A	Feb 08 N/A 50.99	Jul 08 N/A 60.00
Second Revision PE: Gérard Dessenne	Aug 08 N2599 20.60				

9. ISO/IEC 18047-7: Information technology -- Radio frequency identification device conformance test methods -- Part 7: Test methods for active air interface communications at 433 MHz
 (ITTF Project ID: 39496)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
Technical Report PE: Josef Preishuber-Pflugl	May 03 N/A 20.99	Oct 04 N1722 30.99	N/A	May 05 N1849 50.99	Oct 05 N/A 60.60
First Revision PE: Julia Zhu	Dec 06 N2167 20.60				

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Working Group on Real Time Locating Systems (RTLS) (SC 31/WG 5)

Convener: Marsha Harmon (United States), E-mail: marsha.harmon@qed.org

Secretariat: **Vacant**

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 24730-1: Information technology -- Real-time locating systems (RTLS) -- Part 1: Application program interface (API) (ITTF Project ID: 38840)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Nov 03 N1520	Jan 05 N1768	Jul 05 N1914	Jan 06 N/A	Feb 06 N/A
PE: Sandeep Jain	20.99	30.99	40.99	50.99	60.60

2. ISO/IEC 24730-2: Information technology -- Real-time locating systems (RTLS) -- Part 2: 2,4 GHz air interface protocol (ITTF Project ID: 40508)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Nov 03 N1520	Jun 05 N1903	Jan 06 N1994	Jun 06 N/A	Dec 06 N/A
PE: Tim Harrington	20.99	30.99	40.99	50.99	60.60

3. ISO/IEC 24730-3: Information technology -- Real-time locating systems (RTLS) -- Part 3: 433 MHz air interface protocol (ITTF Project ID: 40509)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Nov 03 N1520				
PE: Not Yet Assigned	20.98				
Project deleted based on TMB Resolution (3 Tracks rule)					

4. ISO/IEC 24730-4: Information technology -- Automatic identification and data capture techniques -- Real Time Locating Systems (RTLS) -- Part 4: Global Locating Systems (GLS) (ITTF Project ID: 42065)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Apr 05 N1839				
PE: Not Yet Assigned	20.60				

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5. ISO/IEC 24730-5: Information technology -- Automatic identification and data capture techniques -- Part 5: Chirp Spread Spectrum (CSS) at 2.4 GHz (ITTF Project ID: N/A)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Mar 07 N2214	Oct 07 N2358			
PE: Not Yet Assigned	20.60	30.92			

6. ISO/IEC 24769: Information technology -- Automatic identification and data capture techniques -- Real time locating systems (RTLS) -- RTLS device conformance test methods

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Sept 05 N1946	Mar 08 N2445	N/A	Jul 98 N9195*	Aug 08 N/A
PE: Tim Harrington	20.99	30.99		40.99	60.00

7. ISO/IEC 24770: Information technology -- Automatic identification and data capture techniques -- Real time locating systems (RTLS) -- RTLS device performance test methods

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard	Sept 05 N1945	Mar 08 N2446	N/A	Jul 98 N9196*	Aug 08 N/A
PE: Not Yet Assigned	20.99	30.99		40.99	60.00

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**Working Group on Mobile Item Identification and Management (MIIM)
 (SC 31/WG 6)**

Convener: Craig Harmon (United States), E-Mail: craig.harmon@qed.org

Secretariat: Se Won Oh (Republic of Korea), E-Mail: sewonoh@etri.re.kr

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

- 1. ISO/IEC 29143: Information technology -- Automatic identification and data capture techniques -- Air interface specification for Mobile RFID interrogator (ITTF Project ID: 45166)**

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	NWIP	CD/PDTR/PDAM	FCD/FPDAM	FDIS/DTR/FDAM	IS/TR/AMD
Technical Report	Nov 07	Dec 08			
PE: Josef Preishuber-Pflugl	N2373 20.99	N 30.20			

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Vocabulary Rapporteur (SC 31)

Convener: Craig Harmon (United States), E-Mail: craig.harmon@qed.org

Detailed Work Projects: <http://isotc.iso.org/livelink/workprg/workprg?objId=3367879>

1. ISO/IEC 19762: Information technology -- Automatic identification and data capture techniques -- Harmonized vocabulary -- Abbreviations

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	N/A	May 06 N2090 30.60			

2. ISO/IEC 19762-1: Information technology -- Automatic identification and data capture (AIDC) techniques -- Harmonized vocabulary -- Part 1: General terms relating to AIDC (ITTF Project ID: 37432)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	N/A	Mar 02 N/A 30.99	Feb 03 N/A 40.99	Feb 05 N/A 50.99	Mar 05 N/A 60.60
First Revision PE: Craig Harmon	N/A	May 06 N2085 30.99	Jul 07 N2326 40.99	May 08 N/A 50.60	Jun 08 N/A 60.60

3. ISO/IEC 19762-2: Information technology -- Automatic identification and data capture (AIDC) techniques -- Harmonized vocabulary -- Part 2: Optically readable media (ORM) (ITTF Project ID: 37433)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	N/A	Mar 02 N/A 30.99	Feb 03 N/A 40.99	Feb 05 N/A 50.99	Mar 05 N/A 60.60
First Revision PE: Craig Harmon	N/A	May 06 N2086 30.99	Jul 07 N2327 40.99	May 08 N/A 50.60	Jun 08 N/A 60.60

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4. ISO/IEC 19762-3: Information technology -- Automatic identification and data capture (AIDC) techniques -- Harmonized vocabulary -- Part 3: Radio frequency identification (RFID)
 (ITTF Project ID: 37434)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	N/A	Mar 02 N/A 30.99	Feb 03 N/A 40.99	Feb 05 N/A 50.99	Mar 05 N/A 60.60
First Revision PE: Craig Harmon	N/A	May 06 N2087 30.99	Jul 07 N2328 40.99	May 08 N/A 50.60	Jun 08 N/A 60.60

5. ISO/IEC 19762-4: Information technology -- Automatic identification and data capture (AIDC) techniques -- Harmonized vocabulary -- Part 4: Conceptual relationship between terms
 (ITTF Project ID: 44321)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	Sept 04 N/A 20.99	May 06 N2088 30.99	Jul 07 N2329 40.99	May 08 N/A 50.60	Jun 08 N/A 60.60

6. ISO/IEC 19762-5: Information technology -- Automatic identification and data capture techniques -- Harmonized vocabulary Part 5: locating systems

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Craig Harmon	Jun 05 N/A 20.99	May 06 N2089 30.99	Jul 07 N2330 40.99	May 08 N/A 50.60	Jun 08 N/A 60.60

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