MEDICI: MAILS ELECTRONIC DATA INTERCHANGE & CUSTOMS INTEGRATION - GROUP CHARTER

1 Introduction

The customs and security procedures applied to mail are changing (see A.1). Customs authorities around the world are increasingly using automated systems to support their operations and are looking to the posts to provide the data needed for clearance, tax and duty assessments and statistical purposes in an electronic form. The regulatory and market environment in which the posts operate is also changing, bringing increasing competition both from alternative means of communication and within the postal market itself.

An effective response to these changes requires cooperation between the posts (see A.2), both to minimise the costs of capturing and supplying data in electronic form and to ensure that full advantage is taken of resulting opportunities to improve services. Building on the results of the SAMPLE project, undertaken in 2000-2003 (see A.3), IPC and a group of its members have created an initial operational infrastructure aimed at expediting customs processing and supporting improved postal security through:

- capture of the data relevant to customs clearance of postal items;
- electronic exchange of these data, on an as-needed basis, in accordance with UPU messaging standards;
- sharing, with their local authorities, of the information needed for the export, transport security and/or import clearance of the items concerned;
- use of the data to expedite clearance, processing and delivery of the items and to improve and expedite duty collection procedures.

The posts involved now wish to extend their cooperation to other interested posts which are committed to the operational capture and electronic exchange of customs data and, to this end, have set up the MEDICI *Mails Electronic Data Interchange and Customs Integration* group. Though founded by IPC members and coordinated by IPC, this group is open to participation by any postal operator which is able to meet the membership requirements documented in section 3. Associate membership is open to posts which are not yet able to meet these requirements but which commit to undertake the operational, organisational and technical developments required to enable them to do so within a two-year period. There is particular interest in the participation of posts having different linguistic and character set requirements; from diverse customs jurisdictions and which use different international mail systems.

This document sets out MEDICI group objectives (section 2), specifies membership requirements (section 3) and describes the group's organisation and funding (section 4). Annexes A to E provide supporting information:

- Annex A provides background information, setting out the motivation for the creation of the group and providing a brief summary of the progress made by its founders prior to their decision to open the group to participation by other posts;
- Annex B provides a description of the core activities falling under the MEDICI group's remit. This description complements and explains the membership requirements set out in section 3;
- Annex C describes how MEDICI members are expected to make use of the data they receive from other members. This is documented separately from the core activities because the usage made of the data is, subject to compliance with the updates to UPU articles RL 152 and RC 121 which entered into force on 1 September 2007, not an explicit requirement;
- Annex D details the item and item content data which are to be captured and exchanged under the MEDICI aegis;
- Annex E provides an illustrative example, based on a parcel form Brazil to Canada, of how data is captured, exchanged and used.

This is the first version of the MEDICI charter.

2 MEDICI objectives & approach

The primary objective of MEDICI is to build and develop an operational infrastructure for the capture and electronic exchange of the data needed to support postal clearance applications.

Members will use these data to respond to customs authorities' desire for declarations to be made in electronic form or supported by electronically supplied data.

A basic operational infrastructure has already been put in place by four of the posts which founded the group. This infrastructure is already being used on a daily basis to capture and exchange information on some 14 000 items per week. The intent is to develop MEDICI membership to the point at which most of the import data requirements of members can be met by the electronic supply of item data captured by the origin post.

The automated capture of the item level data required for customs purposes opens new possibilities for the validation of such data. Over time, this will result in significant improvements in data quality. This, in turn, is expected to lead to increasing trust of postal procedures, to reductions in the proportion of items subject to detailed inspection by customs authorities and to consequent speeding of clearance and improvements in end-to-end delivery performance. It should also lead to more consistent and accurate assessment of taxes and duties, opening the way for posts to provide new services, such as a fully landed-cost service.

In furtherance of the above objective, each MEDICI member is expected to:

- capture the data required for customs purposes on those outbound items for which such capture is technically, operationally and economically feasible;
- supply these data, to the delivery posts concerned, in the form of ITMATT V1.0 messages;
- trigger the supply of these messages based on operational tracking of the items concerned;
- be responsible for its own interface with the local authorities which have responsibility for ensuring compliance with local customs, security and quarantine regulations;
- use its own operational tracking mechanisms, together with information available to it from other electronic data interchange messages, such as UPU standard PRECON, RESCON, PREDES, RESDES, EMSEVT, EVTRPT and RESDIT messages, to determine at what point it is appropriate to supply item data to the local authorities concerned.

A further objective is to contribute the development of UPU standards relevant to postal customs processing. For such standards development work, the MEDICI group's role will be to identify requirements and to evaluate, contribute to – and subsequently test – solutions put forward by the relevant UPU standardisation working groups, notably the Customs Data Interchange Group (CDIG) and Electronic Exchange Group (EXG).

3 Membership requirements

3.1 Introduction

This section describes the minimal technical and operational capability which is required for effective participation in MEDICI. It is intended for the use of prospective members, to assist them in assessing the work and resources required to prepare for participation.

Any postal operator willing to commit to the developments necessary to capture and supply CN 22/CN 23 data on its own outgoing items and to receive and utilise data on incoming ones is eligible to join MEDICI.

Prospective members are required to commit to.

- participate in all MEDICI core activities;
- use captured and supplied data only in accordance with the provisions of the updates to UPU articles RL 152 and RC 121 which entered into force on 1 September 2007;
- develop, implement, deploy and operate, at their own cost, the new or modified systems required to support their participation.

These commitments are explained further in the following sub-sections and in Annex B. Applications to join the group should confirm agreement to them, and to the decision making and other procedures documented in section 4. They should also include outline plans and timescales for the development and operational implementation of item-level data interchange with other members. These plans should indicate the mail sub-classes and volumes for which the prospective member expects to be able to capture and supply data both initially and within 6, 12, 18, 24 and 36 months.

Subject to Steering Committee acceptance of these plans, associate membership will be granted for the period, documented in the plans, required to develop a fully operational capability. Associate membership will entitle the organisation concerned to non-voting participation in all MEDICI activities and working and advisory groups. Full membership, giving entitlement to voting participation in the MEDICI Steering Committee, will be accorded when regular operational exchange of data with at least two other members has been demonstrated. Continued membership will be subject to review, by the Steering Committee, in the event of substantial delay in the achievement of the objectives set out in the plans.

3.2 Participation in MEDICI activities

MEDICI membership requires a commitment to participate in all core activities documented in Annex B. These relate to:

- the use of S10 13-character item identifiers[1];
- the capture of customs data on an agreed range and volume of the items exported to MEDICI members in other customs jurisdictions;
- validation of the captured data;
- tracking of the outgoing items for which data are captured;
- bar coded labelling of receptacles in accordance with UPU receptacle labelling specifications;
- supply of the captured data, to the other posts concerned, using ITMATT V1.0, PREDES V2.0 and EMSEVT V1.0 or other EDI messages agreed by the MEDICI Steering Committee;
- the sharing, with other members, of relevant experiences and procedures;
- evaluation.

Further details are provided in Annex B which highlights the required commitments in **bold**.

Though this is not a formal participation requirement, it is anticipated that members will wish to use the data they capture to support export clearance and the data supplied by other members to support import clearance of the items concerned.

In addition to the activities documented in the two annexes, it is intended that interested members should be able to cooperate in the execution of pilot projects which, though not considered as central to MEDICI objectives, have some relevance to customs processing and are thought to be of potential interest to members. An associated document, *MEDICI: Potential Pilot Projects* outlines a number of possibilities which are under consideration. The conduct of these and eventual other pilot projects proposed by members is subject to the level of member interest and commitment. Participation in those selected for execution will be on an entirely **voluntary** basis. However, participants will be expected to share their experiences and findings with all MEDICI members.

3.3 Data protection and privacy

In accordance with the provisions of the update to articles RL 152 and RC 121 which entered into force on 1 September 2007, members are required to provide adequate protection of private data which are captured and exchanged, ensuring that, as individual organisations they:

- make use of secure communications[2] and storage methods to protect such data against the risk of disclosure to third parties during its transmission and whilst it is stored on data processing systems operated by them or on their behalf;
- restrict their use of such data to processes relating to the routing, transport, exchange and delivery of mail and to the fulfilment of customs formalities in respect of the export or import of postal items;

---

[1] Other forms of item identifier may be used subject to bilateral agreement between the origin and delivery posts concerned.

[2] With respect to the usage of the GXS network for inter-post communications, this requirement translates into a requirement to utilise a VPN connection, on which transmitted data are encrypted. A similar level of protection should be offered for data transmitted within internal networks and for data communications between a post and its local customs or other authorities. Internet browser-based capture of or access to data should make use of the HTTPS protocol.

- share such data with their local customs administration only after the latter has agreed to use it only for customs export or import purposes (as appropriate to the case) and not to use it for other purposes or to share it with third parties;
- do not divulge such data about a particular item to parties other than their local customs authority and the postal operators actually called upon to process the item;
- limit their retention of such data to the period which is reasonably required to deal with any queries relating to the postal transactions to which it relates and/or as required by local legal requirements.

In this context, private data includes the names and addresses of the sender and addressee of an item; the names and addresses of any party or parties to whom the item might be forwarded or returned and any data which might be used to establish a connection between two or more of the parties concerned or between any of the parties and any of the contents of the item or the value thereof. It does not include information about the content and/or value which is dissociated from the item identifier and name and address data and the posts and/or customs authority may supply such dissociated content and value data to other agencies, in particular for use in the compilation of trade statistics.

3.4 Active involvement of Customs

Since MEDICI is primarily aimed at operational exchange of customs related data between posts, the interface with customs authorities is regarded as a matter for local agreement, falling outside of the remit of the group. It is therefore recognised that the degree of customs authority involvement will vary from country to country, according to local circumstances. Nevertheless, there would be little point to MEDICI if the data exchanged were not used to improve import clearance procedures and MEDICI members are strongly encouraged to actively pursue this with their local customs authority.

3.5 Self-funding

As explained in section 5, participation in MEDICI is on a self-funded basis: each member is responsible for its own direct and indirect costs, including the normal costs of utilising GXS and/or POST*Net for the exchange of messages with other members.

The above in no way precludes individual members or groups of members from seeking national, regional and/or UPU Quality of Service funding support for their involvement. The last possibility might require the UPU to extend the existing Quality of Service to support capacity building.

4 MEDICI organisation & management

4.1 Membership

MEDICI was initiated by IPC together with Australia Post, Canada Post, Deutsche Post, Finland Post, Royal Mail and USPS, though Finland Post was subsequently replaced by TNT Post. Four of these posts have now set-up an operational infrastructure and are exchanging item-level customs data on an ongoing basis. Participation is now open to any other post[3] which is willing and able to make the commitments described in section 3. Two levels of membership are provided for:

- full membership, giving entitlement to voting participation in the MEDICI Steering Committee;
- associate membership, giving the right to non-voting participation in all MEDICI activities and working and advisory groups.

Posts wishing to join the group will normally initially do so as associate members, becoming full members once they commence active exchange of customs data with other members. The MEDICI Steering Committee (see 4.2) can suspend or withdraw membership in case of failure to meet participation obligations and targets in a timely fashion and/or in case of repeated failure to participate in Steering Committee or PMAG (see 4.4) meetings.

As described in 3.4, member posts are encouraged to involve their own customs authority. The organisations concerned are not considered as group members and are not directly represented on

[3] Though the group continues to be coordinated by IPC, there is **no** requirement for IPC membership and **no** expectation that members which are not members of IPC would contribute to IPC's costs.

the MEDICI Steering Committee, though the Steering Committee may – subject to coordination with the WCO/UPU Contact Committee and UPU Customs Support Project Group – invite Customs and/or WCO representatives as observers and/or may set-up a consultative committee involving Customs representatives.

The Dissemination activity (see B.10) should provide adequate opportunity for informing, and obtaining feedback from, other interested parties, including both customers and carriers. Individual members are, however, entitled to involve customers, carriers and other suppliers, on a local level, subject to the provisions regarding data protection and privacy (see 3.3) and to maintaining the confidentiality of any other information for which other members request this.

4.2 Steering Committee

4.2.1 Role and composition

MEDICI is controlled by a Steering Committee, which sets overall policy, decides on any changes to the group's scope and objectives, defines and agrees procedures and deals with any issues which cannot be resolved at lower levels. The Steering Committee also formally approves membership requests.

The Steering Committee comprises senior managers nominated by the various members (one per member post), each member being authorised to commit his organisation in all MEDICI-related respects. The Committee is chaired by IPC, which also acts as its secretary. The UPU PTC is entitled to participate as observer, but has no voting rights.

4.2.2 Meeting frequency, organisation and procedures

Meetings of the Steering Committee take place with a frequency of one meeting every 3 to 6 months. Additional meetings may be called at the request of its Chairman or any two of the members.

Meetings will normally take place by teleconference, though physical (face-to-face) meetings can be organised where the Chairman considers this necessary. At least two weeks notice will be given of meeting dates, times and locations. In advance of each meeting, IPC will prepare an agenda, together with a report summarising progress and highlighting the areas in which decisions are required to enable work to continue effectively.

Minutes of meetings of the Steering Committee will be drafted by IPC and circulated by electronic mail. Comments and requests for correction should be submitted within 15 calendar days, after which IPC will if necessary, circulate an update of the draft. The minutes will be considered as accepted if, within 15 calendar days of circulation of the original draft or of an update to it, no request for correction or further correction has been received.

4.2.3 Decision making procedures

Decisions of the Steering Committee will normally be by consensus of those present and will be considered as having been taken unanimously unless one or more of the members requests the taking of a vote.

Where a vote is requested, adoption of the decision proposed will be subject to its approval by at least 75% of the current number of full members, representing together at least 75% of the number of items for which data were supplied to other members in the four calendar weeks preceding the publication of the meeting agenda. In the event that the members present do not meet one or both of the 75% requirements, the decision will be deferred to a further meeting, in which its adoption will be subject to the approval of 75% of the members present.

Any member may appeal against a decision which significantly affects its obligations or the costs of meeting these. To be valid, such appeals must be made within 15 calendar days of the meeting or, if the member was not represented, within 15 calendar days of circulation of the draft meeting minutes.

In the event of an appeal, the Steering Committee will review the decision at the first reasonable opportunity. Appeals will be considered grounded, and the decision appealed against rescinded, unless rejected by 75% of the current number of full members, representing together at least 75% of the number of items for which data were supplied to other members in the four calendar weeks preceding the publication of the appeal.

Pending hearing of the appeal, the decision appealed against will not be binding on any member.

4.3 Member Project Managers

Each member is expected to nominate a project manager, responsible for day-to-day management and follow-up of the member's involvement in MEDICI. Each member project manager:

- ensures that the member allocates the resources necessary to honour its participation commitments;
- monitors and control the member's execution of its participation commitments, in particular by ensuring the timely execution of development, implementation and deployment plans;
- ensures that other members are kept informed of any issues which impact relevant aspects of the member's operations and/or its ability to achieve its participation commitments in a timely manner;
- participates in monthly meetings of the project manager's advisory group (see 4.4), providing a report of the member's progress; raising any relevant issues and contributing to the resolution of any issues raised by others.

The IPC project manager reports to, and acts as secretary of, the Steering Committee. In addition to his or her role in respect of IPC's participation, (s)he manages and controls overall progress in accordance with plans submitted by members. (S)he also:

- prepares periodic progress / evaluation reports for review by the project managers' advisory group (see 4.4) and submission to the Steering Committee;
- ensures the smooth flow of communications between members;
- ensures that members fulfil their participation commitments, bringing any shortcomings to the attention of the Steering Committee.

4.4 Project Managers' Advisory Group (PMAG)

Together, the member project managers constitute the project managers' advisory group (PMAG). This group, chaired by the IPC project manager:

- monitors progress, based on plans submitted by each member;
- reviews the scope and objectives of the group, advising the project Steering Committee of the need for any change;
- prepares advice to the MEDICI Steering Committee on policy decisions;
- resolves technical and other issues between the members wherever possible.

Progress reviews are held monthly, normally by teleconference but using face-to-face meetings where necessary. At each review, consideration is given to any actual or anticipated deviations from development plans, and appropriate remedial actions agreed. Reference is made to the Steering Committee for formal review should any of the members consider this necessary.

5 Resourcing

5.1 Funding of participation

Participation in MEDICI is on a self-funded basis: each member is responsible for its own direct costs[4], including the normal costs of utilising GXS and/or POST*Net for the exchange of messages with other members. The following subsections provide guidelines on some of the areas for which budgets need to be established; section 5.6 covers centrally funded developments.

5.2 Manpower

Each member needs to commit resources for participation in the MEDICI Steering Committee, for its own project management and for development and ongoing operations. Precise requirements will vary from member to member, depending on the extent of required developments and on the precise scope of participation, and need to be determined on an individual basis. The requirement

[4] This in no way prevents individual members or groups of members from seeking national, regional and/or UPU Quality of Service support for their involvement.

for development staff will also depend on the systems used and the extent to which any special developments are undertaken by the post itself or are subcontracted to suppliers, whilst the requirement for operations staff will depend on the number of facilities involved and the volume of mail covered.

5.3 System adaptations and operations

Members are in principle responsible for the development, deployment and operation of any system or systems adaptations needed to support their participation in MEDICI. These need to be assessed by individual members and budgeted for based on decisions regarding supplier involvement and on the particular facilities which participate.

Notwithstanding the above, users of IPS and IPS-Lite should be able to benefit from the developments, planned by the UPU PTC, to support IPS-user participation in MEDICI. Subject to agreement on how developments would be funded, these plans envisage the extension of IPS and IPS-Lite to support:

- capture and storage of the data required to support CN 22 and CN 23 declarations;
- interchange of data using EDIFACT and / or XML ITMATT messages;
- an interface between IPS and the UNCTAD ASYCUDA customs system, which is used by many customs authorities, particularly in countries in which IPS is used.

Though the implementation of the IPS-ASYCUDA interface will of course be IPS specific, it is intended that the interface specification will be developed with the cooperation of and agreed by the WCO, and would be published as a UPU standard, making it available for use also between postal systems other than IPS and customs systems other than ASYCUDA.

5.4 Network infrastructure

MEDICI uses the existing infrastructure (GXS and POST*Net) used for electronic data interchange between the posts. Members should budget for the normal fees charged in association with their use of these networks.

5.5 Travel & meeting expenses

Members should budget for up to 4 face-to-face and 15 teleconference meetings per year. To minimise costs, face-to-face meetings are arranged to coincide, as far as possible, with meetings of the UPU Standards Board, Customs Data Interchange Group and/or Customs Support Project Group.

5.6 Centrally funded developments

The costs incurred by IPC for coordination of the group, for making any necessary adaptations to existing systems such as CAPE, Cape*Vision and the performance monitoring and Customer Services (Rugby) systems, for analysing and providing statistics on message flows and, where applicable, providing interim facilities for the conversion of messages between different formats, is borne out of IPC's general and project budgets which are funded by IPC's membership. **No** contribution is expected of MEDICI members which are not members of IPC.

Annex A

BACKGROUND

A.1 Changing Customs and Security requirements

In the aftermath of the 11 September 2001 terrorist attacks on the Pentagon and New York World Trade Center, customs and security authorities around the world have been reviewing the adequacy of their mechanisms for protecting against the unauthorised movement of goods which are either inherently dangerous or that might be used in the mounting of terrorist attacks. Such reviews have resulted in new requirements for pre-advice of the international movement of goods.

In parallel, the liberalisation of world-trade, combined with increased use of the postal service to deliver goods ordered by Internet, has led many customs authorities, particularly those in Australia, Japan, Europe and North America, to review procedures for the clearance of both postal and commercial traffic. New procedures are being introduced with the combined objectives of expediting customs clearance, of increasing security and of ensuring equal treatment of all organisations involved in the competitive provision of cross-border transportation and logistics services. Particularly in Europe, these new procedures are linked to moves towards liberalisation of the postal market. In the United States, they are linked to the revision of US Postal Law and to the requirement that USPS comply with general trade legislation for competitive products. This is expected to result in the requirement for electronic declaration of both postal exports from and imports to the United States, implying on the one hand the availability of electronic data on large numbers of postal items and on the other, the likelihood that USPS will want posts in other countries to capture similar data on items addressed to the United States.

The revised provisions for postal traffic embodied in Chapter 2 of Specific Annex J of the Revised Kyoto Convention also introduce new procedures and recommendations regarding the clearance of postal traffic and the Guidelines associated with these emphasise both the importance of security and efficiency and the advantages resulting from the electronic exchange of information between Customs and postal service providers.

Changes resulting from the above, to be introduced in the next years, are expected to include the requirement for posts in some countries, and particularly those in the European Union, to:

- take on additional responsibilities for data capture and supply; for customs classification of items; for ensuring the accuracy of supplied data and for duty and tax collection;
- submit export declarations;
- comply with ‘level playing field’ requirements for import declarations;
- supply data additional to that required by CN 22/ CN 23;
- submit declarations electronically, either in place of or as a complement to physical documents;
- archive and be able to retrieve declarations for a set period after the goods have been delivered.

A.2 The Need for Cooperation

It would clearly be possible for each post to work with its local customs authority to establish requirements for the electronic supply of data needed for customs clearance and for security monitoring purposes. However, one country’s exports are another’s imports and there are obvious advantages to be gained from exchange of required data, between the posts concerned, so as to reduce overall data capture requirements and costs. The costs and benefits of such data exchange are, though, unevenly distributed. Specifically, the main cost of data capture is borne by the exporting post, whilst – at least for items which do not require export declarations – the main benefits accrue to the delivery post. This means that close cooperation is needed to ensure that overall costs and benefits are fairly distributed.

For mail submitted by bulk mailers, much of the required information is likely to be available on customers' computer systems and the cost and difficulty of data capture could be considerably reduced if customers were to provide these data, to the origin post, in electronic form. Here also, cooperation between the posts is needed to provide common and consistent approaches for use by customers, many of which operate internationally and will need to supply data to several different posts.

A.3 Electronic exchange of customs data

Several postal operators have developed systems for the electronic exchange of data between themselves and their local Customs authority. These systems are, however, generally based on local interface specifications and on the capture of data by the delivery post.

The EU-supported SAMPLE project, undertaken in 2000-2003 by a group of IPC members and their Customs authorities, represented a first concerted attempt to address these limitations. SAMPLE was concerned with the definition and UPU endorsement of customs declaration and response messages (M28 UPIMEX and M29 UPIRES); the development of a prototype implementation of these and the conduct of limited operational trials aimed at demonstrating the feasibility of capturing customs data in the origin country and using this for the filing of electronic customs declarations. It was, however, never intended to progress to real production operations or to fully address data capture issues. As a result it did not totally resolve the question of how import clearance is triggered or address the need for filtering of data to allow selection of those declarations which had characteristics of most interest to the Customs authorities. It was necessarily also tied to the customs procedures and data requirements extant at the time of its execution, since which time revised information requirements have resulted in new versions of the CN 22, CN 23 and CP 72[5] forms used for customs declaration of low-value items sent by post.

Recognising the need to take forward the work initiated in the SAMPLE project, a group of IPC member posts agreed, in late 2005, to initiate work on the development of an operational infrastructure to support customs applications. The resulting MEDICI *Mails Electronic Data Interchange and Customs Integration* project, which was coordinated by IPC, started at the beginning of 2006. As discussed in A.4 below, four of the member posts commenced the operational exchange of data on real postal items in early 2007 and decided, in June 2007, to open participation to other interested posts which are committed to the operational capture and electronic exchange of customs data, whether or not they are members of IPC. In recognition of the ongoing nature of requirement for customs data exchange, it was agreed to re-constitute MEDICI as a *group*, rather than continuing to refer to it as a *project*.

A.4 MEDICI achievements as at September 2007

The initial members agreed that the scope of MEDICI should be to support the capture and exchange, between postal operators, of the data required to enable individual posts to respond to market pressures and new security and customs procedures by supplying data to their local customs authority in electronic form. The four active members[6] – Canada Post, Deutsche Post, Royal Mail and USPS – have:

- agreed on the subset of items about which data is captured and exchanged;
- decided to use the UPU-defined ITMATT V1.0 message as basis for the exchange of item data;
- agreed necessary short-term extensions to the ITMATT V1.0 message specification and obtained UPU Standards Board endorsement of these;
- developed the systems needed to support capture of required data on the agreed subset of items;
- studied the privacy implications of the electronic exchange of the captured data;

---

[5] CP 72 is a manifold set, combining a CP 71 dispatch note with a CN 23 customs declaration. In what follows, references to CN 23 should be interpreted as applying also to the relevant part of CP 72.

[6] Australia Post and Finland Post (now Itella) were also involved in the set-up of MEDICI but, for local operational and organisational reasons, Finland Post withdrew and Australia Post did not yet undertake the developments necessary for active participation. Finland Post's place was taken by TNT Post, but it also decided to defer development work pending an internal reorganisation.

- developed, and via the UPU Customs Support Project Group obtained UPU POC approval of, a change[7] to the UPU regulations making explicit provision for the exchange of CN 22 and CN 23 data and specifying limitations on the use to which it may be put;
- developed support for the interchange, between them, of the captured data;
- initiated operational exchange of the data concerned;
- conducted an evaluation of the data exchanged;
- contributed to a register of requirements for further update of the ITMATT specification[8];
- initiated discussions, about the possibility of participation, with a number of posts which have already expressed interest, notably the other posts belonging to the Kahala group (Australia Post, China Post, Correos [Spain], Hong Kong Post, Japan Post, Korea Post and La Poste [France]), with Correios [Brazil], Die Post (Switzerland) and South Africa Post. There have also been some contacts with Correios (Portugal), Ente Post (Italy) and, via UPAEP, with Uruguay and Venezuela Post;
- agreed to a cooperation with the UPU PTC under which the PTC intends to extend IPS functionality to support the participation of IPS users.

In all four cases, the initial developments were based on the use of post-supported customer shipping systems such as Royal Mail's World-wide Dispatch Manager (WDM and WDM On-Line) and USPS' Click & Ship system. These have been adapted to ensure that all data required for CN 22 and CN 23 completion are captured. The modified systems make these data available electronically as well as reproducing them on physical documents and labels for insertion in and attachment to the items themselves. The electronic data are integrated with item tracking data and, using event-based triggers derived from the tracking data, forwarded to the relevant delivery post[9] in the form of EDIFACT ITMATT V1.0 messages.

Few problems were experienced with the necessary developments, the main issues identified being:

- duplication of data (the sending of data about an item more than once);
- name and address data validation and parsing and the truncation of data which cannot be accommodated in the relevant EDIFACT data segments;
- compliance with the specifications for location codes (required to be compliant with UPU standard S25); party identifiers (required to be compliant with S35) and for the population of customs classification data (HS codes).

Current volumes amount to approximately 14 000 items/week, 58% to Canada, 7% to Germany, 16% to the U.K. and 19% to the U.S.A.

The four operational partner posts have agreed to continue development of the infrastructure which has been created and expect volumes to grow as they implement additional data capture facilities. Since these facilities do not, at the time of data capture, distinguish between items addressed to participating countries and other countries, all four posts are already capturing data on items bound for other destination counties and already have the capability required to provide available data, on outgoing items, to any other post willing to implement support for the exchange of ITMATT V1.0 messages. All are keen to see participation in MEDICI grow, both so that these data can be provided to the posts concerned, and so that data on incoming items can be obtained from new members.

---

[7] See the revisions to articles RL 152 and RC 121, agreed by the 2007 meeting of the POC, which came into force on 1 September 2007. These are documented in UPU IB circulars 2007-166 and 2007-160 respectively.

[8] The majority of these have been taken up in proposals for the update of M33 which were tabled for consideration by the UPU EXG in September 2007. Subject to their eventual approval by the UPU Standards Board, these will in due course be published as UPU standard M33-7.

[9] Note that there are no messages between Deutsche Post and Royal Mail since post between Germany and the U.K., both being in the European Union, is not subject to customs control.

Annex B

MEDICI GROUP CORE ACTIVITIES

B.1 Introduction

This annex describes the main activities to be undertaken in a MEDICI context, highlighting the contributions which members are expected to make and providing explanatory background on these.

B.2 Item identification

For postal clearance purposes, each postal item constitutes a separate entity which is subject to customs requirements. Support for the electronic submission of customs declarations necessarily implies that items carry identifiers, so that each item can be linked with the declaration data which relate to it.

In this context, **members will use UPU standard S10 13-character identifiers**. Whilst it is understood that the WCO is encouraging the adoption of ISO/IEC 15459 compliant identifiers (so-called licence plates[10]) for identification purposes, the adoption of such identifiers by postal operators has not yet reached a stage at which their use would be operationally practical. They may be used on a bilaterally agreed basis, as may other forms of identification, such as the Deutsche Post 12-digit identifier and TNT Post's 3S identifier, which have been accepted for use within the EPG system.

The origin post is free to determine its own procedures for the allocation of identifier values and for the application of the bar codes: the only requirements are that, unless otherwise agreed on a bilateral basis, or by the MEDICI project Steering Committee, the identifier used should:

- comply with the specification of 13 character identifiers in UPU standard S10;
- be and remain unique for a minimum of 12 calendar months;
- be bar coded in accordance with the provisions of UPU standard S46 for Code 128 bar codes.

Subject to careful control of the 13-character identifier numbering ranges, members are free to authorise large mailers to generate their own item identifiers and to print their own CN 22, CN 23 and CP 72 forms. It is recommended, though not required, that such customer-allocated identifiers are printed on the forms in both human and bar coded form.

Care should be taken to ensure that each item carries only one readable bar coded identifier. Where, for product or domestic operations reasons, an item has multiple S10 13-character identifiers assigned to it, all but the one to be used as the basis for data exchange and tracking should be obliterated or rendered unreadable before dispatch of the item by the origin post. It is permissible for an item to have multiple copies of the bar code and/or to have the identifier represented in UPU standard S28-compliant 2d symbol or S49-compliant 4-state form in addition to its representation in a Code 128 bar code.

There remains the problem that not all items that are subject to customs declaration are, today, individually identified. In particular, many small packets do not currently have identifiers. Members are expected to contribute to UPU study of the need for all items subject to customs procedures to be individually identified and of the potential operations, regulation and terminal dues implications of applying identifiers to items which are not subject to tracking services.

[10] This is the subject of one of the possible pilot projects documented in *MEDICI: Potential Pilot Projects*.

B.3 Capture of CN 22/CN 23 data by the origin post

B.3.1 Introduction

It is anticipated that the major costs, for posts required to submit electronic declarations, will result from the need to capture CN 22 / CN 23 data[11]. Two cases – import and export – need to be considered. These are linked, in that, where electronic export declaration is required, much of the data required for the import declaration should have been captured by the origin post and can be supplied to the delivery post at low cost (see B.8).

Even where no export declaration is required, or where the required declaration is not submitted via the post or not submitted electronically, there can still be considerable advantages in capture of the data as close to the source of the item as possible. In particular, as documented in the Guidelines to Revised Kyoto Convention Specific Annex J Chapter 2, the declarant can be informed of, and is thus able to correct, errors which might otherwise lead to rejection of the declaration. This will reduce overall costs and import clearance delays.

Members will capture CN 22 and CN 23 data, on an agreed range and volume of their outgoing items, using one or more of the following methods:

- capture by the customer prior to item submission;
- capture by the customer or origin post at the point of induction;
- later capture by the origin post, at some convenient point prior to dispatch of the item concerned.

The method(s) used are at the discretion of the member concerned; the data to be captured are documented in Annex D.

Unless this is required for local export control reasons, it is not required that data are captured on all items, or even an all items which are subject to CN 22 or CN 23 procedures. Whilst this is the ideal, it is recognised that, at least at the outset, technical, operational and/or economic constraints might well render this impossible. Initially, data capture can therefore be limited to items for which it can be accomplished at low cost and/or to items addressed to specific destination countries. Based on local products, requirements and constraints, different members might give priority to different mail subsets, though it is likely that most will prioritise individually identified, tracked, items subject to CN 23 (as opposed to CN 22) procedures, including EMS, PRIME (Exprès) and some registered letter mail items and both EPG and other bar coded mail category A (priority / air) parcels. It is recommended that priority also be given to items which are mailed by commercial organisations, by providing support for mailer to post EDI of the required data and/or for the on-line entry of the data on web or PC-based shipping systems.

Notwithstanding the previous paragraph, all **members are expected to commit to capture of data on a steadily increasing percentage of mail subject to customs procedures and to extending data capture to cover (a) items addressed to all other participating countries and (b) a significant proportion[12] of both items posted in retail offices and items submitted by major mailers**. To this end, prospective members will be asked to review their whole mailstream; define the subset of this that is subject to CN 22, CN 23 and security procedures and to then partition this subset according to the ease with which it is able to collect and electronically supply the required data. Based on this review, candidates should draw up development, implementation and marketing/penetration plans setting out concrete targets for the number of items for which data will be captured.

---

[11] Given that CN 22, CN 23 and CP 72 are defined by the UPU regulations, which have the force of an intergovernmental treaty, it is assumed that customs declaration requirements can be met by CN 22 and CN 23 data, coupled with relevant despatch, consignment and transportation information. This assumption has been confirmed by the WCO/UPU Contact Committee. This does not preclude the possibility that additional data requirements are identified in the future.

[12] It is recognised that, even in a fully operational system, there will always remain items for which origin post capture and electronic supply of data is either impractical or uneconomic. Manual and paper-based procedures will continue to be needed to support these items, though their number should decrease with time.

B.3.2 Electronic capture of data by the customer prior to item submission

In the case of items mailed by major customers who make use of computer-based order fulfilment and dispatching systems, the data required for customs declaration purposes is likely to be held on the customer's system, which will often also be used for the generation of the required hard copy declaration (CN 22, CN 23 or 'full' declaration, depending on the value). Such customers can be encouraged to provide the data electronically, as well as providing it (at least initially[13]) in printed form.

In the interests of supporting customers who themselves need to work with different posts, members which support mailer-post electronic data exchange are expected to contribute to the development of baseline specifications for use in the context of data communications based on EDIFACT and/or XML messaging. Such specifications will not limit the ability of individual posts to support varying customer needs through other data interchange mechanisms and members are encouraged to exchange information about these and to adopt best practices in relation to them.

A second class of customers makes use of post or industry-provided dispatching systems which generally provide for capture of the data required for customs declaration purposes and for the printing of the requisite declaration forms. Some such systems are accessible via internet. **Members supporting the use of post or industry-provided dispatching systems will adapt them (or require their adaptation) to supply electronic as well as printed versions of the captured data**.

Even for low volume customers submitting items via retail outlets (post offices), some posts might wish to encourage capture of the data by the mailer, by providing retail office terminals and supporting applications for customer use (see B.3.3).

B.3.3 Capture at the point of induction

For customers unable, or unwilling, to provide declaration data, in electronic form, prior to item submission, one option is to capture the required data at the point of induction into the postal system – i.e. at the acceptance office or post office. This would require the use of appropriate data capture systems and supporting applications. These might include:

- kiosks for use by customers;
- counter systems used by post staff or agents;
- automated data capture systems capable of capturing data from printed CN 22, CN 23 and/or CP 72 forms or supplied on portable storage devices[14].

Whether used by customers (kiosks) or by post office staff (counter systems), the systems used for manual capture of data would be similar in concept to the dispatching systems referred to in B.3.2, the key differences being in the location of use and the degree of control exercised by the post.

B.3.4 Later capture by the origin post

Capture at the point of induction is likely to prove uneconomic in cases in which limited volumes render the use of special purpose equipment inappropriate or result in a lack of practice with consequent reduction in labour efficiency and increase in the rate of errors. Capture of data during later processing (e.g. at the point of first processing of an item, or at the IMPC immediately prior to export) can offer a solution to this problem, by ensuring that volumes are sufficient to justify the use of more highly trained staff and/or the use of special equipment and procedures. The potential advantage of volume is, however, likely to be partially offset by the disadvantage that the customer would not be present at the time of data capture. This would therefore have to be based on the use of customer-completed forms and, if the data were found to be illegible or incomplete, it would no longer possible to remedy this, by consultation with the customer. This could lead to substantial delays, and to associated high costs, for the affected items.

Capture of data in processing centres could be based on the techniques discussed in B.3.3 above and/or might make use of video-coding systems[15].

---

[13] Fully electronic declarations are the subject of a possible pilot project, outlined in a separate document: *MEDICI: Potential Pilot Projects.*.

[14] The encoding of customs data on forms and portable storage devices is the subject of a UPU standards work item aimed at supporting the needs of customers who are happy to capture the basic data on their own premises, but are unable or unwilling to communicate it electronically to the post.

B.4 Data validation

The capture and electronic supply of data is of little use unless the data concerned are complete and accurate. **Members will perform comprehensive validation of captured data to ensure that it fulfils CN 22 and CN 23 requirements**. This will involve, in particular, ensuring that:

- all data which is required (mandatory) for a valid CN 22 or CN 23 (as appropriate) is provided;
- name and address data are reasonable (i.e. aren't obviously inappropriate or incomplete) and are correctly formatted, with clear and separate specification of street name and number or their equivalent (e.g. a post box number); of the delivery location (town or city) and, where appropriate, postcode[16];
- code values used are valid;
- descriptive data is appropriate and reasonable (e.g. the item description is not blank or obviously generic);
- measurement data and values are consistent (e.g. postage value appropriate to the item weight; item weight sufficiently but not excessively more than the sum of the weights of the content pieces; insured value not too far out of line from the sum of the values of the content pieces, …).

It is stressed that, to be effective, data validation has to take place in parallel with data capture: CN 22 and CN 23 content are customer supplied and the origin post has no authority to modify the supplied data. This implies that the mailer needs to be made aware of any errors or inconsistencies, and given the opportunity to correct these, before completion of the declaration.

B.5 Tracking of outgoing items

To enable the delivery post to respond to its Customs authority's inspection requests, it needs to know, for each item, the receptacle in which that item can be found. This implies that:

- receptacle labels must be bar coded using the 29-character identifier specified in UPU standard S9;
- the origin post must scan the item bar code, or otherwise track the item, in at least the process which results in the item being placed in a receptacle for dispatch purposes;
- the association between item identifier and receptacle bar code[17] needs to be recorded and supplied to the delivery post in the PREDES message (see B.8) which is sent at the time of dispatch.

In this context, a distinction is made between items, such as parcels and EMS items, for which tracking services are routinely provided and items which, whilst they might have a bar coded identifier, are not normally tracked.

Members will track outgoing items which are subject to tracking services[18] in the normal way and will provide EMSEVT (or, subject to bilateral agreement, EVTRPT) tracking reports for the appropriate events.

Desirably, item tracking information should also be passed through to the system which controls the sending of item data to the delivery post (see B.8) so that it can be used for triggering message

---

[15] In theory, (remote) video-coding systems could also be used to support data capture at the point of induction, but the economics of this are likely to be problematical.

[16] Desirably, the sender address should be fully validated, by the origin post, using the post's own address database. The delivery address should preferably be similarly validated, and where necessary corrected in the same way as if it were being used for sorting purposes, by the delivery post.

[17] It is recognised that the association between and item and a receptacle might not be 100% accurate. Members should, however, make every endeavour to improve accuracy of this information, since a high error rate (items in the wrong receptacle) is likely to lead to a breakdown of trust between the delivery post and its Customs authority, resulting in more inspections and delayed clearance.

[18] Items which are not subject to tracking services fall outside the current MEDICI scope, but could be added – subject to Steering Committee agreement – as and when the UPU studies referred to in B.2 have been completed. They can of course also be supported under bilateral agreements between the parties involved.

generation and/or so that event data can be embedded in the ITMATT message for the item concerned.

B.6 Export clearance

Members are expected to report on and obtain clearance for outgoing items in the normal way, where this is required, before they are dispatched from the outward IMPC. The use of electronic export declarations, based on captured data, is encouraged, though not required. Where they are used, it is anticipated that the interfaces and procedures required will be based on those used for import reporting and clearance (see C.5.4).

B.7 Receptacle labelling and bar coding

Receptacles used for the dispatch of items for which data are captured shall be labelled in accordance with UPU labelling specifications. Compliance with UPU standard S47 is recommended, though not required.

The labels concerned shall carry a bar coded identifier which complies with UPU standards S9 and S46.

B.8 Inter-post data exchange

B.8.1 Introduction

Members will electronically advise the appropriate member delivery post of at least:

- the outgoing items, for which they have captured the data corresponding to CN 22 and/or CN 23 content, which are both trackable and have an S10 13-character bar coded identifier;
- the key tracking events detected for those items;
- the sending of dispatches which contain such items.

B.8.2 Communication of item data

Unless otherwise agreed between the parties involved, item information should be communicated using EDIFACT syntax version 3 messages with syntax identifier UNOC[19] in accordance with the ITMATT[20] V1.0 message specification[21].

The data to be supplied in these messages is documented in Annex D. For sending purposes, it is not required that support be provided for the additional data referred to in D.4 or, provided that data

---

[19] EDIFACT syntax identifier UNOC is associated with the use of the ISO 8859-1 character set. This character set might not be adequate for members from some countries. The use of other syntax identifiers and character sets, and/or the sending of item level data in XML format is therefore permissible, subject to agreement of the delivery post concerned. Subject to demand, IPC will make available temporary/transitional facilities to support conversion between EDIFACT ITMATT messages and an XML representation. Notwithstanding this, EDIFACT format using syntax identifier UNOC remains the default and should be used for the sending of data unless the delivery post concerned has agreed to accept an alternative. The use of EDIFACT for data interchange between posts in no way prevents individual posts from using other formats, including XML, for the interchange of data with customers.

[20] ITMATT allows the communication of both customs-related and other item data. Though the customs data content was based on the earlier UPIMEX (M28) specification, it has been updated to reflect the current versions of CN 22 and CN 23 and to address other deficiencies in UPIMEX which were identified in the SAMPLE project. Details of these can be found in POC C1 SB EXG 2005.2–Doc 10. This UPU document, freely downloadable from the UPU web site, summarises known requirements for the adaptation of M28 and related UPU standards.

[21] As at September 2007, M33 is a 3-part standard at UPU standards status 0, the versions of which in practical use are M33a-4, M33b-6 and M33c-4. A proposal for an update of the ITMATT specification has been tabled for consideration by the UPU Standards Board in October 2007 but the proposed update, to ITMATT V2.0, would (if accepted) remain at UPU standards status 0 (working draft standard). The MEDICI Steering Committee expects that further modifications will be required before the standard qualifies for UPU standards status 1 (draft UPU standard) and has therefore agreed to continue using the existing specification (ITMATT V1.0) for the time being. This will, however, be kept under review. MEDICI members will be expected to upgrade to the (then) latest version of M33 within a reasonable time of its achieving status 1.

is only sent after posting of the item, for the inclusion of the event data referred to in D.5. For reception purposes, support is required for fully populated messages, including such additional data and event information. The delivery post may, however, ignore or discard any data which it is unable to process or considers not useful.

The sending of data, about an item, should preferably be triggered by tracking events which occur to the item, with the particular events which trigger communication being agreed with each delivery post. In the absence of such agreement, or in the absence of a capability to link transmission to events, the data for an item should be transmitted immediately before the dispatch pre-advice message (see B.8.4) which refers it.

B.8.3 Communication of tracking events

Tracking events for items subject to tracking services should, unless otherwise agreed on a bilateral basis, be communicated using EMSEVT V1.0 messages in accordance with UPU standard M17-5 or M17-6. Their reporting within ITMATT messages relating to the items concerned is strongly encouraged (see D.5), though not mandatory.

Tracking events for items that are not subject to tracking services should preferably be reported within ITMATT messages relating to the items concerned. Their reporting in EMSEVT messages is subject to bilateral agreement between the parties involved.

B.8.4 Communication of dispatch data

Dispatches containing items for which item data is supplied should be pre-advised using PREDES messages. Each such message is required to specify, for each receptacle in the dispatch, the list of such identified items contained within the receptacle concerned (see B.5). This implies use of (at least) PREDES V2.0, as specified in UPU standard M14-7 with supply of item information. PREDES V3.0 or V3.1 may be used, as an alternative, subject to bilateral agreement.

The requirement to supply item information in PREDES messages extends only to items for which data are supplied by means of ITMATT messages and only to the supply of the item identifiers. It is nevertheless recommended that other available item-level data supported by PREDES are also supplied and that data are provided in respect of all identified items, not only those referenced in ITMATT messages.

B.8.5 Use of other inter-post messages

It is recommended, but not required, that use is made of PRECON messages, in accordance with UPU standard M10, to pre-advice consignments.

RESDES and/or RESCON messages should desirably be used (see C.3) to report tracking of receptacle reception by the delivery post.

B.8.6 Network use

Participation presently requires the use of a specific mailbox on the GXS network for the sending of ITMATT messages. The use of POST*Net will be supported in the near future.

EMSEVT, PREDES and eventual other messages (RESDES, PRECON, RESCON, EVTRPT, CARDIT, RESDIT, …) may be sent / received using either GXS or POST*Net.

B.9 Sharing of experience and best practices

Members are expected to share, with other members of the MEDICI group, their relevant experience, including that of:

- developing, implementing and deploying:
  - new identification systems;
  - data capture systems;
  - data validation systems;
  - systems for the tracking of items not subject to tracking services;
  - new operational procedures designed to make effective use of the data exchanged;

- promoting the spread of data capture and supply by customers;
- working with suppliers of third-party dispatching systems;
- resolving any data protection and privacy issues which might arise on a local basis.

B.10 Dissemination and liaison

Dissemination covers all activities associated with:

a) keeping non-members informed about MEDICI, its objectives, progress and results;

b) providing opportunities for such non-members to influence development of the group.

Dissemination towards non-member posts will be achieved through member involvement in and the giving of reports to relevant UPU and IPC groups, notably:

- the UPU Standards Board and its Electronic Exchange (EXG) and Customs Data Interchange (CDIG) groups;
- the UPU Customs Support Project Group;
- the UPU Parcels Group;
- the Kahala Group Steering Committee.
- the EMS Task Force;
- the IPC Upgrading Steering Committee;

Explicit MEDICI-run workshops and meetings with individual posts will additionally be arranged as necessary.

Contacts with individual customs authorities are the responsibility of the member post(s) in the country concerned. Dissemination towards other relevant organisations will be achieved through member involvement in:

- the WCO/UPU Contact Committee;
- PostEurop and, in particular, its Customs working group;
- the IATA/UPU group on EDI.

The WCO will be kept informed through the WCO/UPU Contact Committee and the European Commission will be kept informed through PostEurop. To avoid potential confusion, MEDICI will not seek direct contact with either the WCO or the European Commission, though it is recognised that the PTC will need to consult with the WCO on the development of the standard interface referred to under 5.3 and C.5.

B.11 Evaluation

B.11.1 Economic evaluation of data capture

A key MEDICI objective is to minimise the overall costs of data capture. To this end, **members will contribute to an evaluation of the costs of different methods of data capture**, enabling a simple economic model showing the distribution of costs and benefits to be constructed. This will be used to assess the need for data capture incentives. The results of this analysis will be made available to the UPU and other bodies, such as the REIMS Steering Committee, for them to take into account in setting terminal dues and other conditions for the interchange of mail.

B.11.2 Data quality evaluation

The initial members have already conducted a first evaluation of the quality of the data exchanged between them; have addressed most of the issues raised as a result and have highlighted the need for further work on the parsing and validation of name and address data. Such evaluation is, however, seen as an ongoing activity and all **members will contribute to periodic evaluation of the quality of the data and the timeliness of its supply**.

B.11.3 Overall evaluation

Evaluation will be an ongoing process leading to periodic reports covering:

- the experiences gained and results obtained up to the date of the report;
- the adequacy of the technology choices and interchange specifications used, together, if appropriate, with detailed proposals for their improvement and, as and when relevant, a proposal for the granting, by the UPU Standards Board, of Level 1 and 2 approval of the specifications;
- the extent to which different item attributes are, in practice, populated in exchange messages; the quality and the resulting value of the attributes for clearance purposes;
- comparative analysis of electronically provided data against data provided in hard copy CN 22 and CN 23 declarations;
- operational procedures for usage of the data, its timeliness, impact on clearance times and the overall value of its electronic exchange;
- the need for standardising the classification of mail which should be included within the scope of electronic customs and security declaration procedures;
- the conclusions which may be drawn regarding further development of the group.

Annex C

MEMBER USAGE OF SUPPLIED DATA

C.1 Introduction

Though this is not a requirement for participation in MEDICI, the main benefits of membership of the group are expected to accrue from the practical usage of the data provided by members to expedite the processing of incoming items and to reduce the costs associated with obtaining customs clearance and the collection of taxes and duties from recipients. This annex describes the main activities likely to be involved.

C.2 Message correlation

Typically, the customs authority is expected to request that specific items are presented for inspection. Such requests can be honoured in two ways:

- by ensuring that every single item with an identifier is scanned, with those items which have been requested for inspection then being separated out;
- by translating the request into a list of the receptacles in which the items concerned were dispatched, so that these receptacles can be singled out, with only the items in these receptacles then needing to be individually scanned.

Though there might well be other reasons for wishing to scan individual items, it might not be convenient to do so until after clearance and many posts are expected to adopt the second approach in order to segregate items requiring inspection as early as possible in the handling process. This of course requires knowledge of the receptacle in which each item is to be found and implies a requirement for the delivery post to correlate item data received in ITMATT messages with data, from PREDES messages, which specifies the content of receptacles.

Whilst the allocation of an item to a receptacle can be communicated in an ITMATT message, if this is sent after the allocation has taken place, this implies that the transmission of item data has to be deferred until the receptacle bar code is allocated at the time of make-up of the dispatch, or that data is sent twice – for example, once when the item is posted and again when it is dispatched. Also, the inclusion of item to receptacle allocation data in ITMATT messages is technically redundant, since the identified item content of receptacles is anyway communicated in PREDES messages.

Given this, the delivery post should implement the capability to correlate item-receptacle allocation data, obtained from PREDES messages, with item attribute data obtained from ITMATT messages. Since the relative timing of reception of the messages is indeterminate, this correlation – if driven from message reception processing – needs to operate in both directions. That is:

- reception of a PREDES message should trigger review of which, if any, items mentioned in it have been the subject of earlier received ITMATT messages;
- reception of an ITMATT message should trigger review of which, if any, items mentioned in it have been the subject of an earlier received PREDES message.

The flowchart diagram below shows one approach to the required correlation, based on the maintenance of a database of both items and receptacles. Entries to the item database are made when either an item is mentioned in a PREDES message or when it is mentioned in an ITMATT message. If the PREDES message is received first, the database will initially contain only the data extracted from the PREDES message, with other data being added when the ITMATT message is received; if the ITMATT is received first, the database will initially contain the data from that message, with other data being added when the PREDES message is received.

The diagram also suggests that receptacle database records should be flagged when and if it is learned that ITMATT data is available on one or more of the items contained in the receptacle.

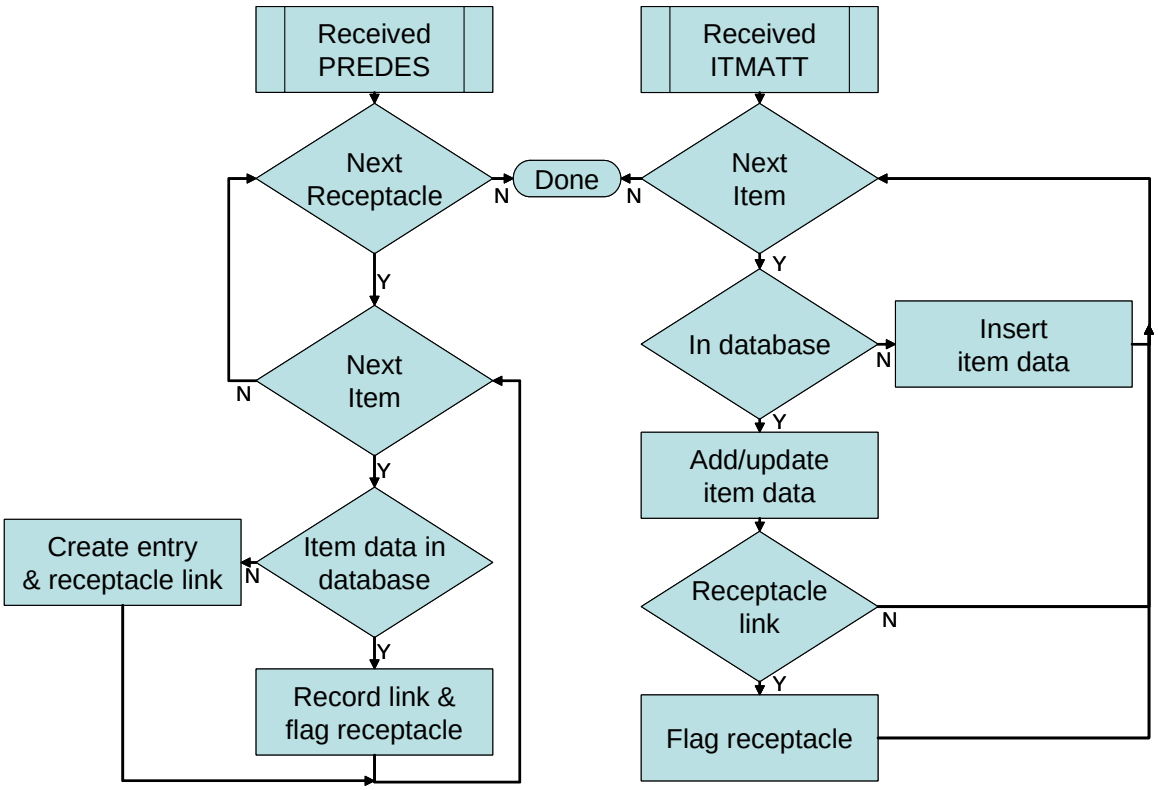

Figure 1 – Correlation of item data from PREDES and ITMATT

It is stressed that the diagram represents only one example of how correlation can be performed. Other approaches can equally well be used. In particular, where different systems are used for the reception and processing of item level (ITMATT) and dispatch level (PREDES) messages, message reception-based correlation might be inconvenient or impractical. Where this is the case, IPC can supply extracts, from the CAPE*Vision database, specifying, for each identified item, the bar code of the receptacle in which it is contained and the available information relating to the intended transport and arrival date/time of the receptacle. Such extracts are made available for download via FTP and are currently generated on a 6-hourly basis. Correlation based on such extracts would work in much the same way as is illustrated in the diagram, with PREDES reception being replaced by time-based collection of the CAPE*Vision database extracts and the *Next Receptacle* loop being omitted, since the extract files are organised by item identifier.

C.3 Tracking reception of incoming receptacles

Members should desirably scan bar-coded receptacles on arrival and report such scans, to the sending post, using RESCON and/or RESDES messages compliant with UPU standards M12 and M13 respectively.

C.4 Capture of data by the delivery post

It is assumed that, if electronic export declarations are required, the data required for these will be captured by the origin post prior to item export and will be supplied, in electronic form, to the delivery post for use in import declarations. However, export declarations are not needed for all items for which an import declaration is required and, even where they are needed, they might well be submitted directly to the customs authority, rather than being submitted via the post. In such cases, there is no absolute requirement for the origin post to capture the data required, by the delivery post, for the submission of electronic import declarations. Notwithstanding possible financial incentives (see B.11.1), and the expected availability of data capture and electronic interchange systems (see 5.6), it is thus unlikely that the delivery post will be provided with electronic data for all incoming items.

There can also be cases in which the data required by the customs authority in the delivery country exceeds that provided, or normally provided, on a CN 22, CN 23 or CP 72 form (as appropriate to the item). For example, the Customs authorities in some countries may require a formal customs declaration from the importer (addressee) for some categories of item and/or for items of high value. It is also understood that some postal operators are required to provide Customs

classification codes even where these have not been provided by the mailer and/or to supply nationally defined extensions to the basic 6-digit HS-code standardised by the WCO.

In such cases the delivery post concerned will have to either continue clearing the items involved based on existing paper-based systems (if this continues to be permitted) or will need to capture the required data (or additional data) itself – except in case of bilateral agreement, the data supplied by the origin post will remain limited to that supported by the CN 22 and CN 23 forms. The tools and techniques explored in the case of capture by the origin post (see B.3.3 and B.3.4) are equally applicable in this context.

Delivery post capture of data on an item would normally need to occur after reception of the item and before it is cleared for delivery to its addressee. This might involve an adverse impact on service levels and/or on costs, the level of terminal dues and on the fees charged to the recipient of the items concerned.

C.5 Obtaining import clearance

C.5.1 General

It remains the destination post's responsibility to fulfil all requirements of its national authorities with respect to the obtaining of authorisation for the reception, offloading, quarantine and import of items. To the extent possible, members are encouraged to develop, and operationally implement, procedures for the clearance of incoming items by their own customs authority, based on the data provided by partner posts, complemented as necessary (see C.4) by locally captured data. The technical and operational methods used need to be agreed on a local basis.

Initial systems might well be based on providing internet-based access to data held on postal systems, rather than on message-based exchange of data between postal and customs systems. This has the potential advantage of supporting customs authority exposure to the idea of electronic declarations, without this requiring interface development on their part or giving rise to any system capacity issues. It could also help to clarify filtering requirements[22] and to develop operational procedures for the communication of customs clearance decisions before these are committed to in an interface, between systems, that might be more difficult to change. Last, but not least, it might offer a potential route for early involvement of posts which make use of IPS, pending WCO agreement of an interface specification and its development by the UPU PTC (see next paragraph).

C.5.2 Electronic data supply

It is recommended, though not required, that the data required for clearance are supplied to the customs authority in electronic form. This approach to this should be agreed on a local level: many customs authorities have specific technical requirements. The approach need not necessarily be based on the used of EDI: it may be preferred, in some cases, to provide customs official with network-based access to relevant data stored on the post's own systems.

C.5.3 Timing of data supply to customs in the delivery country

Careful consideration is needed of the timing of the supply of data to the customs authority. For the delivery post, there can be many advantages in early availability of data: in particular, it can be used to pre-advise the recipient, preparing him or her for the possible requirement to pay duty and/or the post to request the supply of any data, likely to be required for clearance purposes, which was not included in the sender's declaration.

For the customs authority, the early supply of data is likely to be of less interest: though early advice that an item is en route might allow more expeditious clearance when it arrives, the customs authority generally only has jurisdiction over an item once it is on the territory of the delivery country and is unlikely to be able to communicate any decision about an item, to the delivery post, until its presence has been confirmed. Also, if data are supplied too early (e.g. when they are supplied at the time of ordering or order fulfilment), there is some risk that the item concerned might never actually be posted or, if it is posted, that it fails to ever arrive in the delivery country (e.g. through loss or theft). Such instances could damage the credibility of the postal operator towards the customs authority.

[22] Filtering is the topic of one of the possible pilot projects outlined in *MEDICI: Potential Pilot Projects*.

Given the above, it is anticipated that the majority of posts will choose to make data available to the customs authority only when the item has been scheduled for dispatch by the origin post, and possibly even only when the receptacle containing it has actually been received.

The precise trigger for the supply of data to the customs authority is at the discretion of the delivery post and the customs authority concerned. Where the data are made available before arrival of the item in the delivery country, the customs authority is generally expected to require a separate indication of such arrival. The trigger for and timing of this indication is also a matter for local agreement. Possibilities which can be considered include:

- arrival of the incoming flight which is (supposed to be) carrying the receptacle in which the item is (supposed to be) being transported;
- carrier handover of the consignment which is (supposed to) include the receptacle;
- positive scanning of the receptacle by the delivery post;
- positive scanning of the item, on its removal from a receptacle.

Clearly only the last of these provides a real guarantee that an item is within the jurisdiction of the customs authority. Without a positive item scan, there is always some risk that the item will not actually be found in the receptacle that was supposed to contain it; without a positive receptacle scan there is always some risk that the receptacle was not loaded onto the intended transport. On the other hand, requiring a positive item scan would almost certainly lead to unacceptable operational problems and delays. The expectation is therefore that most authorities will accept incoming flight arrival data as the trigger, but will want to carefully monitor statistics of instances in which either receptacles are not on the intended flight or in which items are not found in the intended receptacle.

C.5.4 Import clearance procedures

Notwithstanding the expectation that the posts in some countries will be charged with tax and duty assessment, customs authorities will generally retain the right to audit and inspection. Members will be invited to contribute to specification of best practice procedures aimed at supporting this right, and to develop timing and other limits to its exercise which are needed to avoid undue delays and ensure maintenance of a high level of service.

It is expected that the delivery post will normally require the ability to distinguish between and support separate operational processing procedures for:

- receptacles containing items for which data has been supplied in ITMATT messages and receptacles which do not contain such items;
- receptacles containing one or more specific items (e.g. items which the customs authority has indicated a desire to inspect) and other receptacles;
- items for which data has been supplied in ITMATT messages and items for which no such data has been supplied;
- individual items which the customs authority has indicated a desire to inspect and items which are not to be subject to inspection.

The ability to distinguish between and segregate receptacles for processing purposes requires the positive scanning of S9 / S46 compliant bar codes on receptacle labels and the on-line real-time use of such scans:

- to infer whether the receptacle contains items for which ITMATT data has been received;
- to determine whether the receptacle contains any items, for which ITMATT data has been received and/or which the customs or other authorities have requested for inspection.

It is recommended, though not required, that receptacle segregation is achieved by advance flagging of the records of those receptacles which contain items for which ITMATT data are available. One approach to this is described in C.2.

The ability to distinguish between and segregate individual items for processing purposes requires positive scanning of (at least) the items from receptacles which have been identified as containing items for which ITMATT data are available. It also requires on-line real-time access to at least the list of items for which ITMATT data are available and to the list of items which have been singled out for inspection.

C.6 Advising recipients; collecting taxes and duties

Many members are expected to use the electronic data captured and provided by the origin post to provide recipients with early warning of anticipated deliveries and to support the use of electronic systems for the payment of taxes and duties, allowing delivery to be effected without the need to collect payment on the spot. Such approaches are strongly encouraged, but not mandatory. The sharing of experiences of advising recipients of items en-route to them and of collecting taxes and duties from recipients is strongly encouraged.

C.7 Tracking of incoming items

Members are expected to track and report reception and delivery of incoming items subject to tracking services[23] in the normal way and to provide EMSEVT (or, subject to bilateral agreement, EVTRPT) tracking reports for the appropriate events, including, where appropriate:

- item reception in the inward IMPC or first processing centre;
- the scheduling of items for customs processing or inspection;
- the clearance of items for delivery;
- the dispatch of items to the appropriate delivery office;
- item reception in the delivery office;
- each unsuccessful delivery attempt;
- successful delivery or the abandonment of delivery attempts.

[23] Items which are not subject to tracking services fall outside the current MEDICI scope, but could be added – subject to Steering Committee agreement – as and when the UPU studies referred to in B.2 have been completed.

Annex D

ITEM DATA TO BE CAPTURED AND EXCHANGED

D.1 Data required for all items

The data to be captured comprise at least:

- the S10 13-character item identifier;
- the name and postal address of the mailer;
- the name and postal address of the intended recipient;
- the gross weight of the item;
- the total value of the item;
- the nature of the transaction, e.g. whether it is a gift or commercial item;
- for each distinct type of content of the item:
    - its description;
    - the number of units, if this is not 1 or part of the description;
    - its value;
    - its net weight.

Note that sender and delivery address are required for items subject to CN 22 declarations, even though these are not on the CN 22 itself. Communication of the total value of the item is not supported by the ITMATT V1.0 specification; its capture is nevertheless required to permit validation of correspondence with the sum of the values of the content-pieces.

D.2 Additional data for items subject to CN 23

If applicable to the item concerned, the following data are recommended for items that require a CN 23, particularly if these are commercial in nature:

- the type and identifier of each document accompanying the item[24]. Such documents should preferably include an invoice, proforma invoice or other documentary evidence of value. Other documents such as a health certificate, licence, certificate of origin or authorisation for goods subject to quarantine might also be required, depending on the content and the origin and destination of the item;
- the postage paid;
- the amount of any additional fees;
- other information and observations relevant for customs processing, including information about quarantine restrictions and the numbers of any licences, etc. which do not accompany the item.

D.3 Recommended data

The following data are not essential for customs purposes, but it is strongly recommended that they be provided where relevant and available:

- a UPU standard S35 party identifier, preferably based on a customs or tax registration number or VAT number, for the mailer;

[24] Support for electronic, as opposed to physical, accompanying documents is covered by one of the pilot projects outlined in *MEDICI: Potential Pilot Projects.*

- contact data (phone, fax and/or email address) of the mailer;
- a UPU standard S35 party identifier, preferably based on a customs or tax registration number or VAT number, for the intended recipient;
- contact data (phone, fax and/or email address) of the intended recipient;
- the insured value of the item;
- the dangerous goods classification of the item;

For commercial items, it is recommended that the following data are provided for each type of content, this being stated as "assisting Customs in processing" of the item:

- the country of origin, where this is not the country in which the item was mailed;
- the customs classification code, expressed as a WCO-standardised 6-digit HS code.

D.4 Other item data

The need for exchange of data, between posts, extends beyond that required for customs purposes. Address, weight, postage and insurance data required for customs purposes is potentially useful in other postal applications, whilst – if item data is being exchanged at all – it might be appropriate to exchange other data required for postal applications purposes in addition to the data needed for customs purposes.

Other attributes supported by the ITMATT V1.0 message may therefore be included if available, but are not required for postal customs clearance purposes and might well be ignored by the delivery post.

Of particular interest, in this context, are the data related to cash on delivery services[25], where these apply to the item:

- the COD amount;
- the method of payment;
- payment validation data;
- the payee;
- the payment account and reference.

D.5 Event data

The ITMATT message supports specification of the event history of an item. Where the data for an item are supplied as a result of an event other than item posting, acceptance or dispatch, or where data are supplied more than once (e.g. on dispatch, after supply on acceptance), the data relating to at least the event which triggered supply of the data should be supplied. If data on multiple events are provided, the last instance of event data should correspond to the event which triggered the sending of the data for the item concerned.

In particular, the provision of data prior to the item's being tracked within the postal system (e.g. data captured at the time of order from the supplier, or provided by the mailer in advance of posting or collection) should be indicated by the inclusion of event data signalling that the posting or acceptance event has not yet taken place. The recommended approach is to use a planned posting event specifying the date and time and which posting or collection is expected to occur. Further details are provided in UPU standard M37.

Event data need not be supplied in cases in which data relating to an item are sent (a) only once and (b) when the item has been positively confirmed, through an explicit scan of its bar code, as being under the control of the origin post.

[25] It is recognised that few posts today offer COD services on cross-border items. At least in part, this results from difficulties in ensuring collection and remittance of the payments concerned. Potentially, the electronic supply of COD data could go a long way towards alleviating these difficulties, rendering the supply of a cross-border COD service feasible again.

Annex E

EXAMPLE: A PARCEL FROM BRAZIL TO CANADA

In the case of a postal parcel mailed from the Brazil to Canada:

- Correios do Brazil would, wherever possible, capture required CN 23 data, together with any other data which might be required in accordance with local export regulations, about the parcel and its content;
- Correios would track the parcel through its network and, either on the first occasion on which the parcel is scanned, or at an appropriate point agreed with Canada Post, would supply the captured CN 23 data, together with relevant tracking data to date, in an ITMATT message addressed to Canada Post;
- under its local arrangements, Correios would in parallel supply any data required to obtain export and transport authorisation to the competent Brazilian authorities and would ensure that any necessary export clearance was granted before dispatch of the parcel;
- on dispatch of the parcel, Correios would send Canada Post details of the dispatch, including information specifying the bar code of the receptacle in which the parcel had been dispatched; making use of a PREDES V2.0[26] message;
- Canada Post might use the supplied data before arrival of the parcel in Canada, for example to advise the prospective recipient and invite him to pay applicable taxes and duties;
- under its local arrangements, Canada Post would supply the parcel data to Canadian Customs. Depending on these arrangements, this might be done in advance (e.g. as soon as the data are available to Canada Post) or only when it is (reasonably) sure that the parcel is on Canadian soil. This might be signalled either by confirmation that the aircraft which is (supposed to be) carrying the receptacle has landed; by handover (RESDIT delivery event) of the consignment; by reception scanning of the receptacle for the purpose of RESCON or RESDES generation or by reception scanning of the actual parcel on its removal from the receptacle;
- Canada Post would ensure that import clearance was granted before scheduling the parcel for delivery. It would normally also deal with the collection of taxes and duties to be paid by the recipient;
- in parallel, Canada Post would track the parcel through its network, supplying appropriate tracking information back to Correios using EMSEVT V1.0[27] messages;
- Correios would use this tracking information or, in its absence, RESDIT, RESCON or RESDES information, to fulfil any requirement for it to confirm, to its local authorities, that the parcel had indeed been exported.

Note that the above only covers the sending of messages which are required for MEDICI purposes. It is recommended, but not absolutely required for project participation, that other messages are also used. In particular, EMSEVT can desirably be used to report events by both Correios (events A, B and C) and Canada Post (events D, E, F, G and H and/or I). Support for PRECON, RESCON, RESDES, CARDIT and RESDIT messaging can also be useful.

[26] PREDES V2 is a minimum requirement. PREDES V3.0 or 3.1 may be used as an alternative provided that its use is supported by the delivery post concerned.

[27] EVTRPT messages may be used as an alternative provided that their use is supported by the other post involved.