

**Committee on Government Procurement**

INFORMATION TECHNOLOGY: COMPILATION OF ISSUES

Note by the Secretariat

1. At its meeting on 27 February 1996, the Committee requested the Secretariat to prepare a compilation of issues and, in conjunction with the Chairman and based on inputs from delegations, identify options for carrying forward work in the area of information technology.

2. This Note is an attempt to respond to this request. It is based on the discussions in the meetings of the Interim Committee and the Committee on this topic, replies to the questionnaire drawn up by the Secretariat (GPA/IC/W/4/Rev.1; replies are contained in documents GPA/IC/W/7 plus Addenda), and other papers presented to the Committee (documents GPA/IC/W/18, GPA/IC/W/19, GPA/IC/W/36, GPA/W/13 and GPA/W/14).

3. Article XXIV:8 of the Agreement reads as follows:

With a view to ensuring that the Agreement does not constitute an unnecessary obstacle to technical progress, Parties shall consult regularly in the Committee regarding developments in the use of information technology in government procurement and shall, if necessary, negotiate modifications to the Agreement. These consultations shall in particular aim to ensure that the use of information technology promotes the aims of open, non-discriminatory and efficient government procurement through transparent procedures, that contracts covered under the Agreement are clearly identified and that all available information relating to a particular contract can be identified. When a Party intends to innovate, it shall endeavour to take into account the views expressed by other Parties regarding any potential problems.

4. In the discussions, two major concerns have emerged:

- that, where necessary, the Agreement should accommodate use of information technology, in order to enable its benefits to be harnessed and to ensure the continued relevance of the Agreement;
- but, in doing so, non-discriminatory access should be protected and, where possible, enhanced.

Based on these concerns, issues have arisen as to whether certain provisions of the Agreement should be reviewed and modified and whether other forms of cooperation between Parties might be warranted.

5. The discussions have related to two types of use of information technology:

- information on procurement opportunities on databases;

- electronic procurement or commerce (the situation where a significant part or all of the procurement process is conducted through electronic means, going beyond dissemination of information on opportunities to include such elements as demand and receipt of documentation and specifications, tender submissions and invoicing).

While initially discussions were mainly focused on issues relating to databases giving information on procurement opportunities, recently the emphasis in the discussions seems to have shifted towards issues of electronic commerce.

6. In the light of the above, the compilation of issues part of the paper is organized under these headings:

- summary of the factual information provided by Parties on the use of information technology in their procurement operations and of issues raised regarding the provision of such information;
- issues related to ensuring that access to procurement opportunities on a non-discriminatory basis is maintained and enhanced;
- issues related to ensuring that the Agreement does not stand in the way of greater efficiency in procurement processes through use of information technology.

The final section of the paper attempts to identify, for consideration by the Committee, options for carrying forward the work in the area of information technology.

## I. INFORMATION ON THE USE OF INFORMATION TECHNOLOGY

### (a) Summary of the information provided

7. The following information is based on delegations' responses to the Secretariat's questionnaire, contained in document GPA/IC/W/4/ Rev.1 and on the discussion in the Interim Committee and the new Committee on Government Procurement, including the practical demonstration which was organised in June of 1995. In view of the rapid technological progress in the area of information technology, some of the information described below may already have been overtaken by more recent developments.

#### (i) Systems in place/planned

8. In most Parties, internal developments seem, for the time being, focused on the establishment of databases which list government procurement opportunities, rather than on electronic commerce. In the European Communities, the central element of this is its database called Tenders Electronic Daily (TED). Under the project, entitled SIMAP (Système d'Information Marchés Publics), in which Norway and Switzerland also participate, a number of initiatives are either underway or soon to be undertaken at the European level to enhance the current TED system. The Canadian government has introduced the Open Bidding System (OBS), an internationally accessible electronic database on government procurement. In the United States, Electronic Commerce architecture provides for the VANs to receive calls for tender as they are issued; commercial VANs are used as the interface to the suppliers.

9. In some countries, like Canada, Korea and the United States, suppliers can order and in some cases, obtain tender documentation electronically.

10. The United States Government is in the process of moving from a paper-based system to an electronic process for conducting procurements (electronic commerce) which, for the time being operates in parallel with the system of the hard copy publications. For contracts of a value less than \$100,000, electronic publication is already replacing hard copy publication. The Government is planning to develop and implement, no later than 1 January 2000, a Federal Acquisition Computer Network architecture ("FACNET") that would be government-wide and provide interoperability among users. FACNET would be introduced gradually, with the initial focus on purchases below the simplified acquisition threshold.

11. In Finland, several public sector organizations are using EDI (Electronic Data Interchange) in procurement processes (i.e. municipalities, governmental organizations and companies owned by the government).

12. Israel is considering building a database that would include all public procurement of goods and services covered by the new Agreement. While, at the moment, in Korea procurement information at all levels of government can be obtained via the GINS (Goldstar Information Network Service), operated by a private firm, the Korean government intends to establish a computerized network on government procurement. Chinese Taipei's GPIS (Government Procurement Information System) provides a single source for disseminating tender information by government entities; Chinese Taipei is planning to carry out a feasibility study on electronic commerce.

13. Finland and Norway are involved in pilot projects concerning the use of information technology in public procurement, focusing both on databases containing information on procurement opportunities and on electronic commerce.

(ii) Coverage of the systems: what level of entities?

14. The databases of Chinese Taipei, the European Communities and Korea contain procurement opportunities of all levels of procurement under the new Agreement. The databases in Japan and the United States as well as the US electronic commerce initiative only cover central government entities. It is noted that in the United States, procurement opportunities in several of its States can be accessed through an Internet Homepage. The Canadian Open Bidding System includes procurements for goods and service contracts valued at more than \$25,000,- and construction and maintenance opportunities valued at more than \$60,000,- and include those subject to the GATT Procurement Code.

(iii) Factors affecting access.

15. In the United States, commercial VAN's are used as the interface to the business community. Access to interested suppliers depends on the access capabilities provided by the VANs. The Electronic Commerce system under development is intended to operate through a wide range of VANs, allowing both foreign and domestic vendors the opportunity to access government-wide FACNET databases when they become available.

16. Access to the European TED database system is possible worldwide. Efficient use of the system is dependant upon familiarity with query commands and search strategies. Suppliers (or information brokers), both domestic and foreign, access it via the public switched network (X - 25) connecting to a Network User Address.

17. The databases of Canada, Japan and Chinese Taipei containing information on procurement opportunities are on-line and can be accessed through the Internet, allowing for world-wide access.

18. While in some Parties (Canada, countries providing information on the TED database, Korea, the United States) fees are charged to use their database(s), others are free of charge (Chinese Taipei, Japan).

19. In terms of language, some Parties indicate that their databases only list the contract opportunities in the national language, while others also provide summary information in English.

(iv) Standards used in the databases

20. In the United States, Electronic Commerce Hardware and telecommunications infrastructure consists of internal agency automated purchase systems that are interconnected to vendor-automated systems through a hub that, in turn, is interconnected to commercially available national and international Value Added Networks (VANs). In most cases, commercial off-the-shelf software is used to translate agency purchase data into standard electronic formats that are then broadcast to the VAN's to be accessed by vendors. The standard currently used in the United States by the contracting authorities for electronic commerce is the ANSI X-12 standard language which, according to the United States representative, can be immediately translated into the EDIFACT standard. However, the US representative stated in the Interim Committee in April of 1995 that it was his government's intention to move to the EDIFACT standard in a year or two.

21. The European TED database system is built on Siemens hardware using DIMDI as its database management system. In terms of the development of an electronic commerce system, the European Communities is using the EDIFACT and X-400 standards. The UN/EDIFACT message group MD 12 (or UN/ECE WP.4/MD12), chaired by the European Commission, is developing EDI messages for public procurement. The aim is to draw up EDIFACT messages, on the one hand, between the awarding authorities and the suppliers and, on the other hand, between the awarding authorities and the Official Publications Office of the EC and the Commission of the EC.

22. Japan, Norway, Switzerland and Chinese Taipei are using or have announced their intention to use the EDIFACT standard in future.

(v) Who provides the database services: public or private?

23. The databases in the European Communities, Japan and Chinese Taipei are managed by a public authority, while in Canada the operation of the service has been contracted out to private firms. In Korea, the system is also operated by a private firm. The US "FACNET" is managed by the government but access to suppliers is provided by private VANs. In Finland, four private databases/services exist where a company can get information - stored on the EC's TED system - about public calls for tender.

(b) Issues raised regarding the provision of information

(i) Issues on databases containing procurement opportunities

24. It has been suggested that additional information needs to be collected on the following:

- whether all notices which are required to be published under Articles IX and XVIII:1 of the Agreement - for entities in Annexes 1, 2 and 3 - are also available on databases, and whether such notices contain at least the minimum information required to be published under Articles IX and XVIII:1;
- how Agreement-covered notices are identified;

- to what extent each type of notice contained on databases conforms to a standard structure;
- whether any particular classification is used in such notices to describe purchases, and if so, which classification;
- as regards the compatibility of databases containing procurement opportunities, whether Parties' databases can be interrogated using international standards, such as SQL - Standard Query Language.
- where databases exist in a non-WTO language, to what extent notices and information are summarized in a WTO language.

(ii) Electronic commerce

25. The point has been made that up till now, most of the information provided by Parties has concerned databases of procurement opportunities. However, Parties seem to be increasingly involved in action in the area of electronic commerce. The question has arisen as to whether Parties should be invited to give fuller and more information on their projects and plans with regard to electronic commerce and in particular whether those Parties who have experience with electronic commerce could share more fully such experiences with the Committee.

II. ENSURING ACCESS TO PROCUREMENT OPPORTUNITIES ON A NON-DISCRIMINATORY BASIS

26. In the discussions, it has been widely recognised that information technology can provide a means for increased access to procurement opportunities, by making information about them more readily available and facilitating compliance with procurement procedures. At the same time, the concern has been raised that increased use of information technology, if not properly handled, could put foreign suppliers at a disadvantage, even where formally applied on a non-discriminatory basis. The following specific points of concern have been mentioned:

- Problems resulting from the existence of a multitude of information technology systems for accessing information and/or conducting electronic commerce. Typically a supplier will be more familiar with operating a national system. Having to come to grips with other ones will entail an additional input of time and energy which potential suppliers may not be willing to make.
- This will be particularly the case where different technical standards are used by information technology systems, whether for the structuring and presentation of information, search facilities or the computer languages used for electronic communication.
- The question of the cost of access to databases and electronic procurement systems has also been mentioned, as has been traditional problems of language.
- The concern that procurement officials under an increasing pressure to procure more efficiently and quickly using information technology might, in some cases, resort to an increased use of exceptions under the Agreement.

27. In relation to the use of databases for information on procurement opportunities, a number of options for addressing these problems have been mentioned in the work on this matter:

- **Ensuring effective non-discriminatory access to foreign databases and electronic tendering systems.** Whereas no evidence has been put forward suggesting that access to national systems is not formally available to suppliers of other GPA signatories on a non-discriminatory basis, the point has been made that there may nonetheless be *de facto* discriminatory effects, unless appropriate forms of international cooperation, aimed at ensuring that national systems are readily usable by foreign suppliers, are agreed. The possible areas for such cooperation that have been referred to are technical and content-related compatibility and cost. In this context, the issue of common guidelines regarding format has come up, in particular the question to what extent such guidelines are required in order to assist foreign as well as domestic suppliers retrieve information and ensure that they can quickly and painlessly find the tenders relevant to their line of business. The point has been made that the use by Parties of a tool such as Graphical Users Interface (GUI) is important as would be the sharing of information on the Database Management Systems (DBMS) and the hardware upon which the databases are built.
- **The incorporation into national databases of information on procurement opportunities contained in the databases of other GPA Members,** for example through data swaps. Such cooperation would give rise to a number of practical issues in relation to technical and content-related compatibility, security, cost, copyright and licensing, especially where there are differences in the ownership/control arrangements of national databases. The issues in question are thus in some ways similar to those referred to in the first indent, with the difference that, in this case, the questions relate to the interface between national computerized databases and, in the case above, the question concerns the interface between individual national systems and individual foreign users. The point has been made that to the extent that progress is made on the issues referred to in the first indent, the issue of dataswaps becomes less important.
- **The establishment of a single, or at least a coordinated, international system.** The question has been raised as to whether in an ideal world it would not be optimal to have an integrated international database through which suppliers could obtain information about all Agreement-covered opportunities. Such a system could either co-exist with or be complementary to national systems. Two less ambitious possible forms of cooperation in the same direction have been mentioned: facilitating the generation of a private sector value-added network (VAN) providing for such a system; the establishment of a WTO procurement home page through which direct access could be gained by suppliers to national database systems on the Internet.

28. In relation to electronic commerce, the main emphasis in the discussions about non-discriminatory access has been the use of compatible standards for electronic communication. In particular stress has been placed on the desirability of general adoption of the EDIFACT standard. However, it has also been suggested that use of a common standard is not necessarily desirable as long as national standards are compatible with each other. The question has also been raised as to whether international systems providing for electronic commerce among Parties to the Agreement and their suppliers could be organized through one or more privately operated VANs.

29. In regard to questions of cost, the suggestion has been made that the scope for preferential tariffs to be applied on a non-discriminatory basis in favour of small and medium-sized enterprises might be explored.

30. In regard to problems of language, the suggestion has been made that electronic systems might themselves be able to incorporate tools to help alleviate such difficulties, and that the experience of the European Communities in this regard might be examined.

31. The point has been made that the Agreement on Government Procurement contains detailed rules on procurement procedures aimed at ensuring that such procedures provide effective non-discriminatory access to foreign suppliers. Such rules, however, were drawn up with the hard copy world in mind. The questions therefore arise as to:

- whether additional rules, or clarifications of the existing rules, should be built into the Agreement to ensure that procedures administered electronically give the same or better guarantees of non-discriminatory access;
- whether such safeguards ensuring effective non-discriminatory access are only needed in the event that the Agreement is modified to allow information technology to substitute, in some measure, for hard copy procedures, or whether such safeguards should also be considered in situations where information technology procedures co-exist with hard copy ones;
- whether other forms of cooperation of a more technical nature, without involving modifications to the Agreement itself, might be warranted.

### III. ENABLING ADVANTAGE TO BE TAKEN OF INFORMATION TECHNOLOGY

32. It has been suggested that three aspects of the Agreement may need to be reexamined in order that the contribution that information technology can make to increasing the efficiency of procurement operations can be harnessed:

- (i) Allowing electronic means of publication or submission of bids. It has been said that the provisions of the Agreement are ambiguous as to whether its obligations can be satisfied through electronic means of publication or submission of bids and that the relevant provisions should be reviewed and clarified as to treatment of electronic transmission. The examples of Article IX, which does not explicitly refer to electronic publication, and Article XIII, which does not refer to new forms of electronic submission of tenders, have been cited.

A number of observations about this suggestion have been made:

- for the time being at least, electronic based systems should be a complement and not a substitute for hard copy notices and tendering;
- Parties should not be authorized to rely exclusively on information technology until such time as the suppliers of all other Parties were able to use such technology;
- account should also be taken of the possible disincentive effect of such a move on potential applicant WTO Members to the Agreement;
- in the event that requiring electronic rather than hard copy submission of tenders was allowed as meeting the obligations of the Agreement, special safeguards ensuring effective non-discriminatory access might be necessary;

- special account needs to be taken of the situation of small- and medium-sized enterprises which may be less well situated to cope with electronic systems;
  - the dangers of reliance on electronic systems giving rise to unintended discrimination and obstacles may vary from sector to sector, according to the extent to which the industry in question has ingested information technology;
- (ii) Reviewing deadlines. The point has been made that the minimum periods required by the Agreement for the different stages of the procurement process were drafted with hard copy transmissions in mind and therefore the need to allow for transmission by international mail. It has been suggested that the deadlines under Article XI should be reviewed in the light of the fact that electronic publication can reduce the lead time necessary for informing interested suppliers of potential procurement opportunities and electronic submission of tenders can decrease the time required by bidders for submitting responsive tenders.

In the discussion on this matter, the point has been made that, before amending deadlines, it will be necessary to ensure that all Parties to the GPA have in place the necessary electronic transmission systems and that account should be taken of the position of possible new Parties. In this regard the suggestion has been made that thought should be given to ways of ensuring that electronic systems with different degrees of sophistication can coexist.

- (iii) Greater use of selective tendering procedures. The suggestion has been made that, because electronic commerce may result in a significantly greater volume of bids, procurement authorities may rely more heavily on selective tendering, and that it might therefore be necessary to consider ways to ensure that foreign suppliers can participate on an equal footing with domestic suppliers in selective tendering procedures under Article X arising from the use of electronic commerce.

In the discussion on this matter, the following points have been made:

- an increased volume of bids should not be considered a problem if it results in greater competition and therefore more cost-effective procurement;
- before recourse to selective tendering is facilitated under the GPA, it should be assessed whether technology can be used to alleviate the burden on a purchasing entity from too many bids, while guaranteeing non-discrimination. Suitable tools for making a rapid selection of tenders on the basis of simple, effective and non-discriminatory criteria could perhaps be developed;
- the question has been raised as to whether electronic databases and commerce would necessarily be the real source of a problem of excessively numerous bids. It has been suggested that perhaps the solution lies more in greater precision in the specifications and qualification criteria to be built into the tender documentation.

33. The point has also been made that the Committee may want to exercise caution in taking any action which would require amendments to the Agreement in view of their implications for domestic legislative processes.



#### IV. OPTIONS FOR CARRYING THE WORK FORWARD

34. The discussions so far would seem to indicate widespread acceptance of two basic guidelines that should inform the future work of the Committee on information technology:

- that the work should be governed by the objectives of the Government Procurement Agreement and the specific provisions of Article XXIV:8;
- that work on aspects aimed at safeguarding and promoting open and discriminatory procurement should proceed in parallel with work on aspects aimed at promoting efficient procurement.

35. In regard to the factual information available to the Committee on practices and projects using information technology, the summary in Section I above indicates that much of the information provided could benefit from updating and completion, especially in regard to electronic commerce. The Committee may wish to consider asking the Secretariat to revise the questionnaire on information technology (document GPA/IC/W/4/Rev.1) to include the elements referred to in Section I(b)(paragraphs 24-25) above and agree that members would provide responses in time for the September meeting of the Committee.

36. In regard to the issues discussed in Section II, a number of quite technical matters have been raised and the question arises as to whether work on these matters would be facilitated by the establishment of a sub-group of experts and/or by the use of a consultant. However, it would be that a more in-depth and systematic examination of these issues in the Committee itself would be a necessary preliminary for the Committee to be able to determine to appropriateness of such steps and the mandate to be given to any sub-group and/or consultant. In doing so, members might also have regard to the issues earlier identified in document GPA/IC/W/18 (reproduced at Annex 1).

37. In regard to the issues set out in Section III, a more detailed examination of the three aspects of the Agreement that it has suggested may need to be re-examined in the light of information technology would also seem warranted. To facilitate such consideration, the Committee might wish to request the Secretariat to prepare a factual note setting out the relevant provisions of the Agreement and drawing attention to any pertinent information on their negotiating history.

38. A further aspect to which the Committee might wish to give thought in deciding how to carry forward the work is the possibility of establishing a pilot project of some sort. Mention has been made of a pilot project being launched in the APEC framework, which consists of creating a home page on the World Wide Web of the Internet, which would enable individual national databases to be accessed by clicking on their icons. There may be other ideas for possible pilot projects, for example aimed at assessing the degree of compatibility of the various national systems.

## ANNEX 1

### Issues Identified in Document GPA/IC/W/18

1. Document GPA/IC/W/18 reproduces the list of possible issues for examination identified as a result of consultations with delegations that was submitted by the Chairman to the Interim Committee on Government Procurement at its meeting on 4 April 1995. This list was drawn up by the Chairman as agreed by the Interim Committee at its meeting of 15 November 1994.

#### Access to Procurement Opportunities

2. Compatibility of databases. To what extent do the existing and planned databases of signatories have, in common with each other, information they contain and the structure within which it is organized and what are the implications of this for the compatibilities of different systems?

3. What common guidelines regarding format are required in order to assist foreign, as well as domestic, suppliers retrieve information, encourage them to compete, and ensure that they can quickly and painlessly find the tenders relevant to their line of business?

4. How should access be set up and who should pay for it? Will suppliers have to subscribe to each system, or will it be set up on the Internet, free for anyone who has an Internet account?

5. Data swaps among Parties. Where databases are being developed or exist, should a possibility exist or be developed to swap data among Parties? Do delegations consider data swaps economically viable? What obstacles currently exist, such as licensing restrictions, etc.?

6. If so, would it be desirable to find ways and means to facilitate those swaps? It would appear that this would to some extent depend on the existence of a minimum amount of common, structured, information and the possibility to establish correspondences between classification systems used by signatories in their respective databases (any given object of procurement, e.g. a pen, should be identified by all signatories in a recognizable way in their databases).

#### Electronic Procurement

7. The question was raised whether, to the extent information technology had been, or was being brought into use in procurement systems, appropriate use would be made of the international standards to ensure that data interchange be carried out in a structured standardized manner, allowing for international use. The question was also raised whether, in the event that this was not the case, delegations could make a commitment to use these standards in future, with a precise time-table.

8. In the event VANs are being used and to the extent that international access to them is desirable, how can ways and means be defined to ensure such international access?

#### Concerning Both Categories

9. Compatibility of the provisions of the Agreement with the use of information technology in government procurement. To what extent are the provisions of the Agreement sufficiently flexible to allow for the use of information technology in government procurement? Should governments be allowed to require firms to tender exclusively by electronic means? If so, for what types and/or values of contracts?