



# Why the GTPNet is Now the Largest Trading Network on Earth

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The Global Trade Point Network relies on the most advanced available technologies for networking and multimedia communication. As the number of connected Trade Points increases, the Global Trade Point Network is rapidly emerging as one of the main worldwide networks for trade-related information flows.

One of the instrumental factors in the successful initial development of GTPNet has been the Trade Point Development Center (TPDC) created by UNCTAD in Bangkok (Thailand) in cooperation with the Asia Institute of Technology. Established in the context of the decentralization strategy adopted by UNCTAD92s Special Programme on Trade Efficiency, the UNCTAD-TPDC has been responsible for the development of innovative tools and interfaces used by GTPNet, including the Electronic Trading Opportunities (ETOs) System, the setting up of the GTPNet World Wide Web site on the Internet, and its corresponding 93Trade Point Internet Incubator<sup>94</sup> (explained below). These accomplishments provide useful examples of how the technologies promoted by SPTE can find a practical application, since the Bangkok center was able to perform all these important functions while the GTPNet server remained physically established in Geneva (hosted by the United Nations International Computing Center, UNICC).

In July 1995, the UNCTAD-TPDC moved to Melbourne, Australia where it is hosted by the Royal Melbourne Institute of Technology (RMIT). The Memorandum of Agreement between UNCTAD and RMIT is included as annex 4.

## Electronic Trading Opportunities (ETOs)

The Electronic Trading Opportunity (ETO) System, was started by the UNCTAD-TPDC in June 1993. As the name suggests, ETOs are offers and demands for products, services, and investment. They are collected from Trade Points and ETO Associates and then distributed electronically via an e-mail central switch and via Internet News groups to subscribers worldwide.

As discussed in section II.A, the two Expert Groups have already discussed different aspects of the ETO system. The first major task of the Expert Group on Information and Standards was to develop a UN/EDIFACT-compatible format for sending and receiving ETOs. This format has been completed and is currently undergoing a six-month trial period. The big advantage of this new format is that it allows automated database exchange among Trade Points. The Expert Group on Financial Sustainability and Cooperation among Trade Points discussed more policy-oriented aspects of ETOs, e.g. who can send and receive ETOs, the role of third party information providers, pricing of ETOs, etc. The draft report of this Expert Group is attached as Annex 2. Clearly, every effort is being made to make ETOs fully compatible with international standards and to make them more useful for Trade Points.

There are two types of ETOs sent by e-mail: tagged and free text. The tagged ETOs are sent to the UNCTAD TPDC by Trade Points and some ETO Associates. They consist of specified data fields, each of which is identified by a tag (code) at the beginning. When the ETO system first started, three-character tags were used. Now, the UN/EDIFACT-compatible five-character tags are used as part of the ETO format agreed upon by the Expert Group. The tagged-ETOs are the highest quality ETOs. In the future, it is foreseeable that some sort of ETO certification by Trade Points could

become part of these ETOs.

The ETO-e-mail-tagged system has shown spectacular growth since its inception less than three years ago. >From 300 ETO-e-mails in June 1993, the traffic has increased by 19,900% to 60,000 ETO-e-mails per month in January 1996. This growth can be seen in figure 1.

The free text ETOs have not been processed by the UNCTAD TPDC and are unstructured. They are forwarded to the central ETO-e-mail switch from the Internet--both from individual companies and ETO Associates. Currently, approximately one hundred of these are received or collected each working day by the UNCTAD-TPDC. Some are sent out via e-mail; others are put into the News groups, described below.

Since January 1996, the UNCTAD-TPDC has also begun distributing ETOs via News groups on the GTPNet server. Each News group contains a specific category of ETOs, which can be viewed by country subcategory on the WWW server. Examples of News groups categories and the country subcategories can be seen in Annex XX. Electronic mail users can also subscribe to specific News groups and receive the contents directly in their electronic mailboxes.

The ETO News groups have become immediately popular with the Internet community. The number of hits has increased from 870,000 in the month of January 1996 to approximately 100,000 hits per day in March 1996. (A 93hit94 is registered every time a user clicks on a hypertext link to download an ETO or move between Web pages.)

When one adds up the three categories of ETO-dissemination, it is clear that a tremendous amount of information passes over the system. At the time of the last Trade Point Programme assessment in January 1995, a total of 5 Gigabytes of information had passed over the ETO system since June 1993. Currently, the data flow volume is 25 Gigabytes per month and growing!

Several thousand trade organizations receive ETOs daily via e-mail or News groups. The total reach of ETOs is much more than that, since many of these organizations re-broadcast the ETOs. For example, Trade Point Korea distributes the ETOs daily to its 67,000 customers. A reasonable estimate is that over 3 million companies received ETOs in January 1996. This estimate is based on information received from Trade Points, ETO Associates and WWW queries. ETOs are received via e-mail, BBS, specialized databases, Home Pages, News groups, publications, newspapers and CD-ROMs depending on the distributor and country.

A particularly important feature of the ETO system is that ETOs are distributed point-to-point and company-to-company. This is in contrast to older systems which posted information on a bulletin board system or relied on country-to country exchanges at a more official level. Companies receive ETOs in their e-mail boxes or from their local Trade Point or they download the ETOs from the ETO News groups straight into their computers. The ETO system is directly in touch with the people who make trade happen.

## **The GTPNet World Wide Web Servers**

The World Wide Web is the fastest-growing part of the Internet. It is made up of multimedia (i.e. text, images, sound, and video) information distributed on thousands of Internet servers around the world. This information is interconnected by 93hypertext links94, where choosing a highlighted word or image in one Web page takes the user directly to a related Web page, possibly on the other side of the world. The GTPNet World Wide Web server was launched in January 1995. It contains a huge amount of information on Trade Efficiency, Trade Points, the Global Trade Point Network, ETOs, etc., as well as hypertext links with other United Nations organizations, government agencies, and trade-related organizations and information sources. Annex XX contains part of the Home Page, and a Guide to Navigating the GTPNet server. As an example of what the user might find further down a path, a page on the Trade Efficiency Library has also been included. This page contains links to the recommendations on the six sectors of Trade Efficiency which were prepared for the United Nations International Symposium on Trade Efficiency, as well as other related U.N. documents.

A very important part of the Web site is the section devoted to Trade Points. All Trade Points have the right to be connected to the GTPNet server via a hypertext link if they have their own Internet servers. If they don't have their

own servers, UNCTAD offers them the possibility of having a Home Page (and much more) on the GTPNet server. This is called the Trade Point Internet Incubator service.

The main objectives of the Trade Point Internet Incubator service are:

- to allow Trade Points (especially in developing countries) without access to the Internet and without infrastructures to operate Internet servers to have a real presence on the Internet;
- to help Trade Points establish links to national organizations in their countries present on the Gopher and Web and to benefit from selected information of particular interest to Trade Efficiency available on the UNCTAD-TPDC Web;
- to use the UNCTAD-TPDC servers as data depositories for countries without national data centers or server capability;
- to help Trade Points in both developed and developing countries to use the latest graphical design techniques applicable to the Web and improve the graphical presentations of their Home Pages and product catalogues.

The design, multimedia preparation and composition of their Home Pages are usually carried out by the Trade Points at the national level. For production of ETO-Visuals (product catalogues), the HTML files required to design the Web applications can be sent upon request to the Trade Points via e-mail. Trade Points send their Web pages via e-mail or diskette to the UNCTAD-TPDC, where they are integrated into the GTPNet server.

Already 34 Trade Points are being incubated by the UNCTAD-TPDC. An excellent example is the Harare Trade Point, which has uploaded not only Trade Point information, but also an entire searchable company database onto the GTPNet server. (See Annex XX)

## Easy Global Access

When the UNCTAD TPDC moved to Melbourne in July 1996, a second GTPNet Internet server was set up which exactly replicates the GTPNet server in Geneva. Having two GTPNet servers significantly increased the ease and speed of access to the GTPNet. The ease and speed of access continues to improve rapidly and steadily, as Mirror Sites of the main GTPNet servers are being set up around the world. Mirror Sites are read-only replications/copies of the main GTPNet servers. Currently there are eight Mirror Sites operational with five more on the way (in Spain, South Africa, Zimbabwe, Finland, and New Zealand). The Internet addresses of the 10 servers are as follows:

<http://www.unicc.org/untpdc/welcome.html> (SWITZERLAND)

<http://urgento.gse.rmit.edu.au/untpdc/> (AUSTRALIA/MEL)

<http://w3.gsm.mq.edu.au/untpdc/> (AUSTRALIA/SYD)

<http://www.tradepoint.org/untpdc/> (USA)

<http://sunsite.icm.edu.pl/untpdc/> (POLAND)

<http://www.tpsingapore.org/untpdc/> (SINGAPORE)

<http://www.dprin.go.id/untpdc/> (INDONESIA)

<http://sunsite.ms.mff.cuni.cz/untpdc/> (CZECH REPUBLIC)

<http://sunsite.sut.ac.jp/untpdc/> (JAPAN)

<http://www.sai.msu.su/untpdc/> (RUSSIA)

## Traffic Generated

The 2 main servers (Geneva and Melbourne) registered a total of 2.6 million hits for the month of January 1996 and 3.2 million hits in February 1996. The total UNCTAD-TPDC sites in 10 countries reached over 4.3 million hits during January 1996. (The figures for February have not yet been compiled, but are likely in the 5 million range). This makes the UNCTAD-TPDC WWW Site one of the most-visited trade site on the Internet.

As a comparison, the number of hits registered by the Home Page of the World Trade Organization in February 1996 was 115,779. In some ways, however, this is not a fair comparison. The WTO and other organizations (ITC, UN/ECE, etc.) use their WWW pages simply to create awareness of their organizations. The UNCTAD-TPDC WWW servers are visited repeatedly, often daily, by ETO users who wish to post or extract new ETOs. A more suitable comparison would be with a serious GTPNet competitor--e.g. the CommerceNet. Recent data indicates that the CommerceNet registers about 3 million hits per month--nearly one third less than the GTPNet.

The Web traffic has grown exponentially since the Web site was launched in January 1995. Figure 2 graphically depicts the developments. Some insights into the traffic generated by the UNCTAD-TPDC Servers can be gained by taking a closer look at the statistics for one of the main servers--that hosted by the UN ICC in Geneva:

- Total completed requests/hits to the Geneva server: 1 271 118 (In January 1995 the monthly requests totaled 20,000)
- Average requests per day: 22 877
- Number of distinct files requested: 330 115

ETOs requested by product and country together with html files from Trade points

- Number of distinct hosts served: 22 075

Number of unique computers from which the accesses originated

- Number of new hosts served in last 7 days: 1 880

- Total bytes transferred: 12 066 316 572

Total amount transferred by the UNCTAD-TPDC WWW Sites to end users. (This figure is equivalent to the amount of information in the entire U.N. Library in New York!!) - Average bytes transferred per day: 208 029 977 (123 593 631)

(This is equivalent to an entire CD-ROM of data sent every day)

-Countries from which accesses were made (in order of frequency):

United States, Israel, Canada, United Kingdom, Finland, Australia, Switzerland, Germany, Sweden, Netherlands, Italy, Japan, France, Norway, Belgium, Singapore, Malaysia, Denmark, Spain, South Korea, Portugal, Chile, Mexico, Austria, Slovenia, Estonia, Greece, Argentina, Brazil, Thailand, Costa Rica, New Zealand, South Africa, Ireland, China, Russian Federation, Czech Republic, Malta, Hong Kong, Uruguay, United Arab Emirates, Indonesia, Peru, Trinidad and Tobago, Bahrain, Luxembourg, Lithuania, Hungary, Turkey, Iceland, Latvia, Croatia, Dominican Republic, Nicaragua, Romania, Slovak Republic, Philippines, Poland, Brunei Darussalam, Uganda, Egypt, Colombia, Panama, Cyprus, Ukraine, Antigua and Barbuda, Bermuda, Macau, Zimbabwe, Ecuador, Kuwait, Bolivia, India.

These statistics on the Geneva-based UNCTAD-TPDC server reveal several things. First, the amount of data on Trade Efficiency and Trade Points which is being transferred to end users is enormous! Every month, the equivalent of the entire United Nation library in New York is being transferred! Second, there are considerable repeat visitors to the Web site. Third, and very importantly, the UNCTAD-TPDC is being visited by Internet users in over 74 countries. This is clear evidence that the GTPNet is a truly global network.

## **Regional TPDCs**

In order to further decentralize the GTPNet, regional servers will be set up in regional TPDCs, which will be hosted by universities or research institutions. Their main task will be to collect information from Trade Points in their region and upload this information onto the network and the UNCTAD TPDC central server in Geneva. Regional servers will therefore have read/write capabilities on the UNCTAD TPDC server, as opposed to Mirror Sites which are read-only sites. Trade Points will continue to establish their own servers which will be linked via the regional servers to the GTPNet. As mentioned in section II.A, an expert group will be meeting soon to design the technical architecture necessary to interconnect the Trade Point servers, regional servers, and the UNCTAD server.

## **Connecting to the GTPNet**

Each Trade Point is free to select its own way to connect to GTPNet. Developing countries (and generally countries without packet switching data networks - PSDN) can be connected via Internet, X25 services, VANs and/or SITA, inter alia. Regional TPDCs will have responsibility for developing the connectivity solutions best adapted to local needs and possibilities. However, such solutions will have to respect the basic principles of the GTPNet as specified in the UNCTAD document PSM/CAS/679 (The Trade Point Programme: a First Post-Symposium Evaluation, January 1995), namely openness (i.e. the solutions and systems will be interconnectible and interoperable, which implies a strict respect of universal norms and standards, in particular those promoted by the United Nations, such as UN-EDIFACT), non-exclusivity (i.e., the equipment and services supplied to GTPNET must be delivered on a non-exclusivity basis, leaving the Trade Points permanent freedom to select the best quality/price ratio), and universality (i.e., the solutions developed will be of use to all types of Trade Points in all types of environments with the purpose of

'excluding exclusion). The latter requires, inter alia, additional efforts in favour of least developed countries, as well as SMMEs (Small- Medium- and Micro-Enterprises) on a worldwide basis.

## **Impact on Business**

With several million companies around the world receiving ETOs each month and over 4.3 million hits registered at the GTPNet WWW servers, it seems clear that the GTPNet is already having a considerable impact upon businesses. However, due to the resource constraints of the Trade Point Programme, it has not been possible to carry out a systematic evaluation, which would ideally involve evaluation teams being sent to Trade Points. Simply contacting Trade Points for information on, for example, trade transactions which have taken place as a result of ETOs or product catalogues on the GTPNet WWW server, does not suffice. This is especially so because Trade Points themselves rarely have the time and resources to do extensive follow-up of clients.

At best the Programme has some anecdotal evidence. For example, when Trade Point Armenia sent out an ETO looking for exporters of butter, eight responses were received from around the world. The Director of the Santa FE9, Argentina Trade Point recently sent an e-mail with the news that as a result of ETOs, two provincial companies are now exporting to New York and that she herself is going to New York to seal the deal.

## **Links with Other Networks**

The GTPNet has literally thousands of links with other networks and organizations. This is done primarily by hypertext links on the GTPNet servers. Annex XX shows examples of ETO Associates with whom links exist. (The underlined words indicate a hypertext link: by clicking with the mouse on the word, the Internet user is automatically taken to the other WWW site.) Also, with the ETO system, many links exist, particularly with trade promotion organizations. Finally, many World Trade Centers have expressed interest in establishing Trade Points. Cooperation on this front, and many others, continues.

The ETO-e-mail-tagged traffic refers to the number of unique ETO-e-mails-tagged multiplied by the number of recipients. Each e-mail contains on average five ETOs.

Current figures could even support a claim to being the most visited trade-related WWW site on the Internet.

For some commercial and CompuServe users, the country of origin cannot be ascertained. Thus, this list of countries is probably not complete.