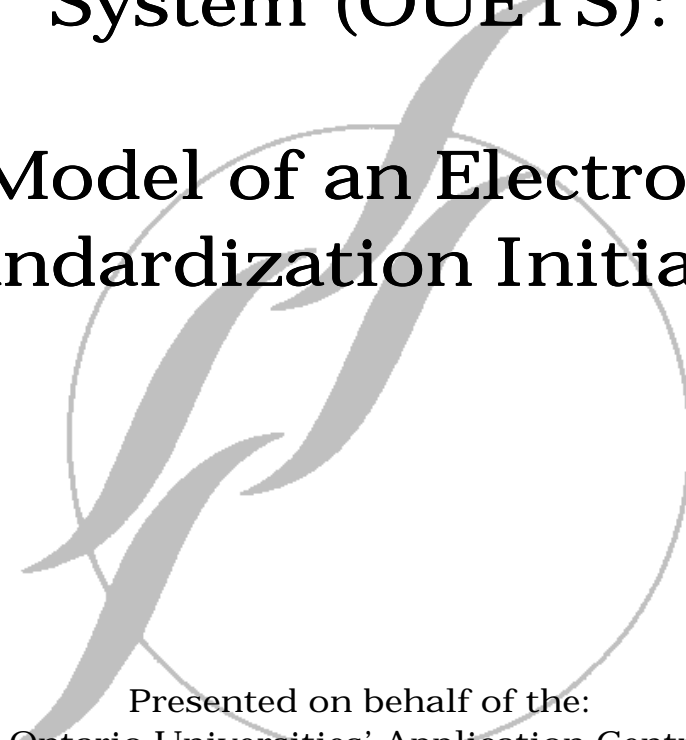


Ontario Universities' Electronic Transcript System (OUETS):

A Model of an Electronic Standardization Initiative



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OVERVIEW

- ! **Executive Summary**
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- ! **Introduction to the OUETS Partners**



I. Executive Summary

This paper, Ontario Universities' Electronic Transcript System (OUETS): A Model of an Electronic Standardization Initiative, details how the universities of the province of Ontario, Canada, in conjunction with the Ontario Universities' Application Centre, conceived of, designed and implemented a system which allowed them to progress from an entirely paper process of transcript exchange to the electronic exchange of transcripts utilizing both electronic and data encryption standards.

Our purpose in submitting this entry is to demonstrate our belief that the OUETS qualifies as an admirable example of a "best practice" in the area of electronic data standardization initiatives. It is our desire, through this submission, to share our experience with the Standards Council and its membership.



II. OUETS Mission Statement

The Ontario Universities' Electronic Transcript System (OUETS) is the product of a commitment by all Ontario universities to adopt an internationally-accepted electronic standard for the exchange of academic documents amongst its members, with the Ontario Universities' Application Centre (OUAC) acting as the hub of trading activity. It ultimately aims to provide a paperless admissions environment across the province in order to serve university applicants with the greatest processing efficiency and expediency. The OUAC and the universities are dedicated to the promotion and expansion of the OUETS by accommodating the entry of each Ontario university into the system, by actively preparing to integrate potential new trading partners from outside the Ontario university sphere, and by constantly striving to improve the effectiveness of the system.



III. Introduction to the OUETS Partners

► The Ontario Universities

There are 18 degree-granting universities in the province of Ontario, Canada, offering considerable diversity of choice to potential students. These universities vary widely from the small, newer suburban liberal arts university to the sprawling, established urban university offering a multitude of programs and professional degrees. Each university is funded in part by the Ontario Ministry of Education but operates with a fair degree of autonomy in a number of areas such as student recruitment, program planning, faculty hiring and general administration and operations. Each has its own grading system and the format of transcripts and other campus-specific documents varies widely. These eighteen institutions are indeed in direct competition with each other for the same high-quality students. Bringing such a diverse group together to successfully develop a standardized method of exchanging electronic transcripts was a major feat of co-ordination and collaboration.

► The Ontario Universities' Application Centre (OUAC)

Located in Guelph (100 km west of Toronto), the OUAC is a centralized bureau which processes applications for admission to universities in the province of Ontario, Canada. The Centre was founded in 1971 by the Committee of Presidents of the Universities of Ontario -- now the Council of Ontario Universities (COU) -- and the Ontario Universities' Council on Admissions. Registered as a non-profit agency operating under the auspices of the Council of Ontario Universities, the OUAC serves all of Ontario's universities and its activities are monitored by an 18-member Advisory Board which includes representation from all of its user groups. The OUAC offers all of its services in both of Canada's official languages, English and French; one-quarter of its staff are fluently bilingual.

The Centre handles undergraduate applications to Ontario universities for students from Ontario secondary schools, as well as for mature/adult applicants, university/college transfers and international applicants. Applications to Teacher Education, Medical School, Law School and Rehabilitation Sciences, as well as certain Graduate and Part-time programs are also processed by the OUAC. While each university independently sends offers of admission to its applicants, all responses to these offers are returned to the OUAC for processing. In turn, the Application Centre keeps the universities apprised of their response totals, as well as myriad other pertinent statistics.

In addition to its processing functions, the OUAC also produces all application forms in both English and French for the various divisions, as well as other publications such as



information/request cards and posters, and *INFO* – an information magazine about the Ontario universities designed for Ontario secondary school students and their guidance counsellors. Over the past year, the OUAC has also developed a Web-based application form for international applicants. This technology will continue to be developed and expanded to the other OUAC application divisions.

Since its inception, the OUAC has been exchanging data electronically with the Ontario universities using a proprietorial standard with each university as a trading partner. Although the Application Centre has always provided electronic academic data for some categories of applicants (secondary school applicants from Ontario and British Columbia, as well as college applicants from Québec), university academic data was not collected electronically. Therefore, the move to develop a system of transcript exchange based upon an internationally-accepted electronic standard represented an obvious direction for the OUAC and Ontario's universities.

See APPENDIX A: OUAC AT-A-GLANCE: 1998-1999



THE OUETS PROJECT

- ! **Background Overview**
- ! **Scope**
- ! **Project Development & Management**
- ! **The Electronic Process**
- ! **Operational Issues**
- ! **Benefits of a Centralized,
Electronic Transcript System**
- ! **Plans for Future Growth**
- ! **The OUETS: In Conclusion**



IV. Background Overview

In the late 1980s the Ontario University Registrars' Association (OURA) began promoting the concept of electronic transcripts using the SPEEDE/ExPRESS standard by providing membership on the AACRAO SPEEDE Committee through the Association of Registrars of the Universities and Colleges of Canada (ARUCC). Over a number of years, an awareness and a level of confidence in the SPEEDE/ExPRESS transaction sets were established in the Ontario university system through attendance at conferences held by AACRAO, ARUCC and OURA, as well as the SPEEDE Committee.

By 1992 the OURA had formed an EDI Commission whose purpose was to promote, coordinate and provide direction on all matters pertaining to the introduction, development and implementation of EDI in functional areas of interest to OURA and its membership. Meanwhile, the Government of Ontario was emphasizing the importance of student mobility among the universities, and as a result, recommendations for an Ontario university electronic credit transfer system with an EDI component were endorsed by the COU in October 1995. Linking EDI with the credit transfer project -- through the Credit Transfer Implementation Committee -- elevated the profile of the EDI component to a senior level in university administration and thus encouraged financial support and overall interest.

By November 1995 the OUAC was mandated to start negotiations with the universities to develop a system that would permit the electronic exchange of transcripts using the SPEEDE/ExPRESS Standard, with the Application Centre as the hub of trading activity. It was agreed that the Centre would proceed with development of a system if interest was expressed by at least four Ontario institutions.

In January 1996 the OUAC hosted the first EDI meeting. Response to the initiative was overwhelming with 47 attendees from all 18 universities, representing various systems, admissions and registrarial areas. After eleven meetings, four days of group mapping sessions and four days of EDI software education workshops, the Ontario Universities' Electronic Transcript System went into production -- on schedule -- November 7, 1996.



V. Scope

In the initial stages of this project, the decision was made to limit trading partners to Ontario universities only, although there was agreement that the design of the OUETS should permit future expansion to other trading partners both national and international. It was also a requirement of the system to accommodate all institutions, regardless of EDI-readiness.

During the first processing cycle in 1996-'97, the option of ordering transcripts via EDI was made available to applicants to the OUAC's Teacher Education and Non-Secondary application divisions. Two (2) universities were fully EDI-ready, four (4) were partially EDI-ready, a further ten (10) agreed to accept OUAC-generated transcript requests and OUAC-printed transcripts, while the final two (2) agreed to minimal participation by accepting transcripts printed by the OUAC.

By the third and most recently completed processing cycle, 1998-'99, the OUETS had been expanded to include the Law School application division, and a **further** five (5) universities had advanced to full EDI-readiness while three (3) were partially EDI-ready, six (6) were non-EDI and two (2) were still participating minimally.

See APPENDICES B(i) & B (ii): INSTITUTIONAL PARTICIPATION IN THE OUETS



VI. Project Development & Management

In the initial stage of the project the future trading partners (the 18 Ontario universities) were invited to provide representation on a steering committee which would participate in the development of the OUETS. This was borne out of a desire to establish a sense of ownership among the participating universities. Staff from the OUAC co-ordinated the project and provided technical leadership and expertise in the resolution of various issues that arose during development. The main steering committee met monthly from January through November 1996; additional task-oriented sub-committees were struck as needed.

A strong commitment to the project by all involved was evident: two separate mapping workshops were organized by the EDI Commission and hosted by two different universities. Other universities organized EDI software education workshops, which included vendor participation. The OUAC covered the travel expenses of committee members, and financial support to universities for software and hardware purchases was made available through a government grant to the Credit Transfer Implementation Committee.

Since the initiative to use the SPEEDE/ExPRESS Standard to send transcripts electronically was sponsored in Ontario by the Registrars rather than being mandated by a group at a higher level, there was a decidedly “grass roots” sense of project development. While there was much animated discussion at the meetings, a number of major issues were addressed and consensus reached in a surprisingly short period of time. Some of the issues included:

- agreement on a centralized approach with the OUAC as the “hub” of trading activity
- accommodation of both EDI-ready and non EDI-ready universities
- selection and purchase of EDI software
- resolution of transcript fee
- selection of security software
- decision on a mode of communication (FTP versus e-mail)
- design of Transcript Request Forms
- format of hardcopy transcripts printed by the OUAC
- decision on operational procedures and conventions
- decision on which information to pass as “Notes (NTE)” in the electronic transactions, including use of a set of standard prefixes to allow partial computer processing capability

See APPENDIX C: OUETS PROJECT IMPLEMENTATION SCHEDULE



VII. The Electronic Process

OVERVIEW

i) Transaction Sets

Currently the OUETS uses ANSI ASC X12 Version 3052. The following SPEEDE/ExPRESS Transaction Sets are employed:

- ▶ **TS146:** Request for transcript
- ▶ **TS997:** Acknowledgement of receipt of transaction set distributions (provides some audit information)
- ▶ **TS147:** Response to a request for transcript
- ▶ **TS130:** EDI-formatted transcript
- ▶ **TS131:** Acknowledgement of receipt and processing of each EDI-formatted transcript

ii) System Features

▶ **Phased-In Implementation**

- Limited initially to Ontario universities only
- Gradual introduction of different OUAC processing divisions
- Accommodation of various levels of university participation and EDI-readiness
- Applicants' use of the OUETS not mandatory (but encouraged)

See **APPENDIX D: Fulfillment of transcript requests using the EDI or partial-EDI system**

▶ **EDI Software**

- Harbinger's TrustedLink EDI/400
- Supply Tech's STX
- SCT's EDI.Smart
- University software developed "in-house"

▶ **Security**

- Encrypt/decrypt data using RIPEM (Riordan's Internet Privacy-Enhanced Mail)
- Public/private keys maintained centrally at the OUAC
- Automatic polling for incoming data and movement to secure directory



► **Mode of Communication**

- Encrypted EDI files transferred via FTP both internally at the OUAC and externally over the Internet between the OUAC and the universities
- Universities “GET” files from the OUAC, universities “PUT” files to the OUAC
- Automated processing of incoming and outgoing files

See **APPENDIX E: COMMUNICATION FLOW**

► **TELNET Access**

- Universities TELNET into the OUAC and have access to the Transcript Request Database for the following purposes:
 - N reviewing outstanding requests to be fulfilled by their university (non-EDI universities)
 - N updating the status of a transcript request after request is fulfilled (non-EDI universities)
 - N reviewing transcript request history for a given applicant
 - N inquiring about the status of transcripts requested by their applicants

► **Transcript Request Form (TRF)**

- Initial TRF included as part of the application package
- Generic TRF sent out with application Acknowledgement/Amendment Form for applicants requiring additional transcripts during application process
- TRF allows for a variety of timing options (e.g. “immediately”, “end of term”, “after degree conferred”, etc.)

See **APPENDIX F for examples of Transcript Request Forms**

► **Transcript Fees**

- The OUAC collects transcript fees from the applicant
- The OUAC remits all transcript fees to the universities in five regularly-scheduled payments

► **EDI Processing**

- Each new cycle begins in early Autumn (late September/early October) and continues through the year with a short break for system clean-up
- Processing of EDI data (known as “The Run”) occurs overnight four times per week
- Each run is monitored upon completion and any problems are highlighted in a series of pre-set exception reports

► **Communication with Applicants**

- The OUAC contacts applicants in the event that their transcript requests cannot be fulfilled
- Applicants deal exclusively with the OUAC when problems/questions arise



iii) Data Flow Description

(Numbered sections refer to accompanying data flow diagram, FIGURE 1, page 17.)

Applicants complete an application form. If they have attended an Ontario university, they also complete the Transcript Request Form (TRF) which is part of the application booklet. The completed application form, the TRF and appropriate processing fees are returned to the OUAC.

The application form is processed into the OUAC Applicant Database. The TRF is processed into the Transcript Request Database. The transcript fees are credited to the appropriate (sending) university.

When the application is processed, a two-part Acknowledgement/Amendment Form is printed. The second part of this form is a TRF. If applicants wish to add new university choices, they can request more transcripts by returning this TRF with the appropriate fee.

For EDI-ready institutions, the OUAC EDI software generates a TS146 from the Transcript Request Database. The TS146 transactions are generated four times per week. These transactions are encrypted using RIPEM and placed in the appropriate university outbound directory at the OUAC. The universities check their outbound directories regularly and GET any files that are available. These EDI transactions are transferred over the Internet using FTP.

After the university GETs the TS146 transactions, they decrypt them. The EDI software then processes the transactions, acknowledging receipt of each SPEEDE transaction within the EDI file by generating a TS997. The EDI software is then used to create a TS130 for each TS146. If an electronic transcript cannot be generated, the EDI software will generate a TS147 with information as to why an electronic transcript was not produced. The file of TS997s, TS130s and TS147s are then encrypted and sent over the Internet via FTP to the inbound university directory at OUAC.

The OUAC checks the inbound directories of each university automatically at a specified time each day for any EDI files that have arrived. The files are moved to a secure area where they are decrypted and later retrieved by the AS/400 computer where the EDI software resides.

The EDI software reads the file of transactions and generates a TS997 to acknowledge receipt of each type of SPEEDE transaction within the file and a TS131 to acknowledge receipt and processing of each TS130. New routing information is attached to the TS130 for each EDI-ready university that is to receive the electronic transcript. If the receiving university is **not** EDI-ready, the OUAC prints a hardcopy transcript and forwards it via



the post. (All universities honour OUAC-printed transcripts as official documents.) The transcript database is updated to reflect successful transmission of each TS130. A file of SPEEDE transactions (TS997, TS130, TS131) is generated four times per week. The file is encrypted and placed in the appropriate university's outbound directory at the OUAC. The universities check for files in their respective OUAC outbound directory and GET the files via FTP over the Internet.

Any TS147s (identifying an unsuccessful request or a transcript delay or a transcript sent manually) received by the OUAC will be used to update the status of a request on the transcript request database. Letters are automatically printed and sent to applicants in cases of unsuccessful requests.

Once universities GET the TS130s from the OUAC -- by FTP over the Internet -- the transactions are decrypted and processed through their EDI software. TS997s and TS131s are generated, the file is encrypted, and it is sent via FTP over the Internet to the OUAC inbound directory.

The OUAC prints a hardcopy transcript if the sending institution is EDI-ready and the receiving institution is **not** EDI-ready.

Universities still have the ability to generate hardcopy transcripts and send them by post to other institutions.

The universities are provided with generic Transcript Request Forms to be distributed to applicants when a second or final transcript is required. Some institutions will mail this generic TRF with the Offer of Admission.

All institutions are provided with the ability to TELNET into the OUAC. Universities which are **not** EDI-ready or are **partially** EDI-ready TELNET into the OUAC to view the Transcript Request Database. Outstanding transcript requests are selected and when a request is fulfilled, the status of that request is updated appropriately. If a request cannot be satisfied (delinquent university account or record not found), the Transcript Request Database is updated to that effect and the OUAC prints and sends a letter informing the applicant of the problem. In addition to using the TELNET screens to view and select transcript requests, universities which are **not** EDI-ready can also opt to receive hardcopy request checklists and/or a data file of transcript requests. All institutions can also inquire via TELNET about the status of transcripts that they are expecting to receive on behalf of their own applicants.

EDI-ready universities TELNET into the OUAC to review the status of transcript requests. Those institutions that are **not** fully EDI-ready can update the status of the



request on the database. In instances where a TS130 cannot be generated and a hardcopy transcript is sent by post at a later date, the request database should be updated through the TELNET.

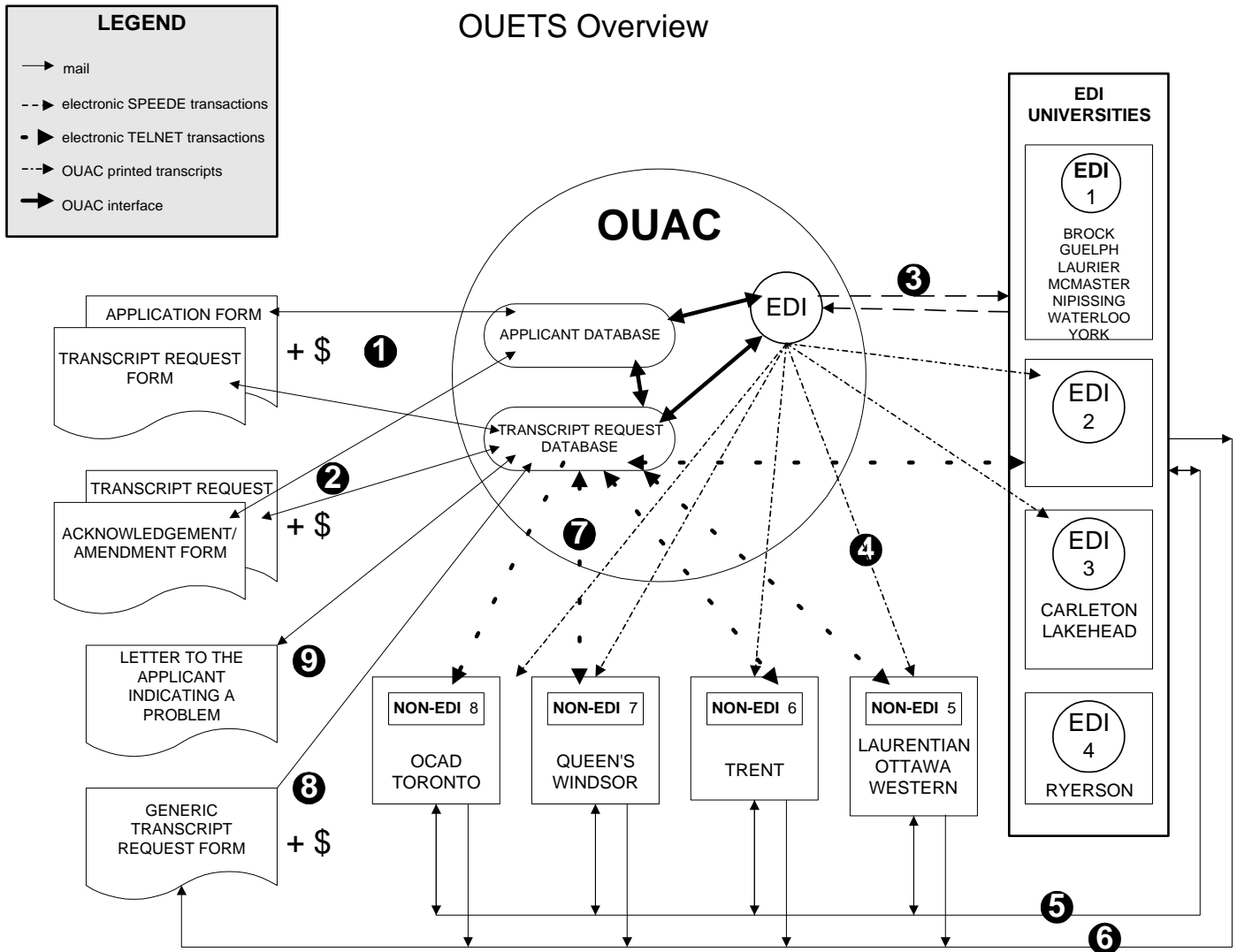
The applicant completes the generic Transcript Request Form and returns it to the OUAC with the transcript fee: the OUAC processes the form and credits the appropriate (sending) university with the fee.

Whenever there is a problem generating a transcript (e.g. a financial hold or invalid student identification number), the transcript request database is updated and a letter automatically generated and mailed to the applicant.



FIGURE 1

DATA FLOW DIAGRAM OUETS Overview



SOFTWARE & HARDWARE

It was agreed from the outset that each university would be allowed the freedom to select (or develop) and use whichever EDI translation software and mapping tool that they wished. As a result, the OUETS supports the following systems: Harbinger's TrustedLink EDI/400, Supply Tech's STX and SCT's EDI.Smart. Harbinger's TrustedLink EDI/400 (originally Premenos EDI/400) was chosen for the OUAC – the hub of trading activity – for a number of reasons. In anticipation of large volumes of transcripts, the OUAC chose to run its EDI system on an IBM AS/400 midrange computer, rather than on a PC. This allows for increased size, power and speed with respect to processing, and permits co-ordination of application information with the electronic transcripts since the OUAC's main application databases also reside on the AS/400 server.

Recommended by the ARUCC, Riordan's Internet Privacy-Enhanced Mail (RIPEM) was chosen as the OUETS method of encryption/decryption based mainly on previous educational use in Alberta, Canada.



VIII. Operational Issues

MANAGEMENT OF SYSTEM & DATA MAINTENANCE

- At the OUAC, approximately 10% of one full-time programmer's job and 50% of another full-time employee's job is dedicated to the OUETS. This includes programming enhancements, statistics, updates, troubleshooting, problem-solving and daily monitoring of the system's processes.
- Currently the flow of the OUETS data is via FTP to a PC to an IBM AS/400 server. (The PC link is necessary to accommodate RIPEM, which is currently not ported to the AS/400.) Year 2000 tests have been successfully carried out at the OUAC, and all universities will move to Year 2000 compliant versions of their EDI translation software (and mapper tools, if separate) in advance of January 2000.
- At this time, the OUETS has five data maintenance proposals before the ANSI X12 Committee. In the original mapping of Ontario transcripts, the OUETS had resorted to using various note (NTE) segments to convey important information that was not otherwise covered in the Standard at the time. These data maintenance proposals, if approved, will allow the OUETS to move away from the use of multiple NTE segments.

EVALUATION OF THE SYSTEM

The OUAC has compiled thorough statistics on the use and growth of the OUETS since its first year.

See **APPENDIX G: SUMMARY OF STATISTICS**

PROMOTING THE OUETS

The OUAC is dedicated to actively encouraging the growth of the existing OUETS. Over the last three years, this mandate has been carried out in a number of ways:

- Annually (ordinarily September), the Centre hosts a meeting of the OUETS Working Group which provides a forum for its members to review the previous processing cycle and prepare for the next one, as well as discuss other pertinent EDI issues and concerns.
- OUAC's senior management consistently encourages the expansion of the OUETS through discussions with university administrators and by presentations at conferences and meetings.



- In January 1998, the OUAC accepted the responsibility of housing an EDI & Credit Transfer Division. As well as providing a formal link between these two projects within the Ontario university system, this division is responsible for dealing with daily EDI operational issues, as well as promoting the ongoing development of a province-wide Credit Transfer database which includes a component capable of evaluating course equivalencies for transcripts received via EDI.
- As the OUAC continues to expand its application processing services over the coming years, the OUETS will be incorporated into any new development. For example, in 1999 five Ontario universities requested that the OUAC design a system for the processing of applications to programs in Rehabilitation Science and Physiotherapy. This new division (known as ORPAS) goes into production in Autumn 1999 with Ontario university transcripts being collected electronically via the OUETS.



IX. Benefits of a Centralized, Electronic Transcript System

FUNDING MODEL

To jointly support the OUETS and the Credit Transfer Project, a levy of \$5.00 was approved and added to the application fee of the Teacher Education and Non-Secondary divisions during the second EDI processing cycle (1997-'98). Applicants to these two divisions make up a large portion of the Centre's application business and are the main users of the OUETS system.

In 1997-'98, the universities also came to consensus on a common fee for requesting transcripts via the OUETS (\$8.00). (Prior to this, two different rates which varied from university to university – \$7.00 and \$8.00 – were in place.) The setting of a common fee also prompted the majority of universities to standardize their “over-the-counter” transcript fee to match the OUETS fee.

The total fee collected by the OUAC for each transcript is remitted to the university that sends the transcript, and lump-sum payments of these fees are made five times annually according to a pre-set payment schedule.

COST SAVINGS

Applicants who order their transcripts through the OUETS realize cost savings in a number of ways:

- ▶ The application and TRF are both sent to the OUAC so there is no need to post/courier two separate items to two separate locations. The “deferred timing” options offered on the TRF also allow applicants to order future transcripts at the time of application.
- ▶ Only one payment is required (cheque/money order/credit card) to cover application and transcript fees.
- ▶ There is no need to write a separate letter to university(ies) requesting transcripts, nor do applicants have to queue up at their Registrar's Office to order transcripts in person.
- ▶ Questions and concerns are addressed directly to the OUAC where personnel do all required investigation into problems. It is not necessary for applicants to contact (by phone/fax/post/courier) the different universities concerned.



Universities who participate in the OUETS also realize various cost savings relative to their degree of EDI-readiness. These savings are most prevalent in the areas of postage, paper, and a reduction in staff time required to collect transcript fees, process transcript requests, open envelopes, file transcripts, calculate grade point averages and deal with applicant queries.

SERVICE ADVANTAGES

During the past three years of the OUETS' existence, the following benefits have been realized:

- Faster processing and delivery of academic transcripts (transcripts deadlines are deemed "met" by applicants with the receipt of the TRF at the OUAC)
- Simplified procedures for applicants ("one-stop shopping")
- Increased manageability of service for universities and applicants (always deal 1:1 with the OUAC)
- Reduction in administrative fee collection functions at universities
- Reduction in number of applicants requesting transcripts on-site at university offices
- Easier tracking of incoming documents as a result of on-line inquiries (availability of full history of transcript orders aids in decision-making, especially in exceptional circumstances)
- Easier tracking of non-fulfilled requests (can lead to proactive problem resolution)
- Reduction in paper: fewer paper transcripts produced overall in system (especially for institutions incorporating electronic data directly into Student Information Systems); fewer individual transcript envelopes to open at receiving institutions
- Facilitated transcript filing in admissions offices since files of electronic or paper transcripts from the OUAC are only forwarded after the corresponding application has been distributed, are sorted as desired by a given university and include the OUAC application reference number
- More timely admission decisions
- Reduction in number of fraudulent transcripts in the system



X. Plans for Future Growth

- ▶ As a result of a 1997 request by the OUETS working group, the OUAC investigated the feasibility of expanding the scope of the OUETS, specifically for categories of Ontario university applicants which are not currently processed through the OUAC. Two possible conceptual approaches were then presented to the OUETS Working Group at their next meeting in Autumn 1998. The approach favoured by the group recommended that the OUAC remain the hub through which all electronic transactions flow. Each participant, therefore, would have only one (1) partner relationship to maintain, while the OUAC would be responsible for maintaining many partnerships. The Working Group also modified the document slightly to ensure that a Web-based transcript request form (TRF) would be included in any further discussions.

The favoured proposal was then endorsed by the OURA EDI Commission and subsequently approved *in principle* by the OURA Systems & Records Standing Committee in February 1999. On June 15, 1999, a working group met for the first time to develop a viable funding and procedural approach to the proposal, and discussion continues in order to bring the project to full fruition.

At the June meeting, the following groups were identified to be approached as potential new OUETS trading partners:

- Schools of Graduate Studies at the Ontario universities
 - Ontario Colleges of Applied Arts & Technology
 - Ontario College of Teachers
 - Professional schools such as Business Administration, Dentistry, Veterinary and Chiropractic
 - British Columbia universities
 - Alberta universities
 - Alberta secondary schools
- ▶ The OUAC's Medical School Application Service is committed to using EDI in its application process beginning in Autumn 2000.
 - ▶ Talks are currently underway to have the OUAC's Part-Time Application Service also participate in the OUETS. Universities will be approached about the possibility of including a Transcript Request Form with their mailings to potential applicants.
 - ▶ In December 1998, the OUAC launched COMPASS (COMPUterized Application ServiceS), a Web-based application for international applicants. Extremely well-received, the OUAC processed 1,128 applications from 110 different countries. Currently, the OUAC is working on the expansion of COMPASS to incorporate its various domestic



processing divisions, and a Web-based OUETS Transcript Request Form will form an integral part of any new on-line applications.

- For over two decades now the OUAC has been gathering applicant data electronically from the Ontario secondary schools and transmitting it to the universities via EDI. While this is currently done according to an accepted proprietorial Ontario standard, the potential is clearly there to adopt the SPEEDE/ExPRESS standard for the exchange of this data.



XI. The OUETS: In Conclusion

During its first three years of existence, the OUETS has established a secure place in the Ontario university system and EDI has become an accepted new business practice across all of its member institutions. It is clear that the “grass-roots” approach to the OUETS’ development, coupled with a firm belief in the importance of employing internationally-accepted electronic standards, has afforded the system much of its success. Continued commitment on the part of the Ontario universities and the OUAC over the coming years will only serve to strengthen and enhance the full realization of its mission.



CONCLUDING REMARKS

- ! The OUETS & Standardization**
- ! Acknowledgements**



XII. The OUETS & Standardization

By definition, the nature of a centralized operation such as the Ontario Universities' Application Centre is to employ and promote the use of standards. By extension, the development of the OUETS was an exercise in standardizing the layout, ordering, distribution and receipt of academic transcripts across Ontario's university system.

In many ways, because the OUAC was designated the hub of trading activity for the OUETS and because each university maintains an equal one-to-one partnership with the OUAC, conventions have been established within the Ontario group for virtually every aspect of the OUETS process. Standardization is evident throughout the system and the benefits of having all Ontario universities and the OUAC standardized in this way are extensive.

The initial mapping of the eighteen different university transcripts into one collective TS130 was a major coup for the OUETS and has resulted in standard TS130s being sent to each EDI-ready university, as well as standard OUAC-printed transcripts being sent to non-EDI universities. In the latter case this generically-formatted transcript facilitates analysis and results in speedier decisions on the part of admissions officers. In the former, it means that university personnel have been able to write programs that read these transcripts directly into their Student Information Systems and perform automatic GPA calculations. Clearly, this accomplishment directly benefits applicants.

Applicants also gain by having a common method of ordering transcripts through the OUETS. By completing a standard transcript request form that is part of the application, there is less confusion for applicants and the alignment of these two processes not only reduces the time and effort required to apply to university, but also streamlines the processes for both the universities and the Application Centre. The standardization of the transcript fee and its centralized collection reduces administrative duties at Registrar's Offices. Furthermore, the OUAC has regulated the timing of the universities' transcript fee payments and includes an audit report with each cheque sent.

The academic data itself and its method of exchange also conform to pre-determined specifications. For the bulk of the transcript the OUETS adopted the SPEEDE/ExPRESS standard, but in the case of certain unique portions of Ontario transcripts the OUETS group agreed to NTEs with standard prefixes to relay this information. Currently the OUETS has a number of data maintenance proposals before the X12 committee with a view to reducing the number of NTE segments now in use. To further standardize, the OUETS adopted established code sets, such as existing grade scales and StatsCan (Statistics Canada) codes for identifying educational institutions. Choosing RIPEM (Riordan's Internet Privacy-Enhanced Mail) as the method of data encryption demonstrated a view toward future expansion in Canadian education since the OUETS followed the Province of Alberta's lead in choosing this product. And finally, consensus on the use of FTP (File Transfer Protocol) as a method



of sending and receiving electronic files over the Internet further standardizes the OUETS operation. File and directory naming and configuration are uniform for all participants and the frequency of distributions and processes is set according to a pre-determined schedule.

The OUETS' centralized approach has also led to standardized operational procedures at the OUAC. Applications are always distributed to the universities in advance of the transcripts, increasing the number of transcripts that can be matched immediately to their corresponding application. Each transcript sent via the OUETS also includes the OUAC reference number for ease of matching, and both paper and electronic transcripts are sorted for the universities in order to facilitate filing. Moreover, standardization has permitted the OUAC to create inquiry screens via TELNET so that both the "sending" and "receiving" institutions can track their incoming and outgoing transcripts. This in turn provides accurate and timely feedback for applicants and clearer communication with them, as well as easier trouble-shooting and problem-solving on the part of the OUAC staff and university personnel.

Both applicants and universities know that they can expect a high level of service from the OUAC. The Application Centre has developed a certain expertise around the working of the OUETS which allows for continuity in the ongoing development and enhancement of the system, as well as a central place for the organization and discussion of that development (e.g. the annual OUETS meeting held at the OUAC). Obviously, a primary objective of the OUETS is to maintain the integrity of the data which is being exchanged. The OUAC being a centralized agency, the universities know they will receive the data quickly and that there is not only an OUAC employee dedicated to handling problems, but also an expert programmer on site. Centralization also allows for the maintenance of back-ups and due to the high degree of standardization, quick recovery of data is possible if problems occur. This is an obvious benefit to applicants whose academic data is handled with the utmost care, efficiency and confidentiality.

The ongoing success of the use of both proprietorial and X12 standards through the OUAC serves to reinforce the importance of standardization within the Ontario university community. The OUAC recognizes that both efficiency and clarity of communication result from the use of standards, and as a consequence the OUAC is committed to developing and employing standards for any appropriate future projects.



XIII. Acknowledgements

We would like to acknowledge the following for their dedicated work in making the Ontario Universities' Electronic Transcript System a reality:

- ▶ American Association of Collegiate Registrars and Admissions Officers (AACRAO)
- ▶ AACRAO SPEEDE Committee, with special thanks to Jerry Bracken & Jeanenne Rothenberger
- ▶ Association of Registrars of the Universities and Colleges of Canada (ARUCC)
- ▶ ARUCC EDI Task Force
- ▶ Credit Transfer Implementation Committee
- ▶ Ontario Ministry of Education & Training
- ▶ Ontario's Universities –
 - Brock University
 - Carleton University
 - University of Guelph
 - Lakehead University
 - Laurentian University
 - McMaster University
 - Nipissing University
 - Ontario College of Art & Design
 - University of Ottawa
 - Queen's University
 - Ryerson Polytechnic University
 - University of Toronto
 - Trent University
 - University of Waterloo
 - University of Western Ontario
 - Wilfrid Laurier University
 - University of Windsor
 - York University
- ▶ The Ontario Universities' Electronic Transcript System (OUETS) Working Group
- ▶ Ontario University Registrars' Association (OURA)
- ▶ OURA EDI Commission



APPENDICES



OUAC AT-A-GLANCE: 1998-1999

Founded:

- February 1971 by the Committee of Presidents of Universities of Ontario (now called the Council of Ontario Universities) and the Ontario Universities' Council on Admissions
- The Centre is a non-profit educational services agency and a division of the Council of Ontario Universities.

Current Staff:

- 33 full-time; approximately 100 part-time (hourly)

Facilities:

- 16,600 square feet of office, meeting room and warehouse space in a commercial mall complex at 650 Woodlawn Road West in Guelph, Ontario

Application Volume:

- Approximately 160,000 applications (all divisions)
- Over 400,000 individual application selections (university choices)

Peak Processing Period:

- While busy year-round, the Centre's peak processing period runs from mid-October to May.
- During January and February, the Centre operates on two shifts from 8:00 a.m. to 11:00 p.m.

Processing Divisions:

- Secondary School Division (for Ontario secondary school applicants)
- Non-secondary Division (for applicants not currently enrolled in an Ontario secondary school)
- Teacher Education Application Service (serving 10 Faculties of Education)
- Ontario Law School Application Service (serving 6 law schools)
- Ontario Medical School Application Service (serving 5 medical schools)
- Ontario Rehabilitation Sciences Programs Application Service (serving 5 schools offering Rehabilitation Sciences programs)
- Graduate Studies and Part-time Processing Division
- Special Projects/Research Division

Universities Served:

Brock University
Carleton University
University of Guelph
Lakehead University
Laurentian University
McMaster University
Nipissing University

Ontario College of Art &
Design
University of Ottawa
Queen's University
Ryerson Polytechnic
University
University of Toronto

Trent University
University of Waterloo
University of Western
Ontario
Wilfrid Laurier University
University of Windsor
York University

Budget:

- Revenue: \$13.3 million
- Total OUAC expenditures: \$4.4 million
- Total OUAC revenue distributed to COU and the universities: \$9 million or 67%

Funding:

- The application processing fee is the Centre's only source of funding; it receives no government funding.

Computer System:

- Three IBM AS/400 servers, two Microsoft Windows NT servers, two IBM RS/6000 servers, a Novell NetWare server, an IBM 4245 T20 high-speed printer (2,000 lines per minute), two IBM Infoprint 40 high-speed laser printers (40 pages per minute), a Xerox 4230 high-speed laser printer (30 pages per minute), 55 data entry terminals, and 40 PC systems for bookkeeping, research, forms design, publications, desktop publishing, etc. connected to an Ethernet network and the Internet for data communications over a fibre-optic link
- On-line access to the Centre's main database is available to university admissions representatives and secondary school guidance officials.

Publications:

- Over 2.5 million forms are distributed annually.
- Most application information booklets and reports are designed and set-up in-house on the Centre's desktop publishing system.
- Over 1 million photocopies are produced annually primarily for statistical reports for wide distribution.
- 50,000 domestic applications are shipped Canada-wide each year.
- Requests for application forms via the OUAC's automated voice-response system average 500 per month at peak times.

Bilingualism:

- All services are offered in both English and French.
- All external forms and publications are published in both English and French.
- 25% of all full-time employees are fluently bilingual.
- 15% of the Centre's 160,000 telephone inquiries are in the French language.

World Wide Web:

- The OUAC's extensive Web site is located at <http://www.ouac.on.ca>.
- Newly launched in December 1998, COMPASS (OUAC's on-line application form for international applicants) received 1,128 applications from 110 different countries.
- Applicants can now request applications via an on-line request form; information is loaded directly into a database and either mailing labels are produced or addresses are printed directly onto envelopes.

Electronic Transcript System:

- Using EDI (Electronic Data Interchange) and the SPEEDE/ExPRESS standard, the OUAC collects and distributes academic transcripts electronically among Ontario universities.

**INSTITUTIONAL PARTICIPATION IN THE OUETS
1996-1997 PROCESSING CYCLE**

EDI or PARTIALLY-EDI:	
<u>Totally EDI ready</u> Brock Nipissing	= receive TS146 = send TS997 = send TS130, TS147 = receive TS131 = send TS131 = receive TS130 = receive TS997
Waterloo	= receive TS146 = send TS997 = send TS147 = send hardcopy transcript = update transcript database (TELNET) = receive TS997 = receive hardcopy transcript
Carleton	= receive TS146 = send TS997 = send TS147 = send TS130 = receive TS997 = receive TS131 = receive hardcopy transcript
Guelph Laurier	= receive transcript request file = receive hardcopy listing of transcript requests * = send TS997 = receive TS130 = send TS131 = send hardcopy transcript = receive TS997 = review transcript database (TELNET) = update transcript database (TELNET)
NON-EDI:	
Laurentian Ottawa * Ryerson * Western * York *	= receive transcript request file = receive hardcopy listing of transcript requests * = update transcript request database (TELNET) = send hardcopy transcript = receive hardcopy transcript
Lakehead McMaster Queen's Trent Windsor	= receive hardcopy listing transcript requests = update transcript request database (TELNET) = send hardcopy transcript = receive hardcopy transcript
(This position was not originally occupied by any of the Ontario universities.)	= review transcript request database (TELNET) = send hardcopy transcript = update transcript request database = receive hardcopy transcript
OCAD Toronto	= receive hardcopy transcript

**INSTITUTIONAL PARTICIPATION IN THE OUETS
1998-1999 PROCESSING CYCLE**

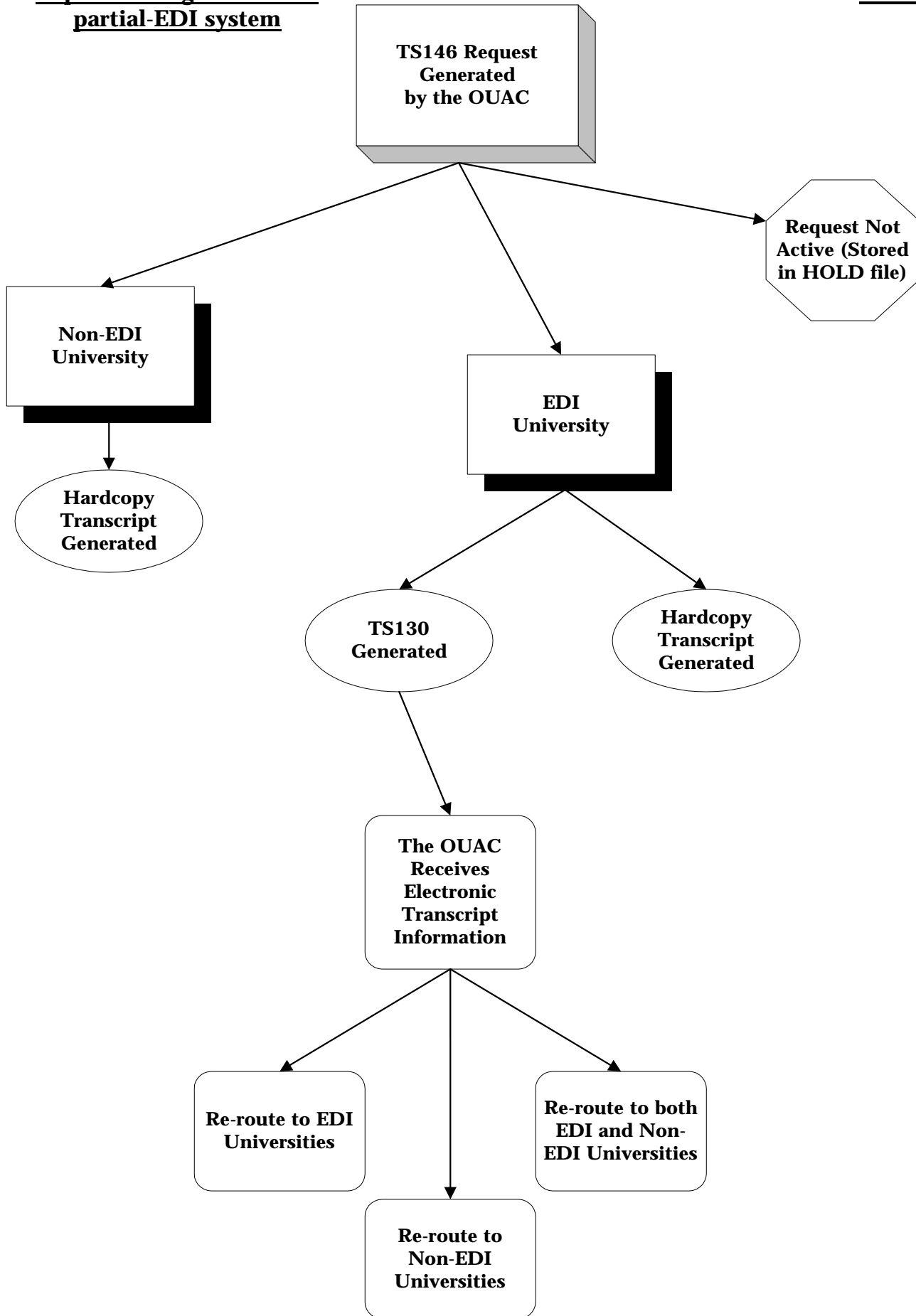
EDI or PARTIALLY-EDI:	
<u>Totally EDI ready</u> Brock Guelph Laurier McMaster Nipissing Waterloo York	= receive TS146 = send TS997 = send TS130, TS147 = receive TS131 = send TS131 = receive TS130 = receive TS997
(This position is not currently occupied by any of the Ontario universities.)	= receive TS146 = send TS997 = send TS147 = send hardcopy transcript = update transcript database (TELNET) = receive TS997 = receive hardcopy transcript
Carleton Lakehead	= receive TS146 = send TS997 = send TS147 = send TS130 = receive TS997 = receive TS131 = receive hardcopy transcript
Ryerson *	= receive transcript request file = receive hardcopy listing of transcript requests * = send TS997 = receive TS130 = send TS131 = send hardcopy transcript = receive TS997 = review transcript database (TELNET) = update transcript database (TELNET)
NON-EDI:	
Laurentian Ottawa * Western	= receive transcript request file = receive hardcopy listing of transcript requests * = update transcript request database (TELNET) = send hardcopy transcript = receive hardcopy transcript
Trent	= receive hardcopy listing transcript requests = update transcript request database (TELNET) = send hardcopy transcript = receive hardcopy transcript
Queen's Windsor	= review transcript request database (TELNET) = send hardcopy transcript = update transcript request database = receive hardcopy transcript
OCAD Toronto	= receive hardcopy transcript

OUETS PROJECT IMPLEMENTATION SCHEDULE

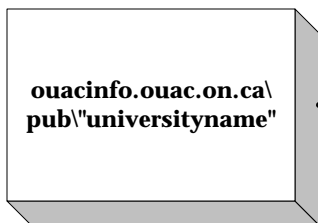
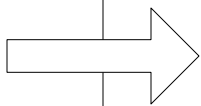
<u>Date</u>	<u>Event</u>
9 January 1996	Initial EDI meeting to gauge interest
12 February 1996	OUAC/EDI meeting
Late February 1996	Education: EDI concepts and general mapping
End February 1996	Decision on security issues Institutions declare intent to be EDI-ready for September Create, distribute, answer questionnaire (establishing universities' EDI preferences & intentions)
Early March 1996	Institutions/OUAC select EDI software
5 March 1996	OUAC checkpoint meeting
3 April 1996	Mapping workshop at York University, Toronto, Ontario
4 April 1996	OUAC checkpoint meeting to review final system before signoff
2 May 1996	OUAC checkpoint meeting Sign-off on final system
7 May 1996	Mapping workshop at Ryerson Polytechnic University, Toronto, Ontario; agreement reached on Ontario conventions
21 May 1996	OUAC ready to send TS146 and to receive/send TS130 Some operational testing
Mid-May 1996	Programming begins
30 May 1996	OUAC checkpoint meeting – discuss results of operational testing Testing plan put in place Final version of application forms approved (Teacher Education and Non-Secondary) Resolution of transcript fee issue

<u>Date</u>	<u>Event</u>
21-26 June 1996	ARUCC '96 Conference (EDI educational sessions available)
27 June 1996	OUAC checkpoint meeting OUAC starts individual trading partner testing
11-12 July 1996	Mapping workshop at Ryerson Polytechnic University, Toronto, Ontario
13-15 August 1996	Supply Tech training session
22 August 1996	OUAC checkpoint meeting Agreement on format of hardcopy transcripts printed by the OUAC Review design of the OUAC's inquiry/update TELNET sessions
6 September 1996	Testing: Trading Partner to OUAC
20 September 1996	Testing: Trading Partner to OUAC to Trading Partner
3 October 1996	OUAC checkpoint meeting
24 October 1996	OUAC checkpoint meeting
7 November 1996	First production distribution of TS146s to universities
5 December 1996	OUETS review meeting

Fulfillment of transcript requests using the EDI or partial-EDI system



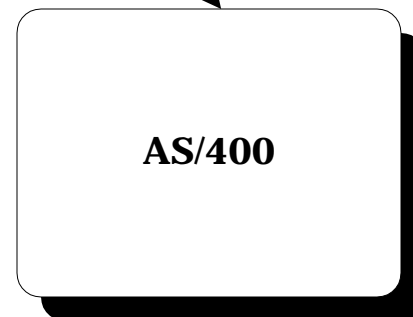
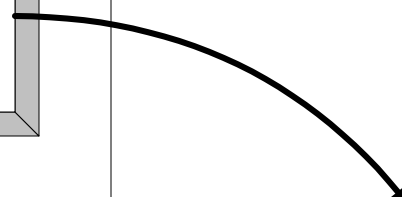
FTP "put" from a university



"public" file area

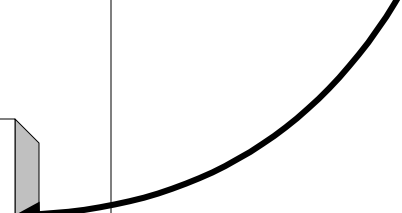
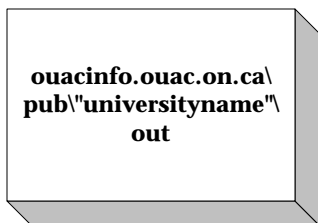
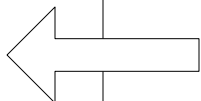


"secure" file area



AS/400

FTP "get" to a university



IBM PC750

COMMUNICATION FLOW

APPENDIX E

**TRANSCRIPT
REQUEST FORM**

For applicants who have attended
or are currently enrolled in an
Ontario university



RETURN TO TEAS:
650 WOODLAWN ROAD WEST
P.O. BOX 1328, GUELPH, ON N1H 7P4

READ INSTRUCTIONS ON
REVERSE SIDE BEFORE
FILLING OUT THIS FORM

Surname

Given Names

OUAC Reference Number

2000

REQUEST 1

TRANSCRIPT REQUESTED FROM (University Name)

Student identification number(s) at this institution

If you are currently enrolled, send transcript as indicated below. **Select one only:**

Immediately At the end of January

If you are not currently enrolled, please indicate your last
year at this institution; your transcript will be sent
immediately. YEAR _____

Type and level of studies -
Check whichever applies

- Undergraduate
- Graduate
- Correspondence / Continuing Education / Open learning

TRANSCRIPT TO BE SENT TO

- | | | | |
|--|---|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> 0111 BROCK | <input type="checkbox"/> 2711 NIPISSING | <input type="checkbox"/> 0811 QUEEN'S | <input type="checkbox"/> 1211 WESTERN |
| <input type="checkbox"/> 0411 LAKEHEAD | <input type="checkbox"/> 0711 OTTAWA | <input type="checkbox"/> 0911 TORONTO | <input type="checkbox"/> 1311 WINDSOR |
| <input type="checkbox"/> 0511 LAURENTIAN | | | <input type="checkbox"/> 1411 YORK |

The above selections must correspond to the faculties of education selected on your Application Form.

REQUEST 2

TRANSCRIPT REQUESTED FROM (University Name)

Student identification number(s) at this institution

If you are currently enrolled, send transcript as indicated below. **Select one only:**

Immediately At the end of January

If you are not currently enrolled, please indicate your last
year at this institution; your transcript will be sent
immediately. YEAR _____

Type and level of studies -
Check whichever applies

- Undergraduate
- Graduate
- Correspondence / Continuing Education / Open learning

TRANSCRIPT TO BE SENT TO

- | | | | |
|--|---|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> 0111 BROCK | <input type="checkbox"/> 2711 NIPISSING | <input type="checkbox"/> 0811 QUEEN'S | <input type="checkbox"/> 1211 WESTERN |
| <input type="checkbox"/> 0411 LAKEHEAD | <input type="checkbox"/> 0711 OTTAWA | <input type="checkbox"/> 0911 TORONTO | <input type="checkbox"/> 1311 WINDSOR |
| <input type="checkbox"/> 0511 LAURENTIAN | | | <input type="checkbox"/> 1411 YORK |

The above selections must correspond to the faculties of education selected on your Application Form.

I, THE UNDERSIGNED, AUTHORIZE THE UNIVERSITY OR UNIVERSITIES MENTIONED ABOVE TO SEND MY TRANSCRIPT TO THE ONTARIO UNIVERSITIES' APPLICATION CENTRE. THE CENTRE WILL TRANSMIT THIS TRANSCRIPT TO THE UNIVERSITIES MENTIONED IN MY APPLICATION AND CONTACT ME IN CASE OF DIFFICULTIES.

SIGNATURE _____ DATE _____

TRANSCRIPT REQUEST FORM

Instructions

The Ontario universities have implemented a system whereby OFFICIAL transcripts can be requested and received electronically. This TRANSCRIPT REQUEST FORM allows the applicant to request a transcript from any of the Ontario universities listed below. Complete the form and return it, along with the appropriate transcript fees, to the Ontario Universities' Application Centre. The OUAC will arrange for the transcript you requested to be sent to the faculties of education to which you are applying. Receipt of this form at the Centre by the application deadline satisfies any transcript receipt deadlines at the faculties of education.

This form is used to request transcripts from only the following Ontario universities:

Brock	Lakehead	Queen's	Western
Carleton	McMaster	Ryerson	Wilfrid Laurier
Guelph	Nipissing	Trent	Windsor
Laurentian	Ottawa	Waterloo	York

Do not use this form to request transcripts from the University of Toronto, the Ontario College of Art & Design or the Royal Military College of Canada. You must request transcripts directly from these institutions.

INSTRUCTIONS

1. Complete the form as follows:

TRANSCRIPT REQUESTED FROM - Indicate the name of the university you have previously attended, or are currently attending. **Make sure you provide your student identification number for this institution in the box provided.** If you do not know this number, please contact the institution you attended to obtain this information - it is important that the number be included on this form.

WHEN YOU WISH THE TRANSCRIPT SENT - It is important that you indicate **one** of the options available:

Option 1 - *If you are currently enrolled at the institution:*

Immediately - Transcript will be sent as soon as your request is processed by the Centre and sent to the faculty of education to which you applied.

Note: The faculties of education at the universities of Ottawa, Queen's, Toronto, Western, Windsor and York require transcripts to be sent immediately.

At the end of January - This option should be chosen for the faculties of education at Brock, Lakehead, Laurentian and Nipissing as they have an end of January deadline.

Option 2 - *If you are not currently enrolled at the institution:*

Make sure you indicate the last year you were registered. The university will send your transcript immediately upon receipt of the request.

TYPE AND LEVEL OF STUDY - You may select more than one option, if applicable.

TRANSCRIPT TO BE SENT TO - You may select any number of faculties of education here, as long as you have selected the same faculties of education on your application form or on your Acknowledgement/amendment form.

2. Sign, date and return this form along with the applicable transcript fees and your Acknowledgement/Amendment form if necessary to the Ontario Universities' Application Centre (OUAC). TRANSCRIPT REQUEST FORMS which are not signed will be returned unprocessed to the applicant.

3. This form can be used to request transcripts from up to two (2) Ontario universities. To request transcripts from more than two institutions, please copy this form.

FEES

- Transcript fees are \$8.00 per transcript requested that is, per institution receiving the transcript). Exception is made for Carleton University for which fees are waived.
- Eg: If you are sending a transcript from Waterloo to Brock, Ottawa and Nipissing, the total fee required is 3 x \$8 = **\$24.**
- *If these non-refundable fees do not accompany the Transcript Request Form, the Centre will not process your request.*
- Request only one transcript to be sent to each faculty of education to which you are applying. If you have applied to more than one program at any one faculty of education, you will need to send only one transcript to that faculty.

Transcript fees are collected by the Centre on behalf of the universities.

NOTES

1. Applicants wishing a personal copy of their transcript must request it directly from the institution.
2. If you have taken courses at the same university as the faculty of education to which you are now applying, it is not necessary to request that a transcript be sent to the same institution. However, if such a request is made using the OUAC Transcript Request Form, the Centre will process it and will not refund or return the fees to the applicant.
3. **Unsigned forms, forms not accompanied by the correct fees and forms without student identification numbers (for the institution attended) will be returned unprocessed to the applicant.**

SUMMARY OF STATISTICS

I. 1996-1997 OUETS Processing Cycle (18 October 1997 - Final)

Non-Secondary Division

Percentage of applicants using TRF: 61%
Total number of Requests fulfilled: 8,290
Number of transcripts fulfilled completely via EDI: 378

Teacher Education Division

Percentage of applicants using TRF: 56%
Total number of Requests fulfilled: 5,591
Number of transcripts fulfilled completely via EDI: 437

II. 1997-1998 OUETS Processing Cycle (31 December 1998 - Final)

Non-Secondary Division

Percentage of applicants using TRF: 56%
Total number of Requests fulfilled: 7,056
Number of transcripts fulfilled completely via EDI: 3,151

Teacher Education Division

Percentage of applicants using TRF: 61%
Total number of Requests fulfilled: 7,246
Number of transcripts fulfilled completely via EDI: 2,634

III. 1998-1999 OUETS Processing Cycle (August 1999 - Preliminary)

Non-Secondary Division

Percentage of applicants using TRF: 61%
Total number of Requests fulfilled: 6,784
Number of transcripts fulfilled completely via EDI: 3,115

Teacher Education Division

Percentage of applicants using TRF: 62%
Total number of Requests fulfilled: 9,841
Number of transcripts fulfilled completely via EDI: 4,486

Law School Division

Percentage of applicants using TRF: 48%
Total number of Requests fulfilled: 2,096
Number of transcripts fulfilled completely via EDI: 2,096

Non-Secondary (105)

OUETS Statistics As Of Oct. 18, 1997

System Summary: # 105 Apps Keyed With TRF = 6798
 ----- = ----- = 61%
 # 105 Applications Keyed = 11108

	A	B	C	E	G	L	M	N	O	P	Q	R	S	U	W	Y	TOTAL
Number Of Requests To Date:																	
- Immediate	233	332	666	1124	417	295	716	439	499	61	410	189	384	229	635	791	7420
- Deferred: On/Before Specified Date	12	16	6	57	24	4	46	8	9	2	21	1	10	2	24	16	258
: End of Current Term	39	56	58	108	42	32	56	66	53	9	38	36	46	24	54	90	807
: After Degree Conferred		1									1						2
Total.....	284	405	730	1289	483	331	818	513	561	72	470	226	440	255	713	897	8487
Number Of Requests Fulfilled To Date:																	
- Immediate	221	323	659	1113	414	293	686	428	479	58	404	186	372	228	620	786	7270
- Deferred: On/Before Specified Date	12	15	6	55	23	4	46	8	9	2	21	1	10	2	21	15	250
: End of Current Term	36	55	56	105	42	32	54	63	51	8	35	34	43	24	50	80	768
: After Degree Conferred		1									1						2
Total.....	269	394	721	1273	479	329	786	499	539	68	461	221	425	254	691	881	8290

Legend: A = Lakehead
 B = Brock
 C = Carleton
 E = Western

G = Guelph
 L = Laurentian
 M = McMaster
 N = Windsor

O = Ottawa
 P = Nipissing
 Q = Queen's
 R = Trent

S = Ryerson
 U = Laurier
 W = Waterloo
 Y = York

Teacher Education (205)

OUETS Statistics As Of Oct. 18, 1997

System Summary: # 205 Apps Keyed With TRF 4110
 ----- = ----- = 56%
 # 205 Applications Keyed 7373

	A	B	C	E	G	L	M	N	O	P	Q	R	S	U	W	Y	TOTAL
Number Of Requests To Date:																	
- Immediate	131	214	260	628	309	259	395	271	248	73	221	186	157	189	326	666	4533
- Deferred: On/Before Specified Date	9	34	15	54	39	28	42	27	19	10	16	14	14	22	31	62	436
: End of Current Term	5	14	4	18	12	10	36	9	13	1	7	10	5	18	21	26	209
: After Degree Conferred	2	26	12	35	50	23	59	10	13	2	25	21	30	40	36	65	449
Total.....	147	288	291	735	410	320	532	317	293	86	269	231	206	269	414	819	5627
Number Of Requests Fulfilled To Date:																	
- Immediate	130	213	260	626	308	259	395	267	244	70	219	186	156	187	324	664	4508
- Deferred: On/Before Specified Date	8	34	15	54	39	28	41	27	19	10	16	14	14	22	31	62	434
: End of Current Term	5	14	4	18	12	10	36	9	13	1	7	10	5	18	20	26	208
: After Degree Conferred	2	26	12	34	50	23	59	10	13	2	25	21	30	40	32	62	441
Total.....	145	287	291	732	409	320	531	313	289	83	267	231	205	267	407	814	5591

Legend: A = Lakehead
 B = Brock
 C = Carleton
 E = Western

G = Guelph
 L = Laurentian
 M = McMaster
 N = Windsor

O = Ottawa
 P = Nipissing
 Q = Queen's
 R = Trent

S = Ryerson
 U = Laurier
 W = Waterloo
 Y = York

1998 OUETS Statistics As Of December 31, 1998

	----- 1997 Final -----		----- 1998 Final -----	
	Undergraduate	TEAS	Undergraduate	TEAS
System Usage (Users/Potential Users):	61%	56%	56%	61%
Fulfilled Transcript Requests:				
Brock	394	287	317	494
Carleton	721	291	489	382
Guelph	479	409	379	531
Lakehead	269	145	265	204
Laurentian	329	320	292	356
McMaster	786	531	607	701
Nipissing	68	83	66	95
OCAD	n/a	n/a	n/a	n/a
Ottawa	539	289	444	301
Queen's	461	267	386	351
Ryerson	425	205	351	259
Toronto	n/a	n/a	n/a	n/a
Trent	221	231	196	333
Waterloo	691	407	634	531
Western	1273	732	1191	911
Wilfrid Laurier	254	267	237	391
Windsor	499	313	358	394
York	881	814	844	1012
Total	8290	5591	7056	7246
Resulting Transcripts Sent / Received:				
Brock	625(E) / 335(E)	507(E) / 1217(E)	525(E) / 303(E)	935(E) / 1630(E)
Carleton	1230(E) / 617	538(E) / n/a	831(E) / 482	759(E) / n/a
Guelph	749 / 740	800 / n/a	617(E) / 660(E)	1038(E) / n/a
Lakehead	497 / 199	237 / 901	479(E) / 146	333(E) / 1079
Laurentian	574 / 189	580 / 112	500 / 140	689 / 82
McMaster	1263 / 1909	1098 / n/a	949 / 1517	1504 / n/a
Nipissing	127(E) / 54(E)	120(E) / 1353(E)	121(E) / 54(E)	144(E) / 1715(E)
OCAD	n/a / 120	n/a / n/a	n/a / 110	n/a / n/a
Ottawa	834 / 563	457 / 993	707 / 561	492 / 1135
Queen's	713 / 566	448 / 878	594 / 305	626 / 1166
Ryerson	713 / 1505	376 / n/a	589 / 1304(E)	525 / n/a
Toronto	n/a / 2344	n/a / 1384	n/a / 2167	n/a / 2177
Trent	382 / 180	473 / n/a	334 / 160	714 / n/a
Waterloo	1068(E) / 647	798(E) / n/a	1032(E) / 609	1117(E) / n/a
Western	1971 / 1201	1286 / 1438	1885 / 1034	1620 / 2122
Wilfrid Laurier	384 / 354	552 / n/a	365(E) / 385(E)	804(E) / n/a
Windsor	861 / 420	513 / 1070	616 / 335	685 / 1610
York	1328 / 1376	1412 / 849	1185(E) / 1057(E)	1892(E) / 1161(E)
Total	13319 / 13319	10195 / 10195	11329 / 11329	13877 / 13877
Transcripts Fulfilled Completely via EDI:	378	437	3151	2634

Note: (E) refers to transcripts being moved electronically via EDI (universities who began sending and/or receiving EDI in mid-cycle may not be reported in this group)

Note: Numbers do not reflect cancelled requests.

Non-Secondary (105)

1998 OUETS Statistics As Of December 31, 1998

System Summary: # 105 Apps Keyed With TRF = 5598
 ----- = ----- = 56%
 # 105 Applications Keyed 9978

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Number Of Requests To Date:

- Immediate	199	330	294	175	201	461	50	314	274	244	127	497	806	170	269	548	4959
- Deferred: On/Before Specified Date	24	11	13	16	14	39		9	20	9	8	31	46	12	13	39	304
: End of Specified Term	89	143	69	73	75	102	16	118	86	96	58	95	312	55	76	254	1717
: After Degree Conferred	5	5	3	1	2	5		3	6	2	3	11	27			3	76
Total.....	317	489	379	265	292	607	66	444	386	351	196	634	1191	237	358	844	7056

Number Of Requests **Fulfilled** To Date:

- Immediate	199	330	294	175	201	461	50	314	274	244	127	497	806	170	269	548	4959
- Deferred: On/Before Specified Date	24	11	13	16	14	39		9	20	9	8	31	46	12	13	39	304
: End of Specified Term	89	143	69	73	75	102	16	118	86	96	58	95	312	55	76	254	1717
: After Degree Conferred	5	5	3	1	2	5		3	6	2	3	11	27			3	76
Total.....	317	489	379	265	292	607	66	444	386	351	196	634	1191	237	358	844	7056

Note: Numbers do not reflect cancelled requests.

Teacher Education (205)

1998 OUETS Statistics As Of December 31, 1998

System Summary: # 205 Apps Keyed With TRF = 4894
 ----- = ----- = 61%
 # 205 Applications Keyed = 7998

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Number Of Requests To Date:

- Immediate	393	346	418	178	283	577	85	264	307	212	278	452	817	296	349	857	6112
- Deferred: On/Before Specified Date	57	20	49	17	25	62	9	24	21	25	26	30	61	35	30	66	557
: End of Specified Term	18	5	16	1	17	16	1	10	7	4	11	14	8	16	6	26	176
: After Degree Conferred	26	11	48	8	31	46		3	16	18	18	35	25	44	9	63	401
Total.....	494	382	531	204	356	701	95	301	351	259	333	531	911	391	394	1012	7246

Number Of Requests **Fulfilled** To Date:

- Immediate	393	346	418	178	283	577	85	264	307	212	278	452	817	296	349	857	6112
- Deferred: On/Before Specified Date	57	20	49	17	25	62	9	24	21	25	26	30	61	35	30	66	557
: End of Specified Term	18	5	16	1	17	16	1	10	7	4	11	14	8	16	6	26	176
: After Degree Conferred	26	11	48	8	31	46		3	16	18	18	35	25	44	9	63	401
Total.....	494	382	531	204	356	701	95	301	351	259	333	531	911	391	394	1012	7246

Note: Numbers do not reflect cancelled requests.

	----- 1998 Final -----			----- 1999 Preliminary -----		
	OLSAS	TEAS	UAS	OLSAS	TEAS	UAS
System Usage (Users/Potential Users):						
	n/a	61%	56%	48%	62%	61%
Fulfilled Transcript Requests:						
Brock	n/a	494	317	53	583	310
Carleton	n/a	382	489	159	490	439
Guelph	n/a	531	379	70	832	423
Lakehead	n/a	204	265	30	273	213
Laurentian	n/a	356	292	40	594	252
McMaster	n/a	701	607	132	935	626
Nipissing	n/a	95	66	10	154	64
OCAD	n/a	n/a	n/a	n/a	n/a	n/a
Ottawa	n/a	301	444	177	457	410
Queen's	n/a	351	386	198	457	374
Ryerson	n/a	259	351	54	341	386
Toronto	n/a	n/a	n/a	n/a	n/a	n/a
Trent	n/a	333	196	33	487	193
Waterloo	n/a	531	634	96	766	584
Western	n/a	911	1191	367	1255	1074
Wilfrid Laurier	n/a	391	237	62	491	256
Windsor	n/a	394	358	145	577	350
York	n/a	1012	844	470	1149	830
Total	n/a	7246	7056	2096	9841	6784

Non-EDI universities who sent and received paper transcripts: Laurentian, Ottawa, Queen's, Trent, Western and Windsor

Non-EDI universities who received paper transcripts: OCAD and Toronto

EDI universities who sent and received electronic transcripts: Brock, Guelph, McMaster, Nipissing, Waterloo, WLU and York

EDI universities who sent paper transcripts and received electronic transcripts: Ryerson

EDI universities who sent electronic transcripts and received paper transcripts: Carleton and Lakehead

	----- 1998 Final -----						----- 1999 Preliminary -----					
	OLSAS		TEAS		UAS		OLSAS		TEAS		UAS	
Resulting Transcripts:	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received
Brock	n/a	n/a	935	1630	525	303	53	n/a	1282	2924	547	296
Carleton	n/a	n/a	759	n/a	831	482	157	n/a	1130	n/a	796	549
Guelph	n/a	n/a	1038	n/a	617	660	70	n/a	1882	n/a	723	629
Lakehead	n/a	n/a	333	1079	479	146	30	n/a	501	1857	438	175
Laurentian	n/a	n/a	689	82	500	140	39	n/a	1279	170	510	142
McMaster	n/a	n/a	1504	n/a	949	1517	131	n/a	2164	n/a	1081	1504
Nipissing	n/a	n/a	144	1715	121	54	10	n/a	270	2765	124	60
OCAD	n/a	n/a	n/a	n/a	n/a	110	n/a	n/a	n/a	n/a	n/a	97
Ottawa	n/a	n/a	492	1135	707	561	171	n/a	811	1859	692	601
Queen's	n/a	n/a	626	1166	594	305	193	n/a	997	1725	610	662
Ryerson	n/a	n/a	525	n/a	589	1304	54	n/a	772	n/a	682	1348
Toronto	n/a	n/a	n/a	2177	n/a	2167	n/a	n/a	n/a	2954	n/a	2290
Trent	n/a	n/a	714	n/a	334	160	33	n/a	1210	n/a	363	167
Waterloo	n/a	n/a	1117	n/a	1032	609	95	n/a	1705	n/a	1044	524
Western	n/a	n/a	1620	2122	1885	1034	361	n/a	2538	2414	1809	1026
Wilfrid Laurier	n/a	n/a	804	n/a	365	385	62	n/a	1090	n/a	426	338
Windsor	n/a	n/a	685	1610	616	335	143	n/a	1032	2520	671	336
York	n/a	n/a	1892	1161	1185	1057	465	n/a	2544	2019	1264	1036
Total	n/a	n/a	13877	13877	11329	11329	2067	n/a	21207	21207	11780	11780

Transcripts Fulfilled Completely via EDI:

n/a	2634	3151	n/a	4486	3115
-----	------	------	-----	------	------

Non-EDI universities who sent and received paper transcripts: Laurentian, Ottawa, Queen's, Trent, Western and Windsor

Non-EDI universities who received paper transcripts: OCAD and Toronto

EDI universities who sent and received electronic transcripts: Brock, Guelph, McMaster, Nipissing, Waterloo, WLU and York

EDI universities who sent paper transcripts and received electronic transcripts: Ryerson

EDI universities who sent electronic transcripts and received paper transcripts: Carleton and Lakehead

System Summary: # Apps Keyed With TRF = 1639
 ----- = ----- = 48%
 # Applications Keyed 3414

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	o	r	e	e	e	s	t	e	e	e	t	s	n		T
	c	G	L	L	M	M	a	e	o	T	e	W	W		T
	o	u	e	e	a	i	a	n	n	r	r	L	U		O
	k	n	h	d	n	r	n	s	o	n	o	U	r	k	A
															L

Number Of Requests To Date:

- Immediate	46	149	70	24	39	127	10	169	182	56	33	93	340	59	140	430	1967
- Deferred: On/Before Specified Date																	0
: End of Specified Term	7	10	1	6	1	7		11	17			5	29	3	7	42	146
: After Degree Conferred																	0
Total.....	53	159	71	30	40	134	10	180	199	56	33	98	369	62	147	472	2113

Number Of Requests **Fulfilled** To Date:

- Immediate	46	149	69	24	39	125	10	166	181	54	33	91	339	59	138	429	1952
- Deferred: On/Before Specified Date																	0
: End of Specified Term	7	10	1	6	1	7		11	17			5	28	3	7	41	144
: After Degree Conferred																	0
Total.....	53	159	70	30	40	132	10	177	198	54	33	96	367	62	145	470	2096

Numbers do not reflect cancelled requests.
OLSAS joined the OUETS in 1999.

Teacher Education (TEAS)

1999 OUETS Preliminary Statistics
As Of August 26, 1999

System Summary: # Apps Keyed With TRF = 6921
----- = ----- = 62%
Applications Keyed 11181

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Number Of Requests To Date:

- Immediate	439	434	640	225	448	724	118	363	390	256	378	595	1004	369	466	954	7803
- Deferred: On/Before Specified Date	121	48	142	45	112	160	35	83	50	46	71	123	200	96	101	124	1557
: End of Specified Term	5	2	11	1	11	8		1	4	7	7	11	11	5	1	11	96
: After Degree Conferred	19	6	39	4	25	49	1	15	15	32	33	45	41	23	11	64	422
Total.....	584	490	832	275	596	941	154	462	459	341	489	774	1256	493	579	1153	9878

Number Of Requests **Fulfilled** To Date:

- Immediate	438	434	640	223	447	722	118	358	388	256	377	593	1003	369	465	950	7781
- Deferred: On/Before Specified Date	121	48	142	45	111	160	35	83	50	46	71	122	200	95	101	124	1554
: End of Specified Term	5	2	11	1	11	8		1	4	7	6	11	11	5	1	11	95
: After Degree Conferred	19	6	39	4	25	45	1	15	15	32	33	40	41	22	10	64	411
Total.....	583	490	832	273	594	935	154	457	457	341	487	766	1255	491	577	1149	9841

Numbers do not reflect cancelled requests.

Undergraduate (UAS)

1999 OUETS Preliminary Statistics
As Of August 26, 1999

System Summary: # Apps Keyed With TRF = 5601
----- = ----- = 61%
Applications Keyed = 9127

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Number Of Requests To Date:

- Immediate	193	305	325	153	158	479	41	314	273	305	141	454	770	170	250	536	4867
- Deferred: On/Before Specified Date	12	13	17	10	13	56		19	11	13	7	22	75	8	27	51	354
: End of Specified Term	106	127	80	50	82	107	23	95	95	79	47	123	224	85	75	251	1649
: After Degree Conferred	2	4	2	2	2	3	1	2	2	2	1	6	19	1	2		51
Total.....	313	449	424	215	255	645	65	430	381	399	196	605	1088	264	354	838	6921

Number Of Requests **Fulfilled** To Date:

- Immediate	192	295	325	151	155	467	40	309	269	294	138	441	767	168	248	532	4791
- Deferred: On/Before Specified Date	12	13	17	10	13	56		19	11	13	7	22	75	8	27	51	354
: End of Specified Term	104	127	79	50	82	100	23	80	92	77	47	116	213	80	73	247	1590
: After Degree Conferred	2	4	2	2	2	3	1	2	2	2	1	5	19		2		49
Total.....	310	439	423	213	252	626	64	410	374	386	193	584	1074	256	350	830	6784

Numbers do not reflect cancelled requests.



**ONTARIO UNIVERSITIES'
APPLICATION CENTRE**

**CENTRE DE DEMANDE D'ADMISSION
AUX UNIVERSITES DE L'ONTARIO**

**650 WOODLAWN ROAD WEST
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GUELPH ONTARIO CANADA N1H 7P4
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FAX: (519) 823-5232**