UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING
Transportation Research Institute

datamanagementgroup

2020

Data Management Group

Annual Report

Prepared by:

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Department of Civil and Mineral Engineering
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University of Toronto

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Contents

INTRODUCTION

The Data Management Group (DMG) was established in 1988 on the basis of a proposal from the University of Toronto's Joint Program in Transportation for an autonomous research group with the following objectives:

(a) to establish a common, centrally accessible database containing information on transportation activities, zone systems, transportation networks and land use activity,
(b) to provide a transportation data retrieval service to the participating agencies,
(c) to monitor the adequacy of available data and propose approaches for adding to or updating the data as mutually agreed upon by the agencies,
(d) to promote greater interaction between university researchers and practitioners in the field of urban transportation planning,
(e) to promote the communication of transportation information and data obtained or administered by the Data Management Group to interested agencies and to the public, and
(f) to further the improvement of transportation demand analysis, research, and forecasting in the Greater Toronto Area.

Although the administration of the group has changed and DMG is now a part of the University of Toronto Transportation Research Institute (UTTRI) under the Department of Civil and Mineral Engineering at the University of Toronto, the DMG continues to be guided by these objectives into this its 32nd year of continuous operation.

Program approval and funding of the DMG is the collective responsibility of members of the Transportation Information Steering Committee (TISC) with the following membership:

City of Hamilton
City of Toronto
Metrolinx
Ministry of Transportation, Ontario (MTO)
Regional Municipality of Durham
Regional Municipality of Halton
Regional Municipality of Peel
Regional Municipality of York
Toronto Transit Commission (TTC)

Each participating agency appoints a member of their technical staff to the

Transportation Research and Data Management Group (TRADMAG), which is a standing committee of TISC, and is responsible for coordinating the needs of the funding agencies and the activities of the research project.

Due to the COVID-19 pandemic, all DMG staff started working from home from March 2020 when the Province of Ontario of Canada declared a state of emergency. Therefore, some of the activities described in this report were carried out remotely. This report provides a brief profile of the staff employed and a description of the activities undertaken by the DMG during the calendar year 2020. These are presented in the following sections:

1. Staff and Location.
2. Transportation Tomorrow Survey (TTS).
3. TTS Redesign Project & COVHITS Survey.
4. Computer Resources and Technical Support.
5. Budget and Contributions.
6. Meetings.

STAFF AND LOCATION

Research Director

Eric J. Miller, Professor, Department of Civil & Mineral Engineering, University of Toronto

Associate Director

Khandker N. Habib, Professor, Department of Civil & Mineral Engineering, University of Toronto

Technical Staff

Reuben Briggs, B.A.Sc. (Civil Engineering), M.A.Sc. (Civil Engineering) University of Toronto, P.Eng.

Susanna Choy, B.A.Sc. (Industrial Engineering), M.Eng. (Civil Engineering) University of Toronto, P.Eng.

Asmus Georgi, Vor-Diplom (Geography), Diplom (Geography, minors in Chemistry and Transportation Planning & Engineering), Freie Universität & Technische Universität, Germany (until March 2020)

Dorian Stratigacos, B.A. Carleton University (since September 2020)

Web Site

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TRANSPORTATION TOMORROW SURVEY (TTS)

Under the guidance of TISC, a series of urban travel surveys, Transportation Tomorrow Survey (TTS), have been conducted every five years since 1986. The last TTS was conducted in 2016 with 22 funding partners. The survey area spanned from Peterborough County in the east to Brant County in the west and Simcoe County in the north. Unlike the previous surveys, DMG did not manage the 2016 TTS but participated as an advisor to TISC and provided consulting and support services for the chosen vendor.

The planning of the 2021 TTS commenced in 2019 and the DMG plays the same advisory role as in 2016. In collaboration with other members of the technical advisory committee (TAC), DMG generated preliminary cost estimates and risk analyses for the potential funding partners. The DMG was also involved in discussions to determine the possible addition of questions to the TTS survey and the expansion of the answer options available for current questions in order to improve data quality. As an important step of the vendor selection and procurement process, DMG prepared the request for bid (RFB) document and technical evaluation criteria with the MTO. The RFB document describes the scope of the survey, the coverage area, detailed procedures involved in the survey, quality control measures, expected deliverables and timelines for major tasks. The technical evaluation criteria specify the detailed requirements for qualification category and the number of points allocated for each category according to the importance of the category. Minimum acceptable levels are also set for some categories.

Due to the COVID-19 pandemic, there were delays in terms of the procurement process. Additional considerations such as alternative timelines of the data collection phase, extra data security measures for a remote working environment, potential extra costs incurred, etc. had to be incorporated into the RFP document. With assistance from the Ministry of Government and Consumer Services, the RFP was posted on the Ontario Tenders Portal in early December 2020. The following table displays the dates for major project milestones. Once a vendor is selected and the contract is awarded, discussions such as the data collection timeline will begin between TAC and the vendor.

Project Milestone	Date
RFB Posting	December 10, 2020
Vendor Information Session	January 14, 2021
RFB Closing	February 16, 2021
Anticipated Contract Start Date	April 2021

TTS REDESIGN PROJECT & COVHITS SURVEY

The TTS Redesign Project is a continuation of a research and development project, Survey Methods Research (TTS 2.0), funded by the MTO and other Ontario government agencies in collaboration with the DMG, to investigate better and cost-effective ways to conduct future travel surveys. The TTS Redesign Project focuses on one of the main tools being developed by the TTS 2.0 team which is the survey design and execution platform, the TRavel and Activity Integrated Survey Instrument (TRAISI).

In 2020, DMG continued to test and provide feedback on TRAISI and offered advice to the team on other requirements of the software such as sample control and telephone interview modules, etc. In the fall 2020, a version of TRAISI was used to support a panel survey to understand the impacts of COVID-19 on transportation behaviour.

Since the pandemic started, residents in Ontario have been encouraged to stay at home and avoid any non-essential trips. Travel behaviour has dramatically changed which sparked interest in observing these changes at different stages of the pandemic. As a result, the COVID-19 influenced Households' Interrupted Travel Schedules (COVHITS) survey, sponsored by MTO, Metrolinx, TTC, the City of Toronto, and the Regions of Halton, Peel and York was arranged and conducted by the TTS 2.0 team under the direction of Prof. Khandker Habib. The first cycle of the survey was conducted in a one-month period from October 20, 2020, to November 20, 2020, and covered the City of Toronto, Regions of Halton, Peel and York. The survey collected travel patterns of the respondents before and during the pandemic. The final dataset contains 3,721 household, 8,096 person and 6,948 trip records. The summary report can be found on the DMG web site. The second cycle of the survey is scheduled to be conducted in the spring of 2021.

The DMG staff met with the team on a weekly basis to give advice, answer any questions and to ensure the project was progressing in the right direction.

INFORMATION PROCESSING

The term 'information processing' is used in this instance to describe a set of activities supporting the management, storage, and distribution of urban travel information. The principal components of this information are the results of the Transportation Tomorrow Surveys and a collection of all Cordon Count Surveys.

Transportation Tomorrow Surveys and iDRS

The DMG administers the data files on urban travel contained in the 1986, 1991, 1996, 2001, 2006, 2011 and 2016 Transportation Tomorrow Surveys (TTS) in the form of a set of relational databases with various methods of access. Direct access to the original files is restricted to DMG staff to ensure that information on a particular household cannot be identified. Currently, data files available to iDRS users contain the following information:

TTS Number of records

Year	Households	Persons	All Trips	Transit Detail
1986	61,453	171,086	370,248	56,615
1991	24,507	72,496	157,349	14,896
1996	115,193	312,781	657,971	702,95
2001	136,379	374,182	817,744	85,095
2006	149,631	401,653	864,348	87,244
2011	159,157	410,404	858,848	86,703
2016	162,708	395,885	798,093	91,437

The increasing size of the databases reflects not only growth in travel in the area but also changes in the size of the area surveyed.

The first text-based data retrieval system (drs) was developed in the mid-1990s by the staff of DMG as the original method for external users to gain access to the data files and complete the data extraction themselves. This retrieval system was very effective when a modem was used as the principal method of remote access to the DMG's computer system. Over the years, as the demand for travel data grew and the Internet became the preferred method of remote access, a data retrieval system specifically designed for Internet access was developed (iDRS). All the features of drs were incorporated into the browser-based iDRS and the drs process was phased out.

The initial release of iDRS was restricted to use by the funding agencies. In 2002, access to iDRS was made available to any individual that requested access. The individual was required to sign an agreement form and system security was

maintained by giving each user a unique login and password. This procedure has the added benefit that agencies outside the Greater Toronto and Hamilton Area that participated in the Transportation Tomorrow Surveys could access their data without the need to set up their own database system.

In order to meet the changing needs of the data, the DMG developed a new version of iDRS. The software was rewritten to incorporate a new database management system; PostgreSQL, which was used as part of the TTS survey software. Several new functions such as additional filter criteria and the ability to store the query for future use have been added and the speed of extraction has increased dramatically.

A new authorization process has also been implemented together with the new software. The process has been automated so that any individual can request access by entering the name, affiliation, email address and contact number online. Once the information is submitted, it will be approved by the DMG staff and an email with the credentials will be sent to the new user.

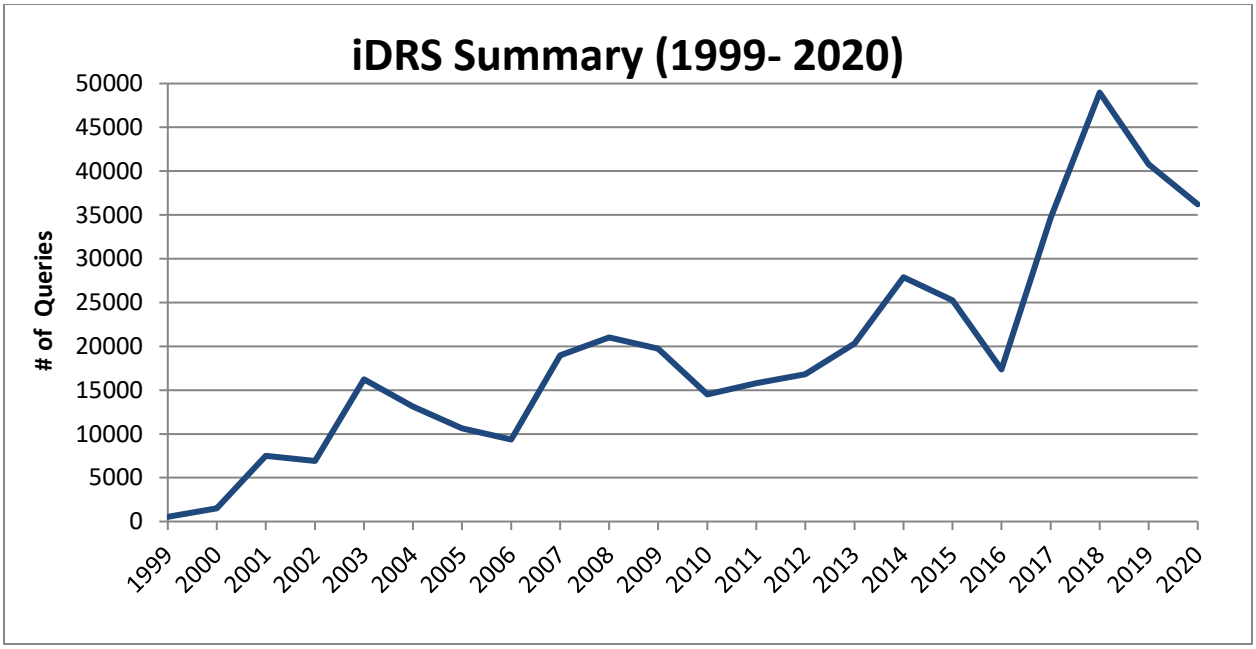
The official version of the new iDRS was released in 2016 but the DMG continues to fine-tune the new iDRS system based on the feedback of the users.

Summary of iDRS Data Requests

When the browser-based data extraction procedure (iDRS) was first released in 1999, the users were registered users of the DMG's computer system. The initial use of iDRS was encouraging. Subsequently in late 2000, the Steering Committee gave approval for use by anyone registering and providing information on their affiliation. The growth in use of TTS data is reflected in the growth of the use of iDRS for data extraction. The following chart shows the growth since iDRS was first introduced in 1999. The 'Number of Queries' reflects the number of times an output was generated during a session. iDRS usage peaked at the year after a new TTS dataset was released in 2002, 2007, 2014[1] and 2018[2]

[1] The interview phase of the 2011 TTS completed in December 2012 and the final data set was released in November 2013.

[2] The interview phase of the 2016 TTS was completed in December 2016 and the final data was released in October 2017.



After peaking in 2018 after the 2016 TTS data were released, the number of queries completed decreased but still remained at a very high level showing that the data tool is still very highly used.

The following table shows the monthly summaries since the release of the latest TTS data.

	Year			
Month	2017	2018	2019	2020
January	2,194	3,079	3,778	3,203
February	2,179	4,126	4,098	3,286
March	4,724	5,479	4,296	4,953
April	2,115	4,080	2,946	5,583
May	4,517	7,466	4,209	2,588
June	2,259	4,944	3,575	2,026
July	2,493	5,405	3,554	2,210
August	2,391	3,139	3,205	1,956
September	3,689	3,196	2,461	2,389
October	3,172	2,759	3,360	2,360
November	2,889	3,148	3,149	3,577
December	2,059	2,149	2,143	2,069
Total	34,681	48,970	40,774	36,200

Affiliations of iDRS Users in 2020

The following is the list of 116 different agencies and groups that extracted data through iDRS in 2020.

ACCESS Planning	Morrison Hershfield
AECOM	N Engineering Inc.
AES Engineering	Nextrans Consulting Engineers
Arup Group	Ontario Professional Planners Institute
Associated Engineering (Ont.) Ltd.	Paradigm Transportation Solutions Limited
BA Consulting Group Ltd.	Poulos and Chung Ltd.
Bentley Systems	PTV Group
C.C. Tatham and Associates	Queens University
C.D. Howe Institute	R J Burnside & Associates Ltd.
C.F. Crozier & Associates Inc.	R V Anderson Associates Ltd.
Candevcon Limited	Regional Municipality of Durham
CBCL Ltd.	Regional Municipality of Halton
CGH Transportation Inc.	Regional Municipality of Niagara
City of Barrie	Regional Municipality of Peel
City of Brampton	Regional Municipality of Waterloo
City of Burlington	Regional Municipality of York
City of Guelph	Remix Software, Inc.
City of Hamilton	Ryerson University
City of Markham	Salvini Consulting Inc.
City of Mississauga	SNC-Lavalin Inc.
City of Montreal	Southwest Jiaotong University
City of Peterborough	Spectrum Traffic Data Inc
City of Toronto	Stantec Consulting Inc.
City of Vaughan	Steer Group
Code for Canada	Street Light Data Inc.
Cole Engineering Group Ltd.	Strik Baldinelli Moniz Ltd.
Cornell University	Sustainability Solutions Group
County of Dufferin	Tatham Engineering Ltd.
CPCS Transcom Limited	Temple University
Deloitte LLP	The Greater Toronto Airports Authority
Dillon Consulting Ltd.	The Municipal Infrastructure Group Ltd.
Elections Ontario	Toronto Star
Engineers without Borders Canada	Toronto Transit Commission
Entuitive	Toronto Youth Cabinet
EXP Services Inc.	Town of Caledon
GHD Group	Town of Halton Hills
Global Insfrastructure Hub	Town of Orangeville
Goodmans LLP	Town of Richmond Hill
Gnosis Axia Consulting Inc	Township of Selwyn

Greater Toronto Airports Authority	Tranplan Associates
Harvard University	Transamo Ltd.
Hatch Ltd.	TransLink
HBA Specto Inc.	Trans-Plan Transportation Inc.
HDR Inc.	Tri-Cities Transport Action Group
HousingNowTO	University of British Columbia
IBI Group	University of Calgary
Jacobs Engineering Group	University of Cambridge
JD Engineering	University of Toronto
LEA Consulting Ltd.	University of Waterloo
Left Turn Right Turn Ltd.	Urban Systems
McGill University	Valcoustics Canada Ltd.
McMaster University	Waterloo Region Record
Metrolinx	Western University
Ministry of Finance	WhatIf? Technologies Inc.
Ministry of Municipal Affairs and Housing	Wood Group
Ministry of Transportation	WSP Group Ltd.
Mohawk College	York University
Monash University	

TTS Special Data Requests

The interactive procedures available with iDRS satisfy the majority of data needs. However, some data needs are too complex and require the intervention of an experienced analyst to formulate a custom query from the database. In addition, the DMG staff can often help define the most relevant data for the problem at hand. One of the typical data requests involves assigning the coordinates of households or trip ends to a specified spatial aggregation, different from the predefined traffic zone systems as these coordinates are not available to any non-DMG staff in order to protect the privacy of the survey respondents. Here is a list of agencies and details on some of the special data requests completed in 2020:

City of Hamilton
: Assignment of the 2016 TTS data to a new Hamilton zone system.

City of Toronto
: Assignment of the 2016 TTS data to the new 25-Ward system.

City of Toronto Capital Projects and Programs
: Presentation on the background and details of the TTS data and demonstration on the use of iDRS.

Region of Durham
: Assignment of the 2016 TTS data to a new Durham zone system.

Regional Municipality of York

Proportion of trips tabulated by trip start time from 2016 TTS and 2019 COVHITS surveys.

University of Toronto

Custom tabulations of City of Toronto data aggregated to Census dissemination areas.

University of Waterloo

Custom tabulations of City of Waterloo data, assigned to numerous new zone systems.

Disaggregate Data Access

There is an increasing number of transportation related projects that require access to disaggregate data for modelling work. With approval from TISC in 2017, DMG has begun testing a new data access protocol for the access of disaggregate data by researchers and consultants working on projects on behalf of DMG's funding partners which will allow DMG to maintain security over the disaggregate data.

Potential users are required to fill out a request form which outlines the specific data required, project and its sponsor, and the time frame for which access is required. If the request is approved, an account is set up and the users are given login instructions and a unique login and password to access their required datasets on a virtual machine. Datasets provided do not include any coordinates and all locations are coded to a higher-level geographic area i.e.: traffic zones, Census dissemination areas, planning districts etc.

The server is setup so the user can work on the datasets in the account via Remote Desktop Protocol (RDP). However, there is no internet access allowed and data cannot be directly copied off the server. Only aggregate data is allowed off the system and any data files required to be downloaded must be reviewed and approved by DMG personnel who will then allow download of the data from an FTP location. DMG has committed to review and forward requested data within one business day.

Below is a list of the users of disaggregate data access in 2020 via the RDP method:

User	Agency	Data required	Project
Arup	Metrolinx	2016 TTS	Pearson Airport Area Transportation Study
Steer	Metrolinx	2016 TTS	Fare Integration Ridership Response Model
WSP	Halton Region	2016 TTS	Halton Regional Model

School of Geography and Earth Science	McMaster University	2001, 2006, 2011 & 2016 TTS	Intergenerational Differences in Travel Behaviour
Dept. of Civil Engineering	Monash University, Melbourne	2011 & 2016 TTS	TASHA/GTA Model application (collaboration with TMG)
Dept. of Economics	University of Toronto	2006, 2011 & 2016 TTS	Estimating the welfare effects of ride-hailing
Dept. of Geography	University of Toronto	2016 TTS	COVID-19 and Public Transit Survey
Dept. of Geography	University of Toronto	2016 TTS	The role of public transit in school choice and after-school activity participation among Toronto high school students
Dept. of Medicine & St. Michael's Hospital	University of Toronto	2016 TTS	Identifying social and environmental factors impacting physical activities among dwellers of urban areas in Southern Ontario, and related health outcome such as obesity levels and Type 2 diabetes.

In addition to the RDP method, two desktop computers are designated for researchers from the University of Toronto[3] to access the disaggregate TTS data. These computers are located in locked offices within the DMG office complex. If the access request is approved, the researcher is provided office access (i.e., keys and security access code) and an account with unique login and password to log on to the specified space of the designated computer with the required data. Usage of the computers is monitored, and only aggregated data are allowed to be taken off.

The following is a list of the users of disaggregate data access in 2020 through the designated computers in the DMG office. Due to the pandemic, these users also accessed these computers remotely through the University's VPN.

Project	Supervisor	Data required
Transportation policies and air quality in the GTHA	Prof. Marianne Hatzopoulou	2016 TTS
Evaluating the impact of private autonomous vehicles on household vehicle ownership	Prof. Marianne Hatzopoulou	2016 TTS
Investigating the impact of automatic vehicle on vehicle ownership and unoccupied vehicle-kilometre travelled	Prof. Marianne Hatzopoulou	2016 TTS

[3] Or researchers visiting the University campus.

Crowdsourcing logistics network optimization and evaluation	Prof. Matthew Roorda	2016 TTS

Cordon Counts and CCDRS

The City of Toronto (then the Regional Municipality of Metropolitan Toronto) began collecting detailed information on the type and volume of traffic crossing selected points on the road system as early as 1975. The counting locations were selected such that screen lines or cordon lines could be defined and the counting program has continued on a regular basis since that time.

Subsequently, other regions began similar programs. Given the number of regions with a similar program, they began coordinating their count programs and defining a common set of data standards. In 1998, the DMG collected these traffic counts in a common database structure and developed a Cordon Count Data Retrieval System (CCDRS). CCDRS is now widely used by a variety of public and private agencies.

In addition, participating agencies now use CCDRS as a tool in verifying their cordon count results. The approved procedure is to place new cordon count data directly into the CCDRS database with a disclaimer notice to all users that the new information is preliminary and allow the agencies to run queries on this preliminary database.

The last Cordon Count was undertaken by the participating regions in 2016 and the dataset was released in 2017.

The DMG released a beta version of a new CCDRS in 2016. The final product is still a work in progress and is to include a graphic interface so the users can identify and select screen lines and count stations from a map. Statistics for usage of the new CCDRS are unavailable at this time.

In 2020, DMG assisted the Cordon Count committee with an update of their Terms of Reference as the committee reintegrated with TISC. Discussions were also held on streamlining the classifications across the various agencies. The ways each agency uses the Cordon count data was also examined. Preliminary discussions also continued with regards to research into new technologies to continue future data collection with DMG asked to play a role in that regard.

It was also decided that rather than conduct the Cordon Count program twice in a five-year period as was done previously, going forward the program would only be done once in a five-year period to coincide with the TTS year as the intermediate count has not been as valuable to the stakeholders.

Due to the COVID-19 pandemic, it was decided by the municipal agencies that the

next count program would take place in the spring of 2022. This will coincide with the timing of the next TTS so that the information collected can be used for validation of the TTS. It is a continuous effort to look at new methods for the future collection of Cordon Count data in order to improve data quality.

Open Data

In March 2011, the first generation of Open Data Portal was launched by the Government of Canada. "Open Data is defined as structured data that is machine-readable, freely shared, used and built on without restrictions." The data must be available as a whole and at no more than a reasonable reproduction cost, preferably by downloading over the internet. It must also be available in a convenient and modifiable form and must be provided under terms that permit re-use and redistribution including the intermixing with other datasets. Everyone must be able to use, re-use and redistribute. There should be no discrimination against fields of endeavour or against persons or groups. For example, 'non-commercial' restrictions that would prevent 'commercial' use, or restrictions of use for certain purposes (e.g., only in education), are not allowed.

With the approval from TISC, the DMG started providing Open Data files from the TTS and Cordon Count data to the public in 2014. Unlike the online data retrieval systems, users can download the pre-generated text files from the DMG web site without registration.

The Open Data Portal at the DMG was updated to include the 2016 TTS data and the 2016 Cordon Count data bringing the total number of files available to 129 TTS data files and 222 Cordon Count data files. Each TTS data file contains household, person, and trip information for a specific survey year, geographic area, and spatial aggregation for different time periods. Each cordon count data file contains different types of vehicles and person counts for a specific year, geographic area, and time period. The files are in comma-delimited text format and readily import into Excel or other spreadsheet software. The DMG continues to update the Open Data Portal to include new TTS and Cordon Count data files as new datasets become available.

COMPUTER RESOURCES AND TECHNICAL SUPPORT

The DMG computer system is comprised of several servers located behind the DMG firewall for security reasons.

The DMG main server is a Dell R620 running Windows Server 2012 R2 with Hyper-V application. This application allows the DMG server to run multiple virtual machines, i.e., operating systems emulated within another operating system by imitating dedicated hardware. One of the virtual machines running on this server was the DMG Exchange Server, which was decommissioned in late 2020 as DMG converted to the University's Office 365 to handle daily emails. In preparation of releasing the COVHITS survey data to the sponsoring partners, a new virtual machine was also set up. The following virtual machines are running on this server:

- Active directory server to facilitate the DMG domain.
- DMG website created in WordPress. Linux, Apache, MySQL, PHP and Lamp stack are also running on this machine.
- Data Retrieval System developed using MEAN stack, a free and open-source JavaScript software stack for building web applications running in Debian. The data are hosted in PostgreSQL which is an open-source relationship database management system.
- 2015 StudentMoveTO Data Retrieval Portal.
- A development and test server.
- Git system for version control and code repository.
- NGINX proxy server to handle web traffic. It also hosts the FTP website for file transfer with the funding agencies.
- COVHITS data server

The other major server is a Dell R430 server running Windows Server 2012 R2 Datacenter, also with Hyper-V application. The virtual machines with the disaggregate TTS data for the consultants and researchers to use are running on this server. In order to support the increasing demand for this format of data, DMG configured additional virtual machines with extra storage spaces in 2019. There are currently 4 virtual machines hosted at the DMG. RStudio, Anaconda and Python are installed on these virtual machines together with basic software such as Office, Adobe Reader, Notepad, and 7-Zip etc. to facilitate modelling work.

EMME

The EMME software, which is used by the funding agencies for modelling, is run locally on agency personal computers with all related files stored locally. This results in a much faster operation. Each local machine requires access to an authentication

key to operate the software. Rather than each agency purchasing a licence from INRO to use the software locally, DMG negotiated a concurrent licence for authentication of several machines operating at the same time. The DMG then dedicated a server to provide remote authentication to the participating partners.

Since late 2019, EMME users had experienced problems obtaining licences via the licence proxy server. After some investigation, DMG decided to ask INRO to replace and consolidate all the USB licences keys. There had not been any issues after new licence keys were issued.

There are nineteen size-15 licences (commercial and educational) hosted at the DMG. The following is the list of EMME users in the year of 2020.

City of Brampton
City of Mississauga
Metrolinx
Paradigm Transportation Solutions Ltd.
Regional Municipality of Halton
Regional Municipality of York
Toronto Transit Commission
University of Toronto
City of Hamilton
City of Toronto
Ministry of Transportation
Regional Municipality of Durham
Regional Municipality of Peel
TIMCON Associates Inc.
Travel Modelling Group

In addition, there are sixty size-1 educational EMME licences available for teaching purposes.

Due to the COVID-19 pandemic, DMG assisted many users in setting up their home computers or laptops to remote access the EMME licences. The DMG also temporarily hosted one of the MTO's size-16 licences on the DMG EMME proxy server so that the MTO staff can access this licence in the same way as they access the DMG licences.

In February 2020, the DMG systems administrator left for another position withing the University. He continued to provide emergency support until the new systems administrator joined in September 2020.

The DMG continues to maintain and improve the computer system to meet its funding agencies' changing needs.

BUDGET AND CONTRIBUTIONS

The following table presents the 2020 DMG budget and contributions by funding agencies. The DMG budget supported three full time staff members and the Director's stipend. It did not include the cost of the Emme software maintenance, which was proportionally contributed based on the number of licences allocated to each agency and a "flow-through" expenditure with an overhead of 2%.

2019 Budget	Amount
Salaries & Benefits	$383,700.00
Hardware & Software Upgrades	$ 6,000.00
Software License Support	$ 2,000.00
Miscellaneous	$ 1,000.00
Overhead @40%	$157,080.00
Total Budget	$549,780.00

2019 Contributions	Amount
Ministry of Transportation	$355,524.40
Metrolinx	$ 16,493.40
City of Toronto	$ 34,910.83
Toronto Transit Commission	$ 34,910.83
Regional Municipality of Durham	$ 16,508.87
Regional Municipality of York	$ 28,370.37
Regional Municipality of Peel	$ 35,318.62
Regional Municipality of Halton	$ 14,018.54
City of Hamilton	$ 13,724.13
Total Contributions	$549,780.00

MEETINGS

In preparation for the 2021 TTS, twenty TAC meetings, chaired by MTO, were held in 2020 to discuss the technical aspects of the survey. There were an additional four meetings with the Procurement office, Information Management Services Office of MTO, and the Ministry of Government Services to discuss the privacy and procurement process of the project.

There were also 7 Cordon Count meetings and 2 Cordon Count subcommittee meetings to discuss the conducting of the 2021 program.

Two TISC meetings chaired by the Ministry of Transportation were also held on June 4th and October 30th of 2020 to inform TISC members on the procurement timelines, instrument, update on the survey.