# Youth Services Application Notes.

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## Issues:

1) The app does not work effectively in IE 9 due to unavailability of "pushstate" and "blob" problems generating PDFs. Do not use IE9 for evaluation purposes. IE 9 is no longer supported by Microsoft and the only reason it was mentioned was because the city still uses it. The average user will not be using IE 9. This site show IE 9 usage at 4%: <https://www.netmarketshare.com/browser-market-share.aspx?qprid=2&qpcustomd=0>

2) The Ethno-Cultural selection box is not implemented. I still need to obtain the mapping of "etho-cultural" values to languages. There is some confusion on this point. We cannot search the data for 211 based on the ethno values of 'Black Communities', 'Chinese Community etc'. We are given 85 topics to use and those indicators are not in the data. I was under the impression that there was a "culture" to "language" mapping. This was removed

4) The topic dropdown contains the 85 topics defined by 211. There is some desire to have this split into a 3 level dropdown but where some of the higher level don't exist. In the example below, "Education" is not a "YAPxxx" Topic as defined by 211. Building "false" Topics in the ETL and building and maintaining relationships between Topics in order to facility this grouping was deemed too much maintenance for the initial launch as per my recollection during the last conference call meeting. There is a tiny bit of potential maintenance in the current release (see below), that we could build this piece if it is absolutely necessary.

* Education
  + Adult upgrading and literacy
    - GED
    - Academic and Career Entrance (ACE) Certificate
    - Academic Upgrading and Literacy and Basic Skills (LBS) programs
  + Schools/educational institutions 4b
    - Colleges and universities
    - School boards
  + Educational support
    - Bridging programs
    - Financial support

The Topic Dropdown is 2-levels. There is some indentation on the 2-level to show a 3-level breakdown but the widget does not re-act to the 2nd level selections. Example: you can select "Education" and all topics under "Education" are selected (including the supposed 2nd and 3rd levels). If you select "Adult Upgrading and Literacy", the control DOESN'T select the items under it. (GED, and the 2 "Academic" topics). There is no fix for this. The HTML specs do not allow for nested option groups, and thus the widget doesn't support it.

Based on last "Mapping Layers" document from Sophie, there is only 77 topics and approx.: 1005 organizations

~~5) Some of the Icons are expected to change..~~

## Features:

1. When you load the page, the browser asks if you want to share your location. If the answer is yes, the map is then centered on it. (Zoom level 11 which is still a pretty high level).
2. We added a "FindMe" button. When clicked, and if location services exist, it will zoom to the user's location (zoom level 18)

***Note: When using a browser on a PC or other device without GPS, the location is approximated***.

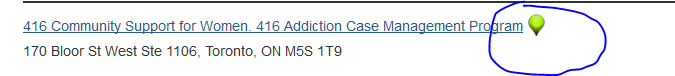
1. Each filter/multi-select is limited to 5 values. (these can be adjusted a little bit if desired). The topic filter is not limited to 5 due to the complexity of the sub-elvels.
2. The Map and listing are updated instantaneously as filtering data is changed.
3. The application is single page design.
4. The List View show 10 records initially. As the user scrolls down, 10 more records are added until the selected number are eventually shown (a-la twitter). There is no paging.
   1. If you use the browser print function, any missing listing rows are appending before printing so that the full number of rows are printed. (this needs full browser testing)
5. The app uses push state functionality to facilitate bookmarking and sharing on social media.
   1. The URL changes as filtering options and favourites and when the page reloads, if takes in account the URL parameters.
6. A "favorites" function is implemented (currently at most 5) to be used with bookmarking. (This can be adjusted if desired). Favorites has a special "red" icon. This method can also be used to limit what is printed but using the 'show favorites only' button.
7. Implements a "multi" icon for those markers/organizations that reside in the same building or near each other (ie. same lat/long)
8. Uses Overlapping Marker Spiderfier to manage data points close in proximity. Once you zoom into a multi-organization marker, it will 'spread or spider' out to show the related markers.

 Becomes 

1. Each item in the topic dropdown can have a tooltip to display more description text, ~~but I need a listing of proper values=~~. These will be maintained as a google spreadsheet. (see below)
2. Accessibility is defined as follows:
   * If the accessibility property contains the value "Fully Accessible" then accessibility is "Full Accessibility".
   * If the accessibility property contains "Not Accessible", "Unknown", "Not Applicable" or is not defined, then accessibility is deemed to be "No Accessibility".
   * For all other scenarios, Accessibility is deemed to be "Partially Accessible".
3. The PDF function generates a PDF of the currently shown organizations. For large values this can be very slow. We may want to limit the number that can be included in the pdf.
   1. The bottom of the PDF lists the search criteria and also provides a link so the user can go back to the website with same selection.
   2. The "show favourites" function is an ideal way to show only the organizations favourited, and then produce a pdf of such items.
   3. I put in a limit of "200"
4. Text appears above the map to show the number organization that are not marked on the map due to a lack of lat/lng in the data.



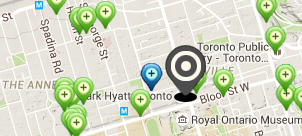
1. In the listing page, an icon is added next to the organization's name.



This icon acts for two purposes:

i) It show there is a map marker for the organization. The lack of marker will inform the user that it is an organization not on the map.

ii) If you click on the icon, it will display that icon and zoom to that spot in the overall map for those perusing data via the listing. (This functionality is a little bit of a throw in. The user would probably click on the link and go to the detail page.)



16. The ETL process produces a file of approx. 500K to be used for searching. This data is used and reported in the "List View". This is done to limit the data on the initial page load which is especially important for mobile devices. The generated PDF also uses this same data to avoid the overhead of selecting each of the individual records

## Maintenance Issues

There is no algorithmic method to determine the ~~85~~ 77+ topics defined for us by 211 and as such a list must be maintained in some manner either in the programming or in an external source. Since we need to maintain this list, it also allows us the opportunity to include better descriptive texts as 'tooltips' on the topic dropdown list to present a more information to the user. A google spreadsheet will be used to maintain this data.

### Google Spreadsheet:

<https://drive.google.com/open?id=15CbaD2ZaHLlsGL6Whqi3i7x30BWI3nWaHBgBi5eqHHg>

***Updates to the spreadsheet are seen in the application after the ETL process is run.***

The spreadsheet name is called: "YouthServices211Topics". Do not rename it.

The spreadsheet contains 1 worksheet called "Topics". The program code looks for data in the 1st worksheet. It is best not to add other worksheets but it is probably safe to do so. Do not change the columns or add any extra information that is not related to the topics to this worksheet.

The spreadsheet contains 6 columns.

SortOrder – is used to sort the spreadsheet and make the parent/child relationship more readable.

Any topic at the top level should have a sort order ending in 00

Ex: education is 400

The child of "400" are 410, 420, 430 etc

The child of 410 are 411, 412 etc.

There is an implied assumption that there is no more than 10 child topics at any level.

TopicId – These the YAPxxx topics defined by 211.

211Topic – Y/N. The topics in Green are "fake" topics and are denoted with a N. They do not exist at 211 and are calculated rather than doing an API call.

ParentTopic– This organizes the Topics and identify which topics are children/parents of other Topics. Do not have more than 3 layers in this relationship or the programming will fail.

DropDownValue – The topics defined at 211 return a description of the topic. The dropdown value will override the values supplied by 211.

ToolTip – A tooltip is a longer version of the dropdown values and are shown to users when they hover over an item in the Topic Dropdown Filter in the application.

Ideally, the only maintenance required is to change tooltip and drop down text.

## Data Issues / Notes

* The ~~85~~ 77+ Topic defined by 211 can be considered as a "predefined" queries, each defining a set of organization.
* These 85 "topics" references approx.: 2577 Organizations
* Of these 2577 organization, ~~1131~~  1005 are unique. [i.e.: An organization is referenced in multi topics]

## Breakdown of the properties found on the 1131 Organization detail records.

The detail information for each Organization varies and seemed to be optional in many cases. Each listing is maintained by the individual organization themselves.

The listing below shows "fees: 836. This means that of the 1131 organizations, 836 have some value for "fees".

accessibility: 1129

accessibilityNotes: 669

address: 1064

application: 921

eligibilityNotes: 964

email: 845

fax: 894

fees: 836

fid: 1131

hours: 1068

intersection: 1061

language: 1131

lastFullUpdate: 1131

lastModified: 1131

latitude: 1060

legalStatus: 1126

location: 1131

longitude: 1060

orgId: 1131

orgName: 1131

phone: 1087

serviceAreaCommunities: 1131

serviceContact1: 554

serviceLanguages: 1131

serviceLevel: 1126

services: 1131

web: 1107

acc: 1131 --ETL Added

topics: 1131 -- ETL Added

serviceAreaBoundaries: 651

executiveContact1: 620

freePhone: 238

executiveContact2: 110

serviceContact2: 171

afterHoursPhone: 17

mailAddress: 105

crisisPhone: 59

serviceLanguagesNotes: 292

tty: 149

publicComments: 114

eligibilityMaxAge: 8

eligibilityMinAge: 8

## 

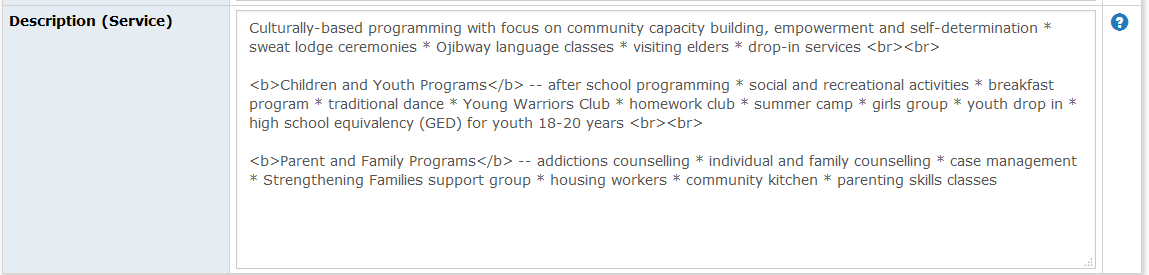
## Data Implications

a) Not all records have lat/long. Those without cannot be plotted on the map.

b) Some of the data at 211 contains HTML. 211 seems to use the "\*" notation as an indicator to put a line break in the generated HTML. However, they don't seem to do it for all fields. (Perhaps just the services field)

Example:

"services":"Culturally-based programming with focus on community capacity building, empowerment and self-determination \* sweat lodge ceremonies \* Ojibway language classes \* visiting elders \* drop-in services <br><br>\n\n<b>Children and Youth Programs</b> -- after school programming \* social and recreational activities \* breakfast program \* traditional dance \* Young Warriors Club \* homework club \* summer camp \* girls group \* youth drop in \* high school equivalency (GED) for youth 18-20 years <br><br>\n\n<b>Parent and Family Programs</b> -- addictions counselling \* individual and family counselling \* case management \* Strengthening Families support group \* housing workers \* community kitchen \* parenting skills classes"



See how the data is displayed at 211: <http://www.211toronto.ca/detail/en/119752>

Notice how the service field does seem to break on "\*", yet the "Hours" field does not.

**This will affect the data displayed in the Youth services display.**

c) The data entered into the system is done by the users themselves and thus can be inconsistent.

Go to any 211 organization pages. Example: <http://www.211toronto.ca/detail/en/80715>

And click on the update listing link. Near the bottom.

Notice under the language options there are 22 possible values with the ability to add notes.

A breakdown of the actual values are below.

Notice values such as: Balochi, Azerbaijani which are not in our language dropdown and as such will not be retrieval able via the language filter. However, you can still get to them via the keyword search.

|  |  |
| --- | --- |
| Adaptive American Sign Language | 1 |
| Afar | 1 |
| Afrikaans | 2 |
| Akan | 3 |
| Albanian | 13 |
| American Sign Language (ASL) | 19 |
| American Sign Language (ASL) - (interpreters by appointment) | 1 |
| Amharic | 16 |
| Arabic | 69 |
| Arabic - call ahead | 1 |
| Arabic - may be available | 1 |
| Armenian | 5 |
| Assyrian | 3 |
| Azerbaijani | 4 |
| Balochi | 1 |
| Belorussian | 2 |
| Bengali | 27 |
| Bhojpuri | 1 |
| Bliss Symbols | 1 |
| Bosnian | 5 |
| Bulgarian | 7 |
| Burmese | 2 |
| Chinese | 1 |
| Chinese (Cantonese) | 102 |
| Chinese (Cantonese) - Saturday-Sunday | 1 |
| Chinese (Fujian) | 1 |
| Chinese (Mandarin) | 109 |
| Chinese (Mandarin) - Monday-Friday 1 pm-5 pm, Saturday-Sunday | 1 |
| Chinese (Mandarin) - Tuesdays | 1 |
| Chinese (Taiwanese) | 1 |
| Cree | 3 |
| Croatian | 13 |
| Czech | 5 |
| Dari | 39 |
| Dinka | 1 |
| Dutch | 4 |
| Edo | 3 |
| English | 1100 |
| English - intake | 1 |
| English - written | 1 |
| Ewe | 3 |
| Farsi | 74 |
| Farsi - by appointment | 1 |
| Farsi - settlement worker | 1 |
| Filipino | 33 |
| Filipino - appointment required | 1 |
| Finnish | 1 |
| French | 190 |
| French - (interpreter) | 2 |
| French - (interpreters by appointment) | 1 |
| French - (interpreters) | 1 |
| French - (limited services) | 1 |
| French - (many programs available) | 1 |
| French - (one counsellor) | 2 |
| French - (primarily) | 1 |
| French - (school programs) | 1 |
| French - (volunteer interpreter by appointment) | 1 |
| French - (website only) | 1 |
| French - (website) | 1 |
| French - appointment required | 1 |
| French - by appointment | 1 |
| French - counselling services in partnership with Centre Francophone (see separate entry) | 1 |
| French - dependent on staff availability during office hours | 1 |
| French - Designated Agency under the French Language Services Act | 8 |
| French - ext 226 | 1 |
| French - Family Duty Counsel | 1 |
| French - Information Centre | 1 |
| French - interpretation available | 1 |
| French - interpreter | 1 |
| French - interpreter available | 1 |
| French - limited | 2 |
| French - officially designated | 7 |
| French - sometimes available | 1 |
| French - Tue 2 pm-5 pm | 1 |
| French - varies by location | 1 |
| Ga | 3 |
| German | 13 |
| Greek | 14 |
| Gujarati | 23 |
| Gujarati - by appointment | 1 |
| Hand over Hand Sign Language | 1 |
| Hausa | 3 |
| Hebrew | 16 |
| Hindi | 71 |
| Hungarian | 15 |
| Ibo | 2 |
| Indonesian | 2 |
| Interpretive Services | 9 |
| Interpretive Services - AT&T Language Line | 2 |
| Italian | 74 |
| Japanese | 10 |
| Kachi | 1 |
| Kannada | 1 |
| Kashmiri | 1 |
| Khmer | 3 |
| Konkani | 2 |
| Korean | 20 |
| Krio | 1 |
| Kurdish | 3 |
| Lao | 2 |
| Latvian | 2 |
| Limba | 1 |
| Lithuanian | 2 |
| Luo | 1 |
| Macedonian | 3 |
| Malay | 4 |
| Malayalam | 2 |
| Marathi | 6 |
| Micmac | 2 |
| Ndebele | 2 |
| Nepali | 3 |
| Ojibway | 12 |
| Oneida | 2 |
| Oromo | 3 |
| Pashto | 25 |
| Picture Boards | 1 |
| Polish | 28 |
| Polish - appointment required | 1 |
| Portuguese | 65 |
| Portuguese - appointment required | 1 |
| Portuguese - limited service | 1 |
| Punjabi | 56 |
| Quebec Sign Language (LSQ) | 1 |
| Romani | 1 |
| Romanian | 16 |
| Russian | 55 |
| Serbian | 15 |
| Shona | 2 |
| Sindhi | 3 |
| Sinhala | 11 |
| Slovak | 3 |
| Somali | 37 |
| Spanish | 142 |
| Spanish - appointment required | 1 |
| Spanish - call ahead | 1 |
| Spanish - FAPS program only | 1 |
| Spanish - Mon-Fri 12 noon-5 pm, 3rd Fl, Latinos Positivos | 1 |
| Spanish - sometimes available | 1 |
| Swahili | 18 |
| Swedish | 1 |
| Tagalog | 3 |
| Tamil | 64 |
| Tamil - FAPS program only | 1 |
| Temne | 1 |
| Thai | 3 |
| Tibetan | 10 |
| Tibetan - Newcomer Youth Program | 1 |
| Tigre | 2 |
| Tigrinya | 13 |
| Turkish | 16 |
| Twi | 15 |
| Two-Hand Manual | 1 |
| Ukrainian | 18 |
| Urdu | 74 |
| Urdu - appointment required | 1 |
| Uzbek | 3 |
| Vietnamese | 34 |
| West Indian dialects | 10 |
| Yiddish | 9 |
| Yoruba | 3 |
| Zulu | 2 |

# 211 API Usage and ETL Process

The documentation for the 211 API can be found at: <http://api.findhelp.ca/services/>

The APIs that are applicable for Youth Services include the Topic Search Query and the Detailed Organization Query

FindHelp/211 has created a series of "Topics" which can thought of as "predefined queries". These topics are defined as YAP001, YAP009, YAPxxx etc. There are approx... 85 topics. These topics were setup by 211 within their systems and we have no useful knowledge of how they were constructed from a programming point of view.

When you use the 211 Topic API and **one of** the YAPxxx topics you receive a list of organizations.

http://api.findhelp.ca/services/rest/v1/topic/*output*?*parameters*

For example: YAP001 – Aboriginal Youth returns 14 organizations records.

For each organization we receive a small amount of data including name, address, lat/lng and a unique identify. This is useful for mapping purposes but does not provide enough information to search and filter them effectively as desired by Youth Services.

Each organization record contains:

"address": "167 Gerrard St East, Toronto, ON M5A 2E4",

"fid": 133353,

"language": "en",

"latitude": 43.660744,

"location": "Toronto Downtown Central",

"longitude": -79.373984,

"orgId": "MET1729",

"orgName": "Miziwe Biik Aboriginal Employment and Training. Ontario Employment Services",

"phone": "416-591-2310",

"web": [www.miziwebiik.com](http://www.miziwebiik.com)

With each unique organization id (called "fid" in the data), we can use the Detail Organization API to acquire detail information about each specific org.

http://api.findhelp.ca/services/rest/v1/orginfo/*output*?*parameters*

,

The list of possible information about an organization varies. See earlier in the document for the breakdown of the 36 properties for the organization is our topics (below is copied from the 211 API link)

|  |  |
| --- | --- |
| **Field** | **Description** |
|  |  |
| accessibility | Short description of the physical accessibility of the organization. |
| accessibilityNotes | Further information on physical accessibility. |
| address | Street address of organization. |
| afterHoursPhone | Phone number to call outside of organization's regular hours. |
| application | Description of how to apply for services |
| copyright | Name of who own's the copyright for this record. |
| copyrightLink | Link to the website of the record owner. |
| crisisPhone | Phone number to call in a crisis. |
| eligibilityMinAge | Minimum age to be eligible for services. |
| eligibilityMaxAge | Maximum age to be eligible for services. |
| eligibilityNotes | Notes on eligibility of services. |
| email | Primary email contact for organization. |
| executiveContact1 | Primary executive contact for organization. |
| executiveContact2 | Secondary executive contact for organization. |
| fax | Fax number. |
| fees | Description of usage fees associated with services. |
| fid | Findhelp ID of record. |
| freePhone | Toll-free phone number |
| funding | Funding information |
| hours | Regular hours of operation |
| intersection | Main street intersection this organization is physically closest to. |
| lastFullUpdate | Date a full update was done on this record. |
| lastModified | Date this record was last modified. |
| latitude | The latitude at which this organization is physically located |
| legalStatus | Description of this organizations legal status. |
| location | Name of community in which this organization is physically located. |
| longitude | The longitude at which this organization is physically located |
| mailAddress | Mailing address, as distinct from the street address given by address. |
| orgId | Another internal id record. |
| orgName | Display name of the organization. |
| phone | Organization phone number. |
| publicComments | General notice regarding the organization. |
| recordOwner | Three letter code for the owner of this record's copyright. Use copyright for display. |
| services | Description of services provided. |
| serviceLanguages | Descriptive list of the languages in which services are provided. |
| serviceLanguagesNotes | Any further notes on the languages in which services are provided. |
| serviceAreaBoundaries | Description of the geographical area this organization provides services to. |
| serviceAreaCommunities | List of community names that this organization serves. |
| serviceContact1 | Primary contact information for services. |
| serviceContact2 | Secondary contact information for services. |
| tty | Phone number for TTY. |
| updateLink | URL to suggest changes to record, as provided by record owner. |
| web | URL for organization's website. |

Since the Youth Services Search design calls for searching on accessibility and service languages, data which is only found on the individual organization records, an ETL process was required to consolidate all the data into one searchable data feed.

If we used only 211 APIs, we would need to read all the topics, then read each and every organization record related to each Topic. The results in an excessive amount of API calls (85 + 1200+ separate API calls) in order to determine which organization to include on the map/listing using the search criteria. This would (i) take too much time, (ii) retrieved too much data that is not needed. This is problematical if you consider mobile users and data plans.

The ETL process perform a few functions but the core is to produce a searchable set of data that include basic information for all organizations for all Topics and include enough information on each organization to properly search the data but not include every piece of data that the initial loading of the page takes too long and/or loads a large data file.

The searchable data that is created by the ETL and which is loaded when the page in started consists of approx.: 1131 rows of data (which represents the unique set of organizations across all Topics) . The size of the file is approx. 500K which is about the maximum we would want to load initially but does provide just enough information to support the desired searching in the application.

Each row/org data contains the following columns/properties

"adr": "310 Gerrard St East, Toronto, ON M5A 2G7",

"fid": 82059,

"gid": "0B-j2Y49nfiw2R21YZ2NZMlQxUW8",

"lat": 43.662327,

"lng": -79.365851,

"nme": "Yonge Street Mission. Double Take Clothing Store. TD Securities Computer Literacy Centre",

"ph": "416-929-9614 ext 4226",

"web": "www.ysm.ca",

"tps": "YAP090","YAP091",

"acc": "N",

"sls": "English",

"ens": "Children, senior kindergarten to grade 12"

Notice the use of abbreviation in the data in order to keep the data as small as possible –

adr =>address,

ens => eligibility notes (required for the general listing)

acc => accessibility. Is one of F-ull, P-partial, N-ot based on an algorithm and calculated by the ETL.

tps => list of topics that reference the organization.

## Notes

1) If you examine the properties on the topic search and look at all the properties on organization detail data, there is no indicators or fields that can be used to determine the 'ethno-cultural' value of an organization. If this data is known to 211 it is not exposed in the data.

2) Having the ETL process also allows us to bury the need to use an access token to get 211 API data to be within the ETL process solely.