

Smart Metering Entity (SME) Licence Order Working Group

Webinar

June 13th, 2016

Agenda

- Review of Privacy Consultant's Report
- Guidelines for Synchronization of the new fields
- Technical Specifications Update
- Communications Calendar Update
- Project Timelines Update
- Meeting Conclusions and Next Meeting Planning

Review of the Privacy Consultant's Report

Privacy Consultant's Report

- Privacy Analytics Inc. was contracted by the IESO to perform a conceptual re-identification risk assessment for the data set that will exist in the MDM/R once the OEB order is implemented.
- The purpose of a conceptual re-identification risk determination is to establish an expected re-identification risk level on a dataset before the data elements are collected in order to avoid collecting data which is known to be at a high risk.
- The analysis considered a data set broader than the new data fields, including the following fields: Premise Address, City, ORG_ID, and USDP_ID

Privacy Consultant's Report

- The report covers the data sharing scenario in which the Local Distribution Companies (LDCs) are the *data providers* and the IESO is the *data recipient*.
- The Consultant noted that the records in the MDM/R pertain to dwellings (and not individuals) and therefore, the risks described are for the re-identification of a dwelling.
- The Consultant completed the analysis and issued their report on June 1st, 2016.

Risk Context and Risk Threshold

- In order to provide an estimate of the re-identification risk context in the MDM/R, the Consultant assessed:
 - The Security and Privacy Controls in place at the IESO (deemed to be HIGH)
 - The degree of Recipient Trust in place at the IESO (deemed to be HIGH)
 - The potential invasion of privacy based on the sensitivity and potential harm to those in dwellings represented in the data set.
- From these assessments, the probabilities of re-identification attacks were estimated and an appropriate risk threshold was determined.

Consultant's Assessment and Recommendations

- The Consultant recommended that *street address* – a field considered to be a *direct identifier* currently being submitted by the LDCs to IESO – be masked (notwithstanding the fact that not all LDCs populate this field with a valid value).
- Based on the conceptual risk determination of the quasi-identifiers contained in the data schema, it was determined that the inclusion of the full (6 character) postal code and the exact occupancy change date would represent an unacceptably high risk of re-identification.

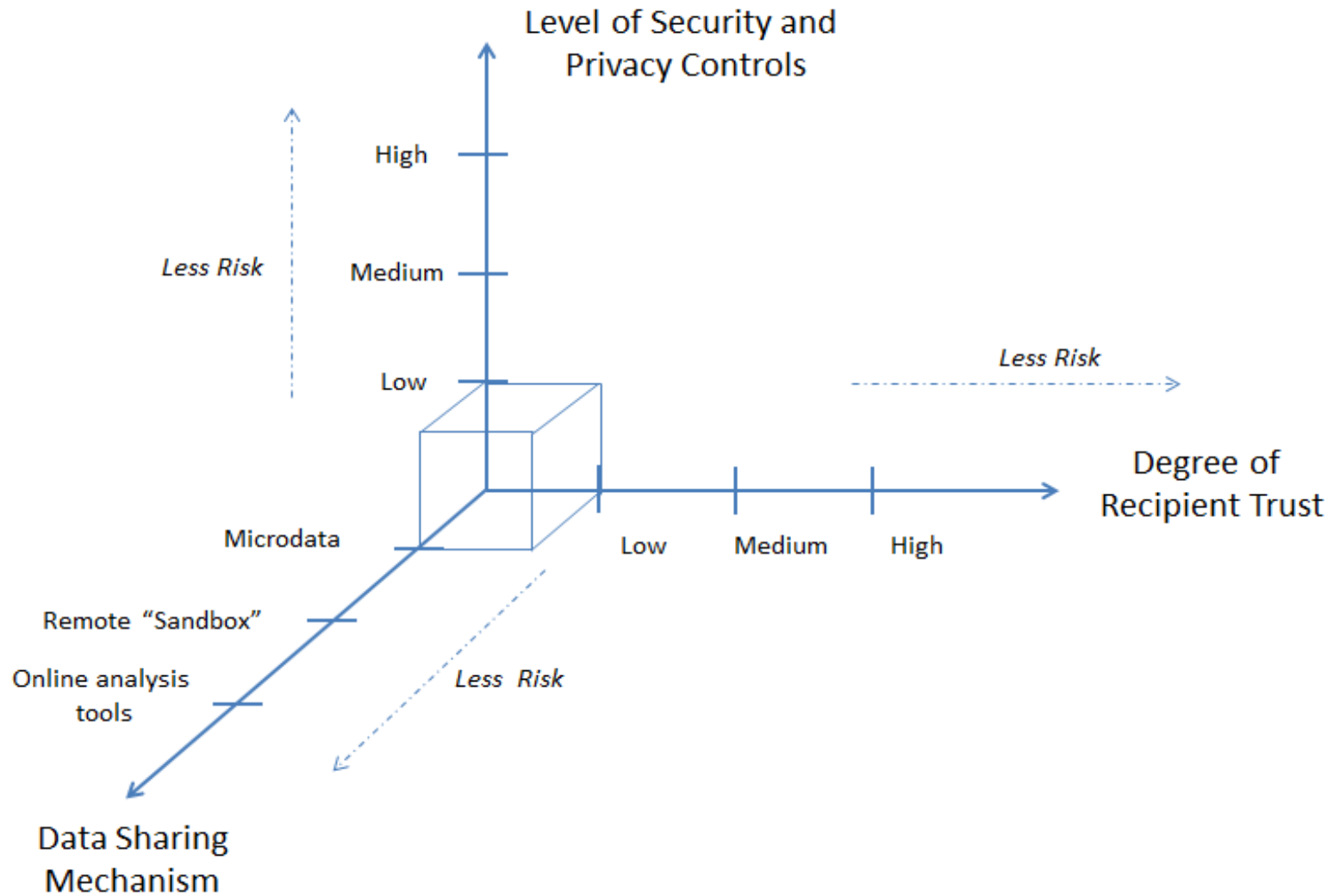
Consultant's Assessment and Recommendations

- The Consultant identified three possible risk mitigation strategies that would lower the estimated re-identification risk to an acceptably low level:
 1. Generalize postal code to 5 characters and occupancy change date to month
 2. Generalize occupancy change date to year
 3. Remove occupancy change date entirely
- Considering that accuracy and completeness of key data fields is paramount in extracting analytical value from the data set, **the mitigation strategy of generalizing the occupancy change date to year and collecting the 6 character Postal Code is the most viable option.**

Third Party Access Recommendations

- In the future, the IESO will be acting as a data provider for various categories of external organizations interested in access to the MDM/R data.
- Because no specific organizations in these categories have been identified, it is not possible to complete a full re-identification risk determination for these recipients at this time.
- The Consultant strongly recommends that when a complete data set is available, a data-based risk measurement should be performed within 6-12 months after data capture has been initiated in order to validate the results of this analysis.

Third Party Access Recommendations



Conclusions

- The Consultant determined that with the recommended risk mitigation techniques, the risk would be very small that the information contained in the MDM/R smart meter data schema could be used, alone or in combination with other reasonably available information to identify a dwelling that is a subject of the information.

SME Actions

- The SME will pursue the second mitigation action (generalize the occupancy change date to year).
- The Technical Interface Specifications will be updated and finalized based on the new specifications recommended by the Consultant.
- The SME will share the Consultant's summary report with LDCs for their review.
- The SME will create the framework for third party access and review it with the Working Group during future meetings.

Guidelines for synchronization of the new fields

Synchronization File Set Submission

- Synchronization is a mechanism by which all the attributes, parameters and relationships for each location where energy consumption is being measured by a smart meter is defined in the MDM/R. Initial synchronization sends all information for a new SDP from an LDC to the MDM/R
- LDCs send updates to the MDM/R as changes occur (e.g. meter exchanges, move in/move outs)
- The MDM/R offers two types of synchronizations:
 - Incremental Synchronization (I-sync)
 - Periodic Audit Synchronizations (P-sync)
- Only LDCs with 150,000 SDPs or less can use P-sync

OEB Order Synchronization Guidelines

- All LDCs should use I-syncs to update their SDPs with the data elements required to comply with the OEB order.
- LDCs are encouraged to submit I-syncs with only the required elements (changed or new) as this can considerably reduce the processing time to update the records in the MDM/R.
- If providing all SDP elements is the only option available to a LDC, the LDC should consider synchronizing a percentage of their total SDPs at a time. The suggested number of SDPs in each file will be shared with LDCs upon completion of further SME testing and gathering of the corresponding operational statistics.

OEB Order Synchronization Guidelines

- When submitting synchronization file sets, please avoid the 3:00am to 7:00am peak meter read data processing time.
- Ensure your I-sync has completed processing and the IR06 and IR07 reports have been received prior to submitting another synchronization.
- P-syncs should be coordinated with the SME for LDCs with more than 25,000 SDPs
- Consider using the window from October 1st, 2016 to January 1st, 2017 to begin populating the new fields in the MDM/R.

SME Actions

- The SME will conduct testing that includes processing I-syncs for a varying number of SDPs per synchronization file set to obtain additional statistics and develop guidelines to ensure regular operations is not adversely affected while enabling LDCs to achieve compliance with the OEB order. This testing is expected to be completed during the month of July
- Conclusions from testing will provide specific recommendations and expectations that will be shared with the Working Group and the LDC community
- A Quick Take will be published by the SME that will detail the process and guidelines for submitting I-syncs for the purpose of complying with the order

Technical Specifications Update

Premise Address and City Specification

- Consistent with the Privacy Consultant's recommendation, the Premise Address and City fields must be masked.
- On October 1st, 2016 the MDM/R will default the "Premise Address" and "City" values with "X"
- LDCs can continue to send the synchronization file sets to the MDM/R in their existing format which includes a value for the "Premise Address" and "City" fields.
- The MDM/R synchronization process will be modified to populate the MDM/R database with a value of "X" for the "Premise Address" and "City".
- The values for those two fields in the MDM/R Graphical User Interface (GUI), for all USDPs, will appear as "X".

Occupant Change Specification

SDP Parameter for 'Occupant Change':

- The Parameter Name (Param Name) will be 'Occupant Change' and related to the Service Delivery Point – Universal_SDP_ID
- The parameter will be date-effective
 - Start Date Time: **yyyy0101000000**
 - End Date Time: **yyyy1231000000**
 - For example, any Occupant Change that takes place in 2017 must be submitted as follows:
 - Start Date Time: **20170101000000**
 - End Date Time: **20171231000000**
- For a scenario where the move in/out might overlap two years, the year of the Move-out should be used.
- The Parameter Value (Param Value) will always be provided as "X".

Summary of Deployment Schedule

Element	Expected Value	Accepted by the MDM/R	Validated if submitted	Required & Validated
Commodity Rate Class	101,102,103,104 or 105 Date format: yyyyMMddHHmmss	Oct 1 st , 2016*	Oct 1 st , 2016*	Jan 1 st , 2017
Distributor Rate Class	201,202,203 or 301 Date format: yyyyMMddHHmmss	Oct 1 st , 2016*	Oct 1 st , 2016*	Jan 1 st , 2017
Occupancy Change Flag	X Start Date: yyyy0101000000 End Date: yyyy1231000000	Oct 1 st , 2016*	Oct 1 st , 2016*	Jan 1 st , 2017
Postal Code	A1A1A1	Oct 1 st , 2016*	Jan 1 st , 2017	Jan 1 st , 2017

* Tentative dates that are subject to change based on the overall project schedule

Summary of Deployment Schedule

Element	Expected Value	Accepted by the MDM/R	On October 1, 2016	Effective October 1, 2016 onward
Premise Address	Submit using the current synchronization file set	Currently acceptable	Script will run in the MDM/R to default the existing values to "X"	The synchronization process will be modified to populate the field with a value of "X" in the MDM/R database
City	Submit using the current synchronization file set	Currently acceptable	Script will run in the MDM/R to default the existing values to "X"	The synchronization process will be modified to populate the values with a value of "X" in the MDM/R database

* Tentative dates that are subject to change based on the overall project schedule

Communications Calendar Update

Communications Calendar Update

Communications Type	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
Working Group Meetings	✓	✓	✓							
IESO Stakeholder Engagement Website Updates	✓	✓								
IESO Stakeholder Advisory Committee		✓								
IESO Webinars		✓	✓							
EDA Website / eBlast	✓	✓								
EDA LDC Surveys	✓									
SSC Meetings and LDC Open Calls										
MDM/R Technical Panel Meetings										
GO LIVE Communication										

Project Timeline Status Update

Project Timeline – Status Update

Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
Early meetings with various groups	Working Group Formed and Kick off Meeting	Ongoing Working Group Meetings									
Privacy vendor selection and contract negotiations		Conceptual Re-Identification Risk Determination Analysis Draft report expected by May 31, 2016		SME Assessment of 3 rd Party Access Development of draft 3 rd Party agreements			SME License Application & 3 rd Party Access Plan		Documentation & Training		Go Live
Technical Scoping & Requirements			Development and SME internal testing of the new MDM/R code			New MDM/R code deployed to MDM/R Sandbox environment LDCs' testing	New MDM/R code deployed to MDM/R Production environment with Validation for new SDP Parameters excluding Postal Code				
Regulatory Activities											

Conclusions

Conclusions

- The SME will pursue the following data collection process:
 - collect the 6 character Postal Code
 - generalize the occupancy change date to just the year
 - mask the Premise Address and City fields
- The SME will share the Consultant's summary report with LDCs for their review this week.
- The SME will create the framework for third party access and review it with the Working Group during future meetings.

Conclusions

- The SME will conduct testing that includes processing I-syncs for a varying number of SDPs per synchronization file set to obtain additional statistics and develop guidelines to ensure regular operations is not adversely affected while enabling LDCs to achieve compliance with the OEB order. This testing is expected to be completed during the month of July
- A Quick Take will be published by the SME that will detail the process and guidelines for submitting I-syncs for the purpose of complying with the order

Conclusions

- The final Technical Interface Specifications will be finalized and shared with LDCs this week.
- Next Working Group meeting is scheduled for June 24th, 2016