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OneCall Version 4.5

Change to Large Scale Enquiries

Author: Mark Scopece
PelicanCorp

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OneCall Software Upgrade Strategy

Background

The DBYD system allows requestors (contractors and members of the public) to draw their proposed work site. This work site is used by the OneCall system to perform a spatial query to determine the relevant utilities/Members that need to be notified of the enquiry.

Currently the maximum extent of a work site allowed by DBYD for both Urban/Rural areas and Excavation/Design is **5km** in length or **20km²** in area.

The Problem

Where a utility is unable to deal with a request of a large scale nature they will typically advise the requestor to re-submit their DBYD enquiry in smaller segments. The re-submitted requests are sent to all utilities regardless of whether that utility was able to successfully process the original (large) request or not. This re-submit process may be repeated until the size of the segments meets the requirements of the notified member with the smallest process-able region.

As a result the member with the smallest limit on the size of the requestors work site area/length that they (or their system) can deal with effectively sets a maximum size for all members at that location, regardless of the ability of each member. It also means that multiple requests will be sent for the same job with members incurring additional costs through paying for and responding to enquiries that their systems have already successfully processed.

Grid Base System (Legacy):

The DBYD (OneCall) system has historically used the concept of street directory map grids as a means for members to define a large scale enquiry. By default a map grid separator value of 15 was assigned to each member meaning that enquiries up to 15 grids in size have been classified as a normal size enquiry. Where a work site is more than 15 grids the OneCall system splits the member notifications into smaller segments based on the grid separator parameter. Each member notification contains the same enquiry details; Job No, GIF and GML attachment but has a unique Sequence No and set of map grids. (E.g. If a member supports 15 grids and receives a job which intersects 16 grids, two notifications would be generated; the 1st notification listing 15 grids and 2nd notification listing the other 1 grid).

The short coming of this solution is that the size of street directory grids vary significantly between Urban/Rural zones and between states. For instance a Melway grid used in an urban area represents 400m x 400m; whilst a VicRoads grid used in a rural area represents 6km x 4km.

The varied nature of the grid sizes means the parameters set by members to define a large scale enquiry are variable and inconsistent.

The Solution

PelicanCorp have developed a solution that accommodates large scale enquiries allowing each member the flexibility to nominate the maximum size (up to 20km²) enquiry they wish to receive for Urban/Rural areas and Excavation/Design activities.

All work sites drawn by DBYD requestors will be compared against the maximum size for each member upon enquiry submission. Where the work site for an enquiry exceeds the maximum area for a given utility it will be split into segments to fit the maximum size area the utility can deal with.

This process is done automatically and per utility, so for a large scale job a utility who is willing to accept jobs of any size will receive one notification. Those members who have a capped maximum size area smaller than the work site will receive multiple notifications, broken into segments that fit within that members defined parameters. In addition the GML attachment for each notification will reflect the attributes of the segmented enquiry. The GIF attachment will remain the same for each notification.

Where utilities require a custom maximum size area (up to 20km²) per enquiry they can do so by nominating their preferred parameter via email: support@1100.com.au. Members will be encouraged to test their settings on the OneCall DRT site once confirmation has been received.

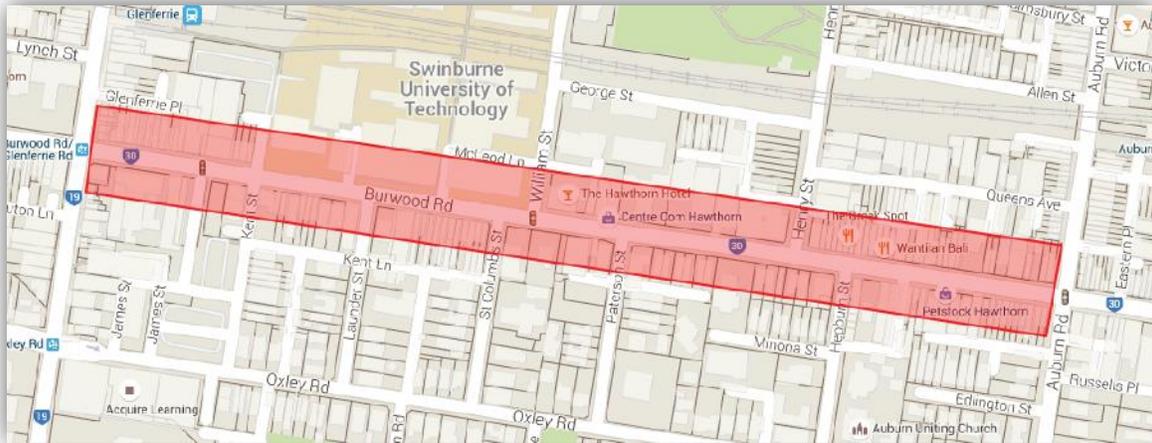
Legacy Grid Support:

Splitting of grids will continue to be done as a legacy support for members who require jobs to be split. However the map grids affected will be split equally across all notifications (E.g. if a utility supports 15 map grids and receives a job which intersects 16 map grids, the enquiry will be split into two member notifications by area and will list 8 grids on each).

Where a members automated plan response system is grid dependent they are encouraged to make arrangements to test their preferred settings on the OneCall DRT site.

How it will work

Example 1:



- An original enquiry is submitted along a major road.

FIGURE 1 – A LINEAR JOB FOLLOWING A MAIN ROAD

- OneCall calculates a grid which is overlaid on the work site and used to split the job based on the settings for each affected member. Each member will then receive their notification split to match their maximum preferences, in this case three segments.

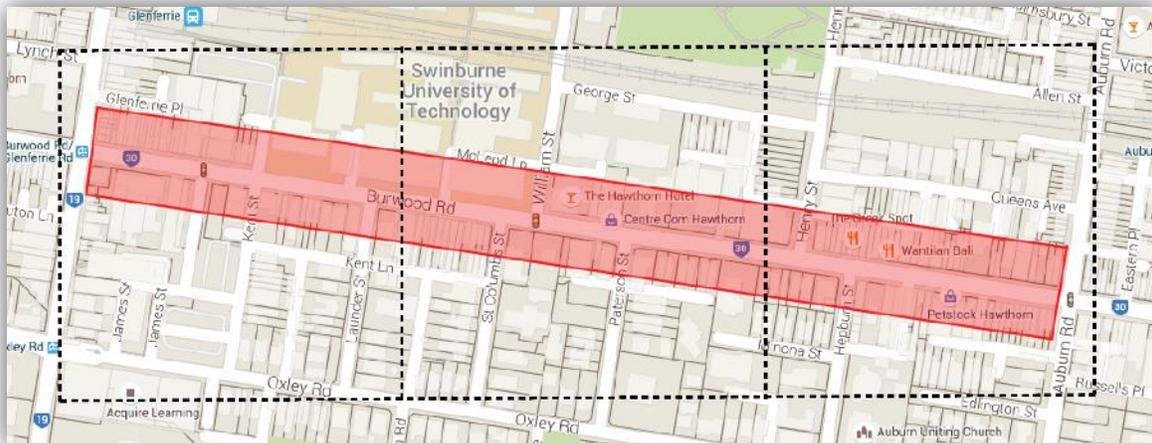
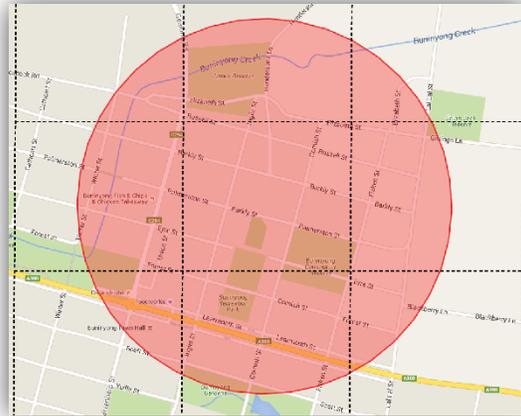


FIGURE 2 - HOW THE LINEAR JOB IS SPLIT

Example 2:

- Using the circle tool to take in a large neighbourhood.



Example 3:

- When a shape is split each segment can only be described by simple polygons. So when you choose a shape where the arms of the shape are close together, such as this irregular neighbourhood shape (Figure 5); the result shows each arm split into pieces that will fit on a maximum area map. No segment from the split requires more than a simple polygon to describe it (Figure 6).

