

MYOB Exo Business White Paper

Geolocation Features

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Contents

Geolocation Features	1
Retrieving Geolocation Details	3
Multiple Matches	4
Confirming Details	4
Proximity Searches	5
Working with Geolocation Details	6
Storing Geolocation Details Manually	6
Creating Geolocation Visualisations.....	8

Geolocation Features

As of Exo Business 8.8, geolocation information (latitude and longitude) can be saved for Debtors, Creditors, Non Accounts and Contacts. This information can be used by the Exo API and the Exo OnTheGo mobile app—search templates are available to return accounts that are located near the user, for example. (Future releases will see the feature extended to include Job Costing and Serviceable Units, and will include search templates to perform location queries within the main Exo Business product as well as in Exo OnTheGo.)

Note: The geolocation features require SQL Server 2008 or later, as they make use of SQL Server functionality that is not available in SQL Server 2005.

The system can automatically retrieve geolocation details whenever a delivery address is entered or changed, depending on the profile setting **Prompt for unset map coordinates on saving delivery addresses**. This setting has the following options:

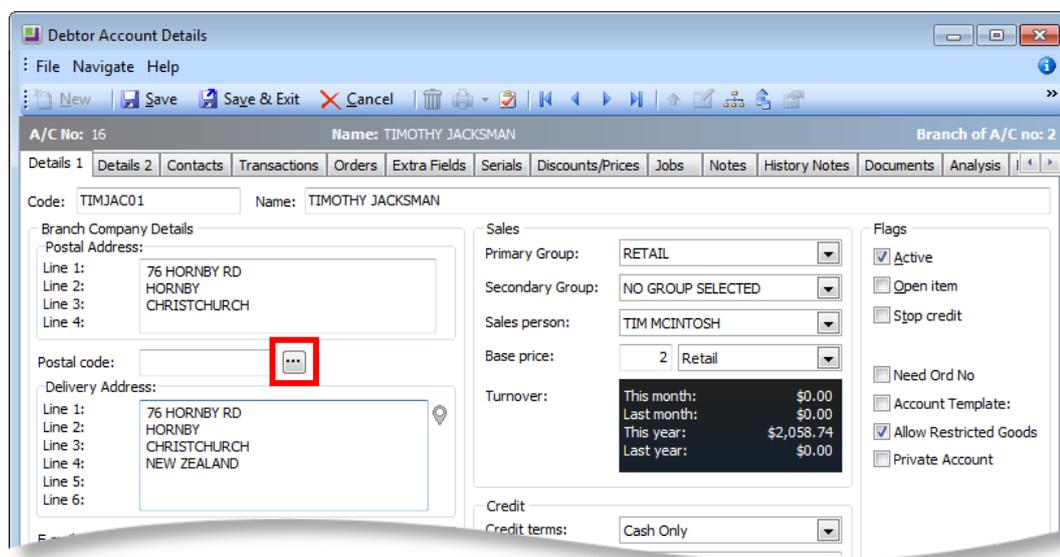
- Always prompt for un-mapped delivery addresses – when a delivery address is entered or changed a dialog box appears, asking the user if they want to retrieve new details.
- Never prompt for un-mapped delivery addresses – the system will automatically retrieve geolocation details whenever a delivery address is entered or changed.
- Disable map locating features – geolocation details are never retrieved for records. Geolocation information will not be returned when querying accounts via the Exo API and the `geolocationtemplate` endpoint will be unavailable.

By default, the “Disable map locating features” option is selected—to enable the geolocation features, you must select one of the other two options.

By enabling this feature, you consent to send information to MYOB and for us to relay part of this information to Google Mapping Services in accordance with their privacy statement (see [Google Privacy Policy](#)) in order to retrieve mapping coordinates and confirmation of the existence of a physical address. See “

Note: Retrieving Geolocation Details” on page 3 for more information.

Geolocation information is based on the account's Delivery Address. The system uses Google's API to query Google Maps for latitude and longitude details when the Location button next to the address is clicked:



The icon on this button indicates the status of the query:

-  - location has not been queried yet.
-  - location successfully retrieved. Clicking the button again will open your default browser, showing the location on Google Maps. SHIFT+clicking the button, or right-clicking on it and selecting **Lookup Location**, will attempt to retrieve location details again.
-  - location could not be retrieved. Hovering the mouse over the button will display a popup message indicating why the query failed.

A Location button is also available for the Exo Business company's street address in Exo Configurator at Company > Company Details. Storing geolocation information for this address allows you to write custom reports or dashboard widgets that show records' locations relative to the company.

All Location buttons are hidden if the **Prompt for unset map coordinates on saving delivery addresses** profile setting is set to "Disable map locating features".

Retrieving Geolocation Details

MYOB Exo Business maintains a web service that relays geolocation queries to the Google Maps services. This service is provided to Exo Business users as part of the ongoing licence fee.

Note: There may be a delay of few seconds the first time you call the geolocation service during an Exo Business session; after that it will be relatively instant.

Exo Business sends the delivery address details of the record being queried. These details are secured via HTTPS, and no other information is sent. All communication is in accordance with the privacy policies of Google and MYOB:

- [Google Privacy Policy](#)
- [MYOB Privacy Policy](#)

The successful location of a delivery address for a record in Exo Business will depend on the quality of the record's delivery address. Exo Business does not inherently know which line is the street address. Delivery address line titles are user definable in Exo Configurator at System > Display Names.

Bear in mind that the company address is usually appended to the company name and would not usually be repeated in the address.

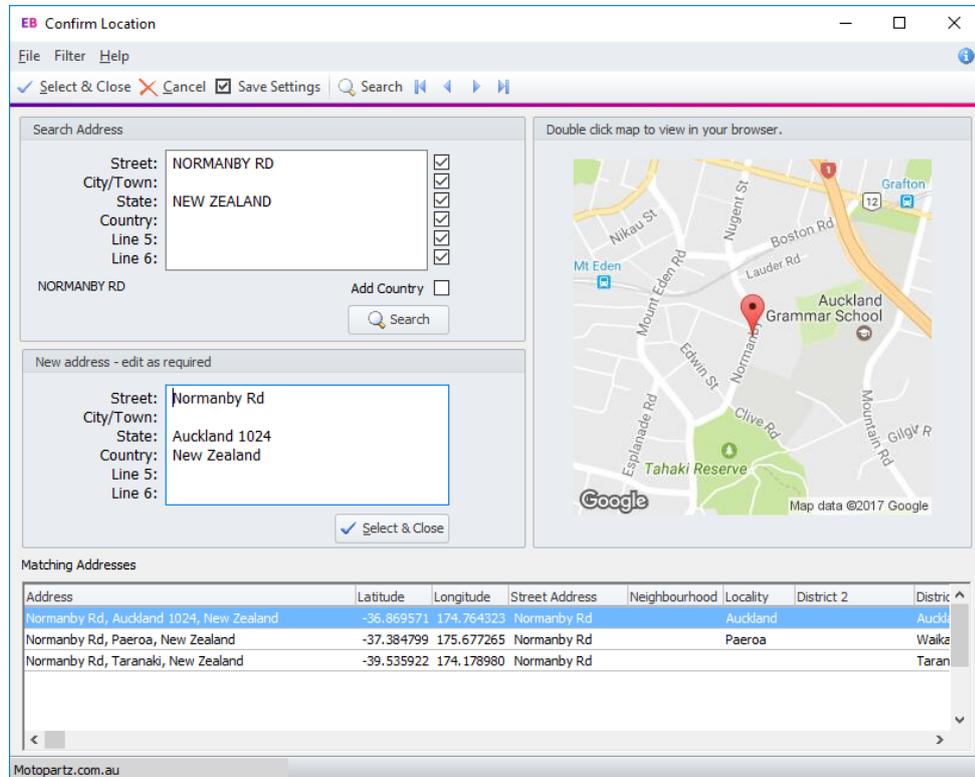
Note: At least two distinct address lines are required before Exo Business will try to relay a mapping request. If you try to retrieve geolocation details for a record with fewer than two address lines, an error message will appear.

At present, there is no perimeter limitation on mapping queries that limits queries to Australasia, so to avoid ambiguous or false results if the town or city name is a common one, entering the country is always advisable.

There is a degree of fuzzy or predictive logic incorporated into the Google Maps geolocation service. If the address is sufficiently unique, the country is not required to locate a unique match, e.g. if the suburb in the address is unique worldwide, a match can be successfully located without a city or country being specified.

Multiple Matches

If multiple matches are found you are presented with all matching addresses to choose from:



Selecting the appropriate address will retrieve the geolocation details for that address. The address you select does not replace the one originally entered for the record; as you cannot cut/paste the address from this form, you will need to manually alter the address and re-evaluate. (This is a potential target for development in future releases.)

Confirming Details

When the location for an address has been successfully matched, i.e. when the  icon next to the address is green, you can confirm the address by:

- clicking the Location button again, which will open your default browser, showing the location on Google Maps.
- right-clicking on the button and selecting **Confirm Location**, which opens the same Confirm Location window that appears when there are multiple matches (since a match has already been found, the window will contain only one option).

Proximity Searches

The Exo OnTheGo iPad app uses location information in a variety of ways; however the proximity calculations are all done by the Exo application itself—examples are included in the standard search templates that are used by Exo OnTheGo.

Geospatial queries are quite simple and can already be used in custom reports or Exo grid widgets if required in 8.7 SP3. Later versions of Exo will see search template features used in common searches as well as the Exo OnTheGo app.

If you want to use proximity queries, you will need to retrieve geolocation details for the Exo Business company's location, which is based on the street address entered in the Exo Configurator, under the Company > Company Details section.

Working with Geolocation Details

Storing Geolocation Details Manually

If you want to store latitude and longitude for branches, you will need to add these as customised Extra Fields alongside your extra branch delivery address details.

```
DECLARE @CURRENTLAT FLOAT
DECLARE @CURRENTLONG FLOAT
DECLARE @RADIUS FLOAT

SELECT @CURRENTLAT=LATITUDE, @CURRENTLONG =LONGITUDE FROM GENERAL_INFO
SET @RADIUS = 10
SELECT TOP (10)
    ACCNO, NAME, LATITUDE, LONGITUDE,
    dbo.GeoDistance(@CURRENTLAT, @CURRENTLONG, LATITUDE, LONGITUDE) / 1000 AS
DISTANCE, YEARVAL, BALANCE, (AGEDBAL2+AGEDBAL3) as OVERDUE, STOPCREDIT
FROM DR_ACCS
WHERE GEOCODE_STATUS = 0
    AND (dbo.GeoDistance(@CURRENTLAT, @CURRENTLONG, LATITUDE, LONGITUDE) / 1000)
<= @RADIUS
    AND ISACTIVE = 'Y'
    AND BALANCE > 200
ORDER BY OVERDUE DESC
```

Similarly, you can use a SQL script to geocode a batch of addresses using a procedure such as the one below:

```
CREATE PROCEDURE GEOCODE_ALL_DRACCS
AS
BEGIN
DECLARE @ACCNO INT
DECLARE ACC_cursor CURSOR FOR
SELECT TOP 50 ACCNO
FROM DR_ACCS
WHERE ISACTIVE = 'Y' AND (GEOCODE_STATUS < 0 OR GEOCODE_STATUS IS NULL)
AND (LEN(DELADDR1) > 5 AND LEN(DELADDR2) > 5)
ORDER BY ACCNO DESC

OPEN ACC_cursor
FETCH NEXT FROM ACC_cursor INTO @ACCNO

WHILE @@FETCH_STATUS = 0
BEGIN
EXEC GeocodeRow @tablename = 'DR_ACCS', @pkname = 'ACCNO', @pkvalue = @ACCNO
FETCH NEXT FROM ACC_cursor INTO @ACCNO
END
CLOSE ACC_cursor
DEALLOCATE ACC_cursor
END

EXECUTE GEOCODE_ALL_DRACCS
```

Note: The GeocodeRow function is an encrypted assembly and only available to Exo users using SQL Server 2008 and above.

Creating Geolocation Visualisations

You can use stored latitude and longitude details in a variety of useful visualisations, for example, using the simple query:

```
SELECT NAME, YEARVAL, LATITUDE, LONGITUDE FROM DR_ACCS WHERE GEOCODE_STATUS = 0 AND YEARVAL > 0
```

With the Microsoft Excel Power Maps plug-in you can represent this data in a variety of compelling interactive visualisations very easily:

