

# foundmi™ Integration with Google Home

## Find your missing item in seconds

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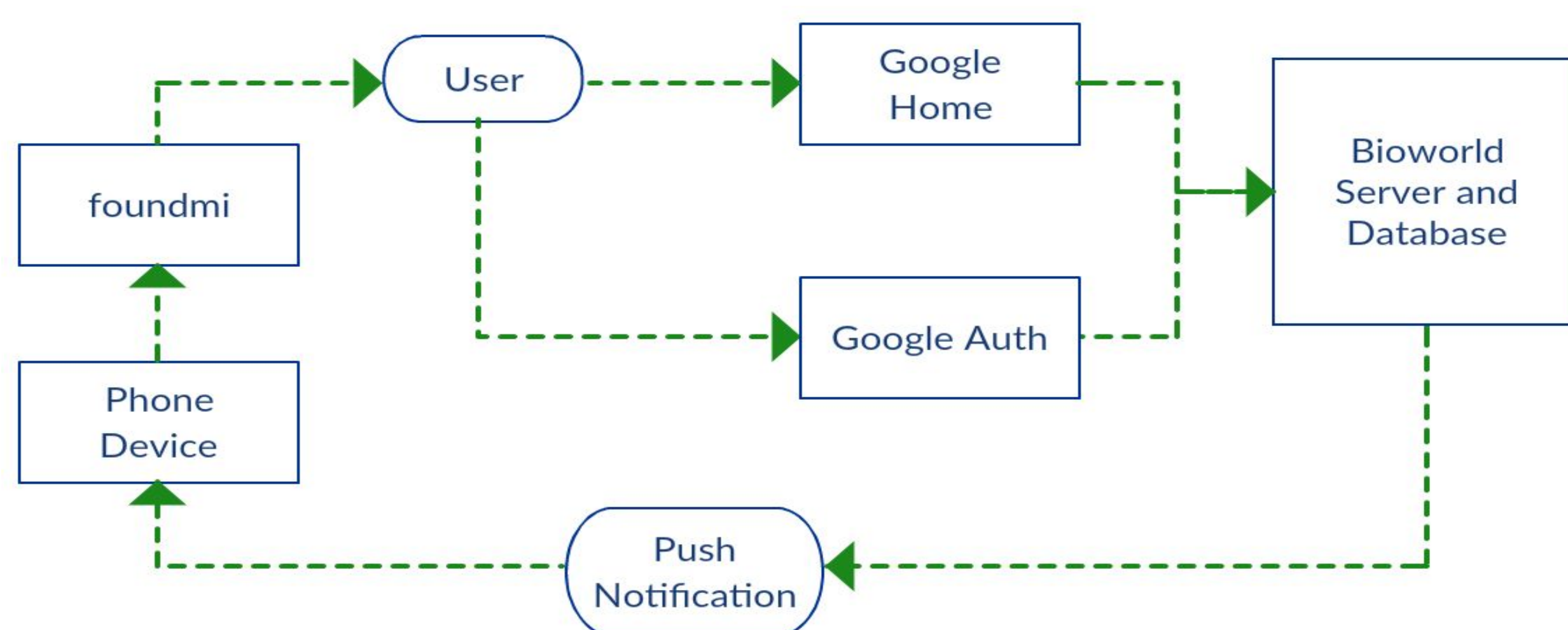
### Abstract

foundmi™ is a Bluetooth tracker that helps find your lost keys, phone, or anything you love. Anyone can attach a foundmi™ tracker on the item, go to the foundmi™ app, press a button, and find the missing item in seconds. This project will incorporate Google's Smart Voice Assistant, Google Home, by using a Google Action to help find your missing item. The user can ask their Google Home device, "Hey Google, ask foundmi™ to find my Batman tag!" The Google Home will then find your foundmi™ and attached item.

### Results

The outcome of this project is a proof of concept. Given the limitations we had on our project, we were able to create a Google Action, an authentication method, and push notification to emulate what the Google Home Action would be like. The final step, which will be handed to Bioworld, would be to incorporate the Bioworld backend and the One61 API.

### Architecture



```
var http = require('http');
module.exports = {
  post_request: function (json) {
    // An object of options to indicate where to post to
    var post_options = {
      host: 'fcm.googleapis.com',
      port: '80',
      path: '/fcm/send',
      method: 'POST',
      headers: {
        'Content-Type': 'application/json',
        'Content-Length': Buffer.byteLength(json),
        'Authorization': '...',
        'data': { "hello": "hello" }
      }
    };
    // Set up the request
    var req = http.request(post_options, function(res) {
      res.setEncoding('utf8');
      res.on('data', function (chunk) {
        console.log('Response: ' + chunk);
      });
    });
    // post the data
    req.write(json);
    req.end();
  }
};
```

```
{ "data": { "google_id": "106023289190655084082", "token": "ya29.GluqB\nirXJ5cUgGwu375sqFFO2KtFM8xwcyYtW8Cld17UPErI3U5M9vGz1RQBopQR5Pv-\nca5ccc402129", "character": "batman"}, "to": "fQREJDZV-qk:APA91bGUDR\nlq2aqpzfzqw3Q62VSCGxTONjbcInwHOYulLDr2xt8j_XwLjxUjb37ILpTeGsqVsi\nJSON Webhook
```

### Impact

Our project will help Bioworld expand their outreach to more users and families that have foundmi™ devices and Google Home. Currently, foundmi™ is used with Amazon Alexa devices. Our project adds another great feature for foundmi™ to offer with the addition of Google Home capabilities.

### Metric

We started by creating a proof of concept for this project. We were able to create our own mock OAuth 2.0 server and then link and authenticate a Google account using Node JS Passport. This emulates what would happen when handled by the One61 (Bioworld's) API.

### Summary

Our team worked on adding Google Home capability to the foundmi™ devices. Currently, foundmi™ has Amazon Alexa capability. Adding Google Home capability would attract new customers to the foundmi™ devices. Our original goal changed when encountering roadblocks preventing us from working with the Bioworld backend. In response, we created the necessary parts to implement this project without the use of the backend. This project will be handed over to Bioworld so that they can incorporate their backend and One61 API before releasing the Google Home Application for public use.

We would like to thank our company mentors Crystal Forbes and Adam Lotia for providing insightful advice and guidance for our project.