mindfire

Overview:

As per our client's needs, we built a PHR product for them that they offered as a service to their members to manage their personal medical records. These records could be accessed from multiple providers by integrating with their EHR systems, e.g. Allscripts, and are organized in secure and private online accounts mapped to these members. These records can be accessed from anywhere and at any time with an internet–enabled cellphone, desktop, a PDA or even a USB drive. Overall, the intent was to enable members of this product to have complete control of their digital health profiles and use them to their advantage.

Work done for this client involved the following:

- Building a Secure, Private, HIPAA-compliant Patient Portal

- Integration with different EHR systems using HL7-interfaces/APIs/SDKs: e.g. AllScripts

- Integration with 3rd Party DICOM viewer

- Authorize.Net integration – Billing/Payments

- USB/Pen drive capability, WinForms/Desktop App

- iOS Mobile App, a PHR app to access records, contacts, pharmacies, providers etc.

Client details:

Name: Confidential | **Type:** Healthcare | **Location:** USA

Technologies:

.Net, iOS, WinForms, AllScripts Integration SDK/API, HL7 v2.3

Project Description:

We built a web-based solution to store Patient Health Records of people. This service could be availed on a subscription basis, and allowed people to collect and manage all their medical records in an organized way and in a single repository that would get updated automatically from time to time. With this measure, the benefits are many. For e.g. it is possible to gain real-time access to information at the time of appointment, in matters of emergencies, to avoid administration of unnecessary and redundant

tests, expedite diagnostic and treatment plans, and remove possibilities of medical errors. Plus, there is the added advantage of having all of this information private, secure and safe from any physical damage or loss.
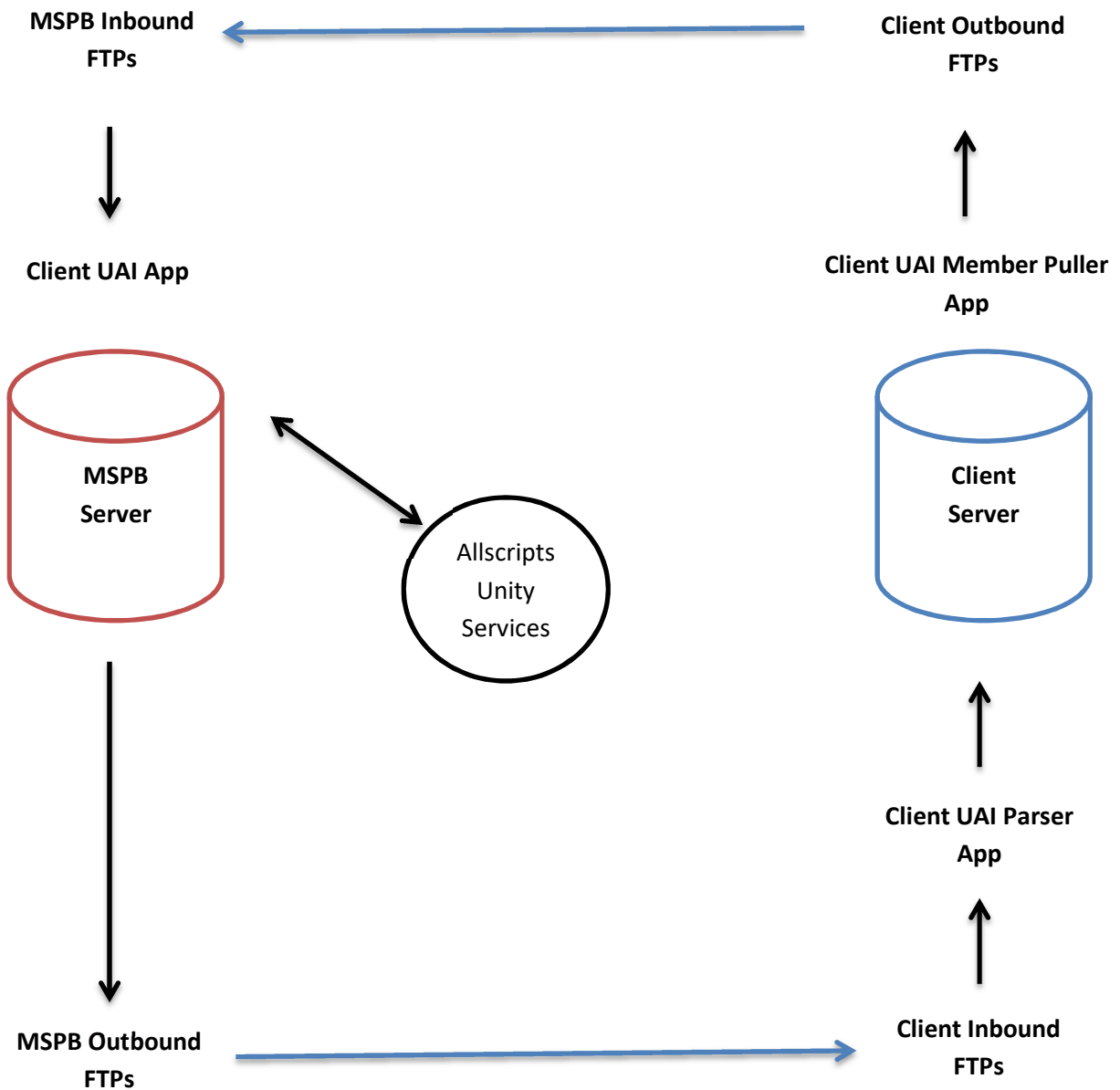
Patients availing this service have the privilege of accessing their accounts through a patient portal to see all their digital health records. In order to make this process extremely convenient, the team@Mindfire ensured that the UI/UX designed was highly intuitive and easy-to-use.

The overall success of this service was hinged significantly upon the ability to pull medical records in a secure and seamless manner from multiple providers, who use different EHRs. To implement this functionality, our technical experts needed to work closely with the IT teams of the providers/EHR vendors to understand the structure of the data that would get exchanged and to finalize on an HL7 format that was acceptable to both the parties. But, since data coming from different EHRs were not expected to have the same format, the team@Mindfire also developed the functionality to parse the incoming data before mapping and storing them correctly in the database.

For example, one such integration involved transmitting the HL7 2.3 Results Message (ORU) using a secure and encrypted FTP connection on a weekly basis. This weekly process was designed to be scheduled every Saturday evening at 8 PM Eastern time. Patient Data from the EHR vendor was grouped under certain heads and submitted in the HL7 Results-message. This grouped data had a one-to-one mapping with data fields in our client's database. The following reflects this:
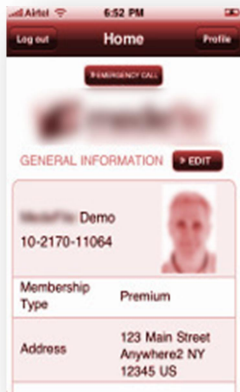
EHR (Provider)	Client
Medication Allergy →	Medication Allergies
Family history →	Family History
Food allergy →	Food Allergies
Medical History →	Medical History
Medication History →	Medications
Surgical History →	Surgeries

Patient Portal - EHR Integration
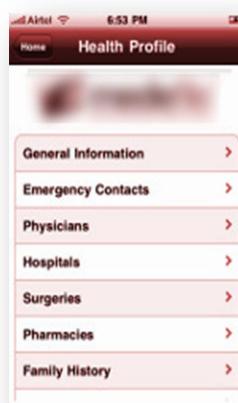
mindfire

Architecture:

MSPB Inbound FTPs

Client Outbound FTPs

Client UAI App

Client UAI Member Puller App

MSPB Server

Allscripts Unity Services

Client Server

MSPB Outbound FTPs

Client Inbound FTPs
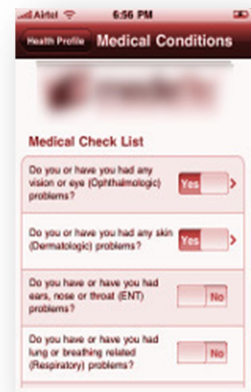
Client UAI Parser App

Screenshots

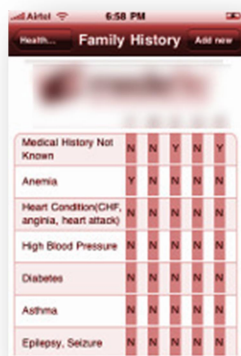## Mobile:

Screenshot 1:
Home Screen

Screenshot 2:
Health Profile

Screenshot 3:
Medical Condition

Screenshot 4:
Family History

Screenshot 5:
Sample Medicine Details

Patient Portal - EHR Integration

Web:

Screenshot 1:
Dashboard

Screenshot 2:
Digital Profile Update

Screenshot 3:
Medical Records

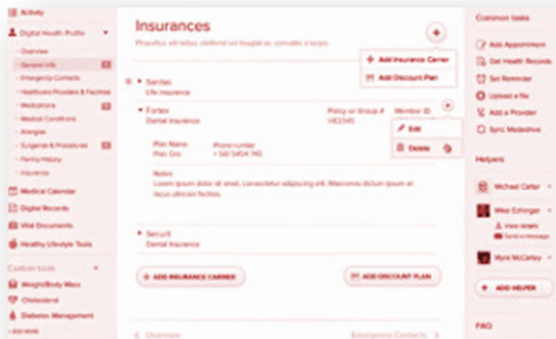**Screenshot 4:**
Healthy Lifestyle Tools

5

Screenshot 5:
Segregation of Docs
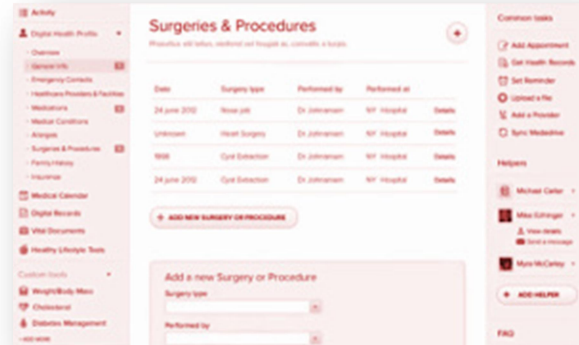
Screenshot 6:
Surgery & Procedure details

Screenshot 7:
Insurance Details

Screenshot 8:
Family History