athenahealth

Franklin W. Olin College of Engineering

API Recommendations

Goal: To make recommendations for additions to athenahealth's Application Programming Interface (API). The API would allow software developers outside the company to interface with athenahealth's large database of information to create powerful healthcare applications.

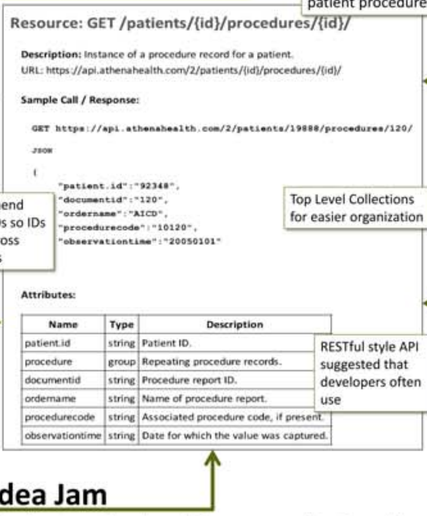
User Understanding

Understanding needs and values of different users:

- Developers: the end users of the API
  Make sure things are easy to pick up
- Healthcare providers, staff and patients: Users of the apps created using the API

Sample of our API

Suggested several calls including the GET patient procedures



Resource: GET /patients/{id}/procedures/{id}/

Description: Instance of a procedure record for a patient.
URL: https://api.athenahealth.com/2/patients/{id}/procedures/{id}/

Sample Call / Response:

```
GET https://api.athenahealth.com/2/patients/19888/procedures/120/

JSON

{
      "patient.id":"92348",
      "documentid":"120",
      "ordername":"AICD",
      "procedurecode":"10120",
      "observationtime":"20050101"
```

Attributes:

Name	Type	Description
patient.id	string	Patient ID.
procedure	group	Repeating procedure records.
documentid	string	Procedure report ID.
ordername	string	Name of procedure report.
procedurecode	string	Associated procedure code, if present.
observationtime	string	Date for which the value was captured.

Recommend global IDs so IDs work across practices

Top Level Collections for easier organization

RESTful style API suggested that developers often use

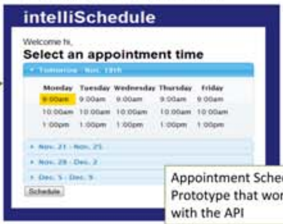
Schema Analysis

Tool to understand database in order to:

- Support the user understanding and applications leg
- Make the API more usable
- Cover a wider range of the application space

Prototypes

Prototyping applications to understand how API used



intelliSchedule

Welcome hi,

Select an appointment time

Tomorrow - Nov. 19th

Monday	Tuesday	Wednesday	Thursday	Friday
9:00am	9:00am	9:00am	9:00am	9:00am
10:00am	10:00am	10:00am	10:00am	10:00am
1:00pm	1:00pm	1:00pm	1:00pm	1:00pm

Nov. 21 - Nov. 25

Nov. 28 - Dec. 2

Dec. 5 - Dec. 9

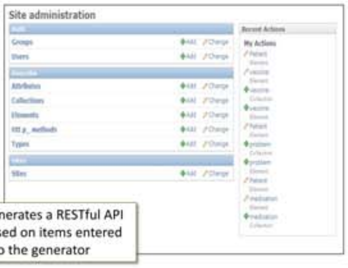
Schedule

Appointment Scheduling Prototype that works with the API

Idea Jam

Brainstorming healthcare application ideas to determine API calls with use cases

API Generator



Site administration

Groups	Add	Change
Users	Add	Change
Attributes	Add	Change
Collections	Add	Change
Elements	Add	Change
Http_methods	Add	Change
Types	Add	Change
Sites	Add	Change

Recent Actions

My Actions

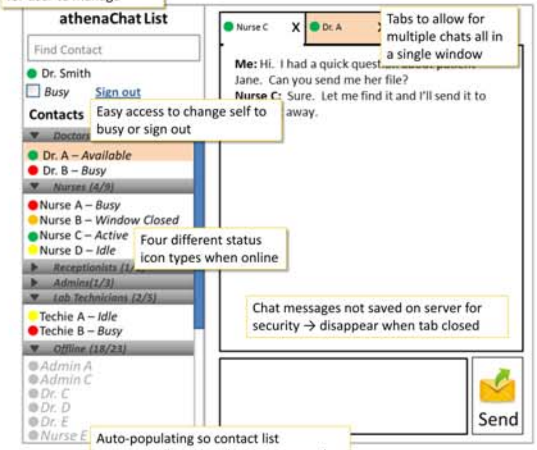
Generates a RESTful API based on items entered into the generator

Integrated Chat Client

Goal: To develop a chat client to be used by healthcare providers and staff within a practice that can be integrated with athenaNet.

Chat Window Mock Up:

Contact list and chat messages all in one small window so less windows for user to manage



Me: Hi. I had a quick question about patient Jane. Can you send me her file?
Nurse C: Sure. Let me find it and I'll send it to you right away.

Tabs to allow for multiple chats all in a single window

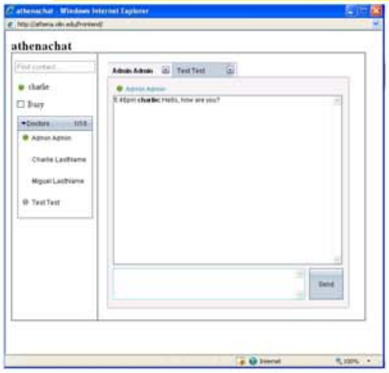
Easy access to change self to busy or sign out

Four different status icon types when online

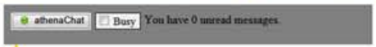
Chat messages not saved on server for security → disappear when tab closed

Auto-populating so contact list automatically updated with new people entering practice or those leaving practice

Current Implementation

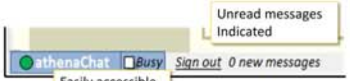


5:46pm **charlie:** Hello, how are you?



You have 0 unread messages.

Chat Button Mock Up:

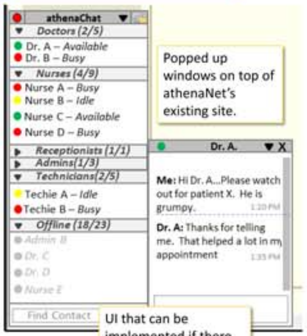


0 new messages

Unread messages Indicated

Easily accessible status change

Potential Future UI:



Me: Hi Dr. A...Please watch out for patient X. He is grumpy. 1:20 PM

Dr. A: Thanks for telling me. That helped a lot in my appointment 1:35 PM

Popped up windows on top of athenaNet's existing site.

UI that can be implemented if there are no frames in athenahealth

SCOPE
Senior Capstone Program in Engineering

Team:
Jason Aurori, Miguel Bejar, Gwyn Davidoff, Noura Howell, Rhan Kim, Natalie Mattison, Charlie Offenbacher, and Poorva Singal

Sponsor Liaison: *Jeff Jason*
Faculty Advisor: *Amon Millner*

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