Use Case for the POC

3M OCSD is in the business of providing state-of-the-art dental and orthodontic solutions to patients worldwide. Generally, doctors order dental /orthodontic products through the 3M online store. If a doctor has an issue with the delivered product, she contacts the 3M technicians or lab personnel over phone, registers her complaint, gets help/directions

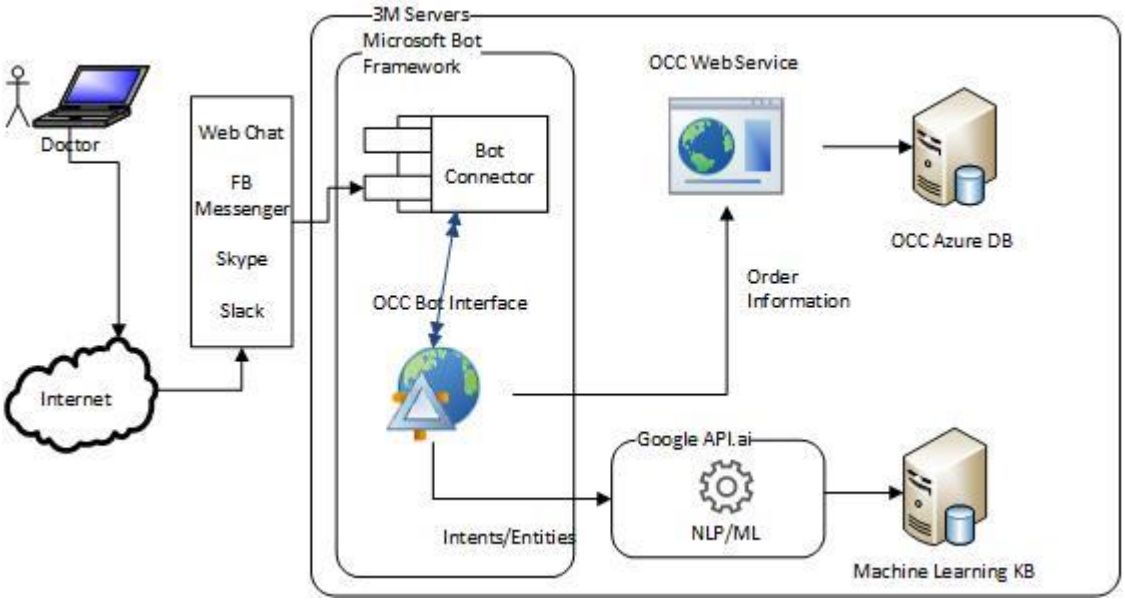
This POC tries to build a virtual assistant ('chat bot' in technical slang) that interacts with the doctor, understands the issue with the delivered product and attempts to provide a solution. Since the initial conversations between the doctors and the 3M executives are generally 'template'ised and follow a pattern, we wanted to try if a virtual assistant can play the role of a support executive so that 3M personnel can devote their time and energy for more meaningful tasks that require their experience, expertise and human intelligence

For this POC, a doctor chats with a bot as she faces fitment issues with the Clarity Aligner product that she purchased for a specific patient

Technology

- Microsoft Bot Framework (UI/UX, miscellaneous plumbing like session, cache)
- API.ai (NLP/ML)
- Node.JS (Web chat canvas)

Following is the conceptual solution components diagram of OCC Chat Bot



It was decided to use free and open source components for the POC. Specifically, we wanted to avoid pricey cognitive services like Amazon Lex or Microsoft Cognitive Services.

Notes for the User

- It is a conversation is between a 3M virtual BOT named 'Liz' and a fictitious doctor user named 'Dr. Roger Smith'. Going forward, in future real-time scenarios, the virtual BOT

'names' can be generated with a randomizing algorithm from a set of 'pre-determined names'. The user details can be pulled from the OCC web app environment that the BOT runs on.

- The context is that the user (doctor) is working on the OCC web app. (S)he wants to contact 3M support as there is a fitment problem with a Clarity Aligner. The user (doctor) initiates the chat with 3M support by clicking on a tiny pop-up in the lower, right corner of the screen. The conversation starts with the user (doctor) typing either 'hi' or 'hello'. The order number is validated to just be numeric and we show 'loren ipsum' content for a fictitious order. We can access the content from the RIO site real time later with a pull from the database / SF.
- Assumption: Virtual BOT knows who is initiating the conversation since the user (doctor) initiates the chat from a logged-in OCC web app.
- Limitation: The virtual BOT is equipped to handle only the fitment problem with 'Clarity Aligner'. If the user talks about any other problem, BOT will say 'sorry…'

The interaction content / language phrasing etc. can be further refined / fine-tuned

Closing Note

With the bots POC, let's

- See if conversational interfaces could be potential replacements for apps/forms
- See how much of mundane level 1 & 2 customer support service tasks can be taken up by bots
- Determine the maturity and real-time readiness of the current bot technologies