

MICHIGAN STATE

U N I V E R S I T Y

Project Plan

IT Expert Live Help

The Capstone Experience

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*From Students...
...to Professionals*

Functional Specifications

- A new IT Expert Live Help system
- Reduce burden on traditional IT ticket system
- Efficient and direct employee interaction
- Allow opportunity for quicker resolutions
- Employees spend less time waiting for help and more time doing their job

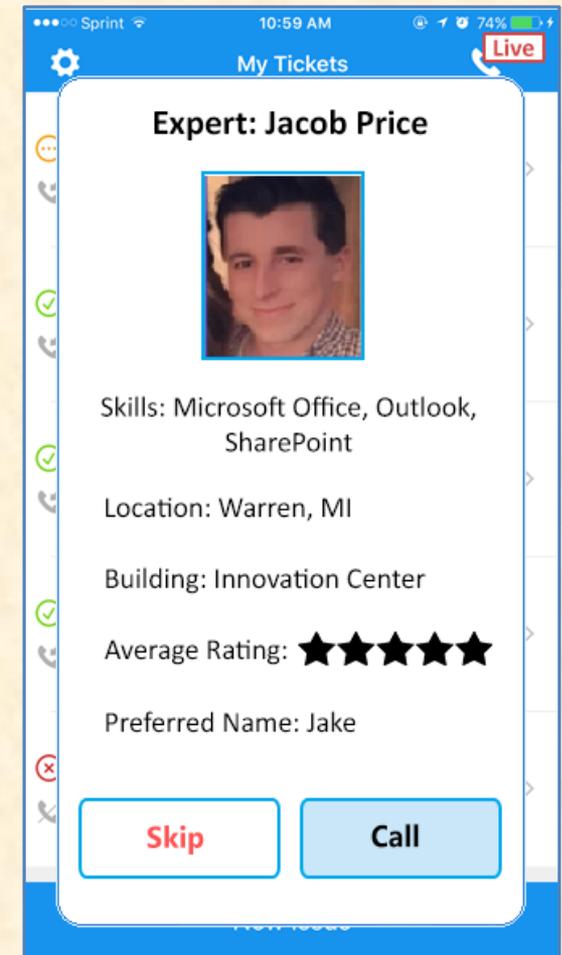
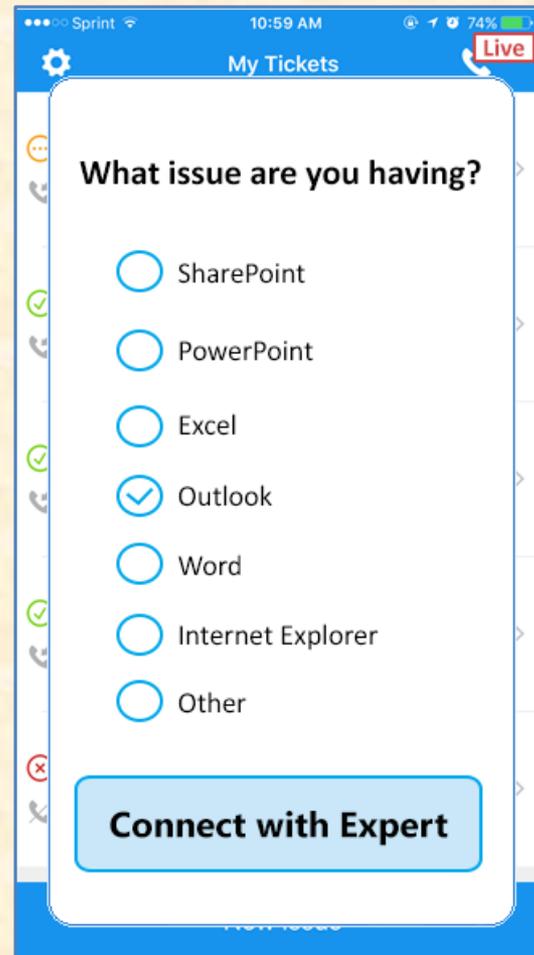


Design Specifications

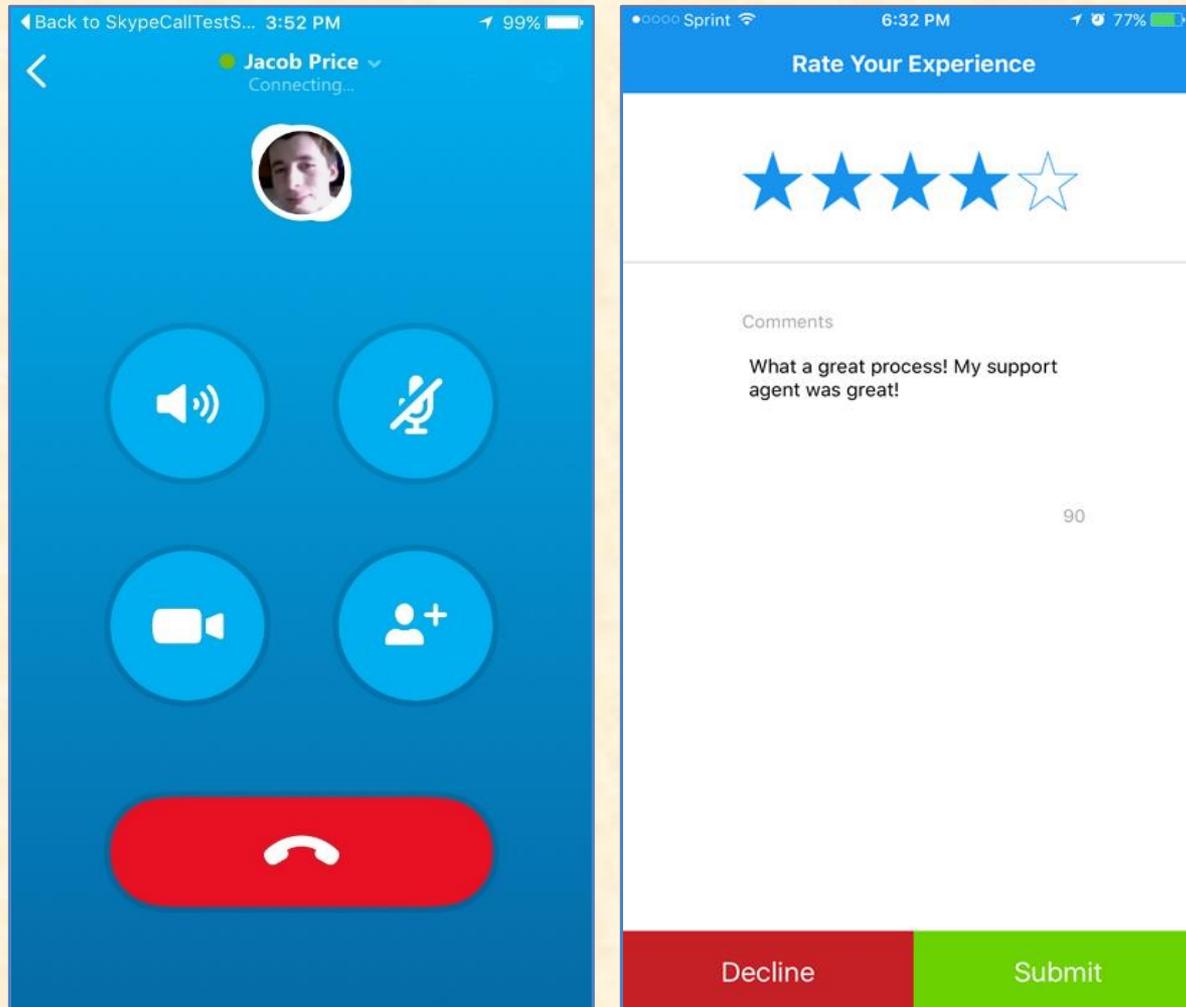
- Employee Help Service Feature - iOS App
 - Adds ability to press a button for live help
 - Simple to use interface as an additional feature
 - Incorporate all existing features (knowledge base articles, ticket creation system)
- IT Expert Live Help Service - Web App
 - Controls availability status and views feedback
 - Does not interfere with expert's normal workflow
 - Keeps the expert's information current



Screen Mockup: Mobile Application

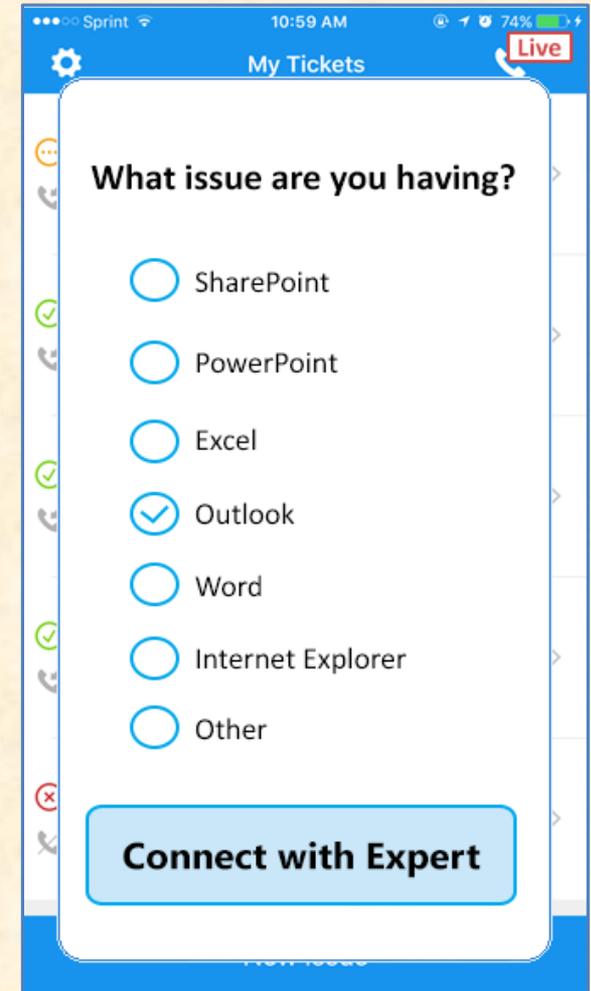


Screen Mockup: Mobile Application



Screen Mockup: Issue Lookup

- Confirm the issue category
- Access directly by selecting an option from home screen
- Or, access after searching for knowledge base articles
- Issues categorized into common sources of tickets

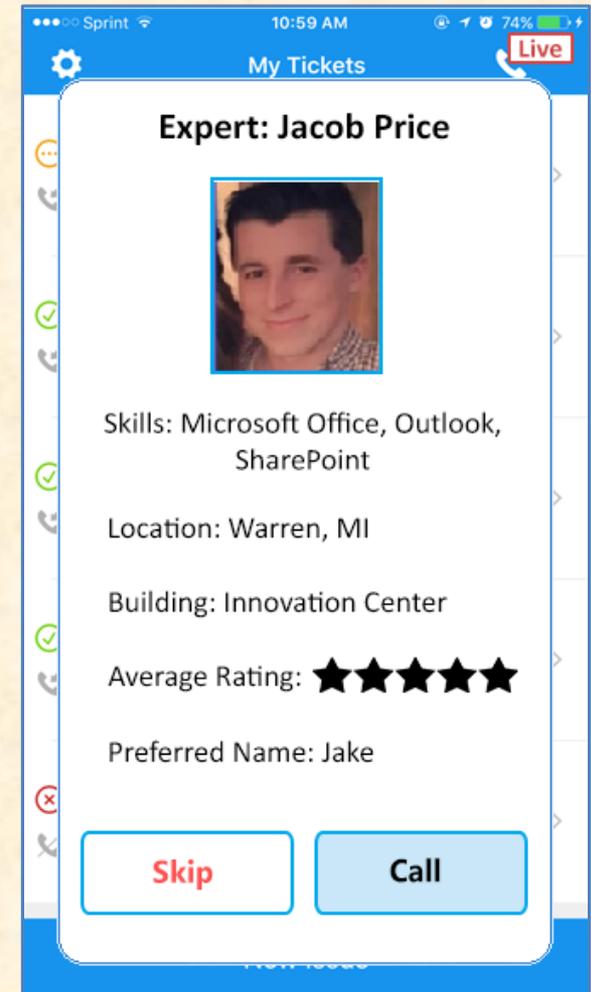


The image shows a mobile application interface for 'My Tickets'. At the top, there is a blue header with a gear icon, the text 'My Tickets', and a 'Live' status indicator. Below the header, a white card contains the question 'What issue are you having?'. A list of radio button options follows: SharePoint, PowerPoint, Excel, Outlook (which is selected with a blue checkmark), Word, Internet Explorer, and Other. At the bottom of the card is a blue button labeled 'Connect with Expert'. The background of the app shows a sidebar with various icons and a status bar at the top with 'Sprint', '10:59 AM', and '74%' battery.



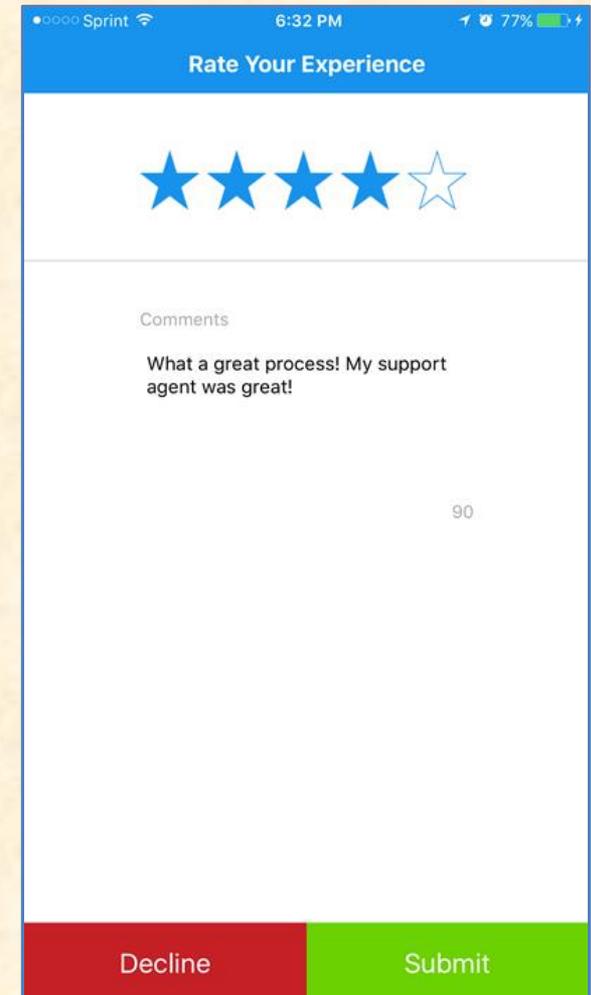
Screen Mockup: Expert Match

- Expert Info shown when found
- “Call” – launch installed Skype for Business App
- “Skip” – Skip current Expert and match another



Screen Mockup: User Feedback

- When the call is completed, prompt for user experience rating
- Ratings of expert recorded and sent to expert's web profile



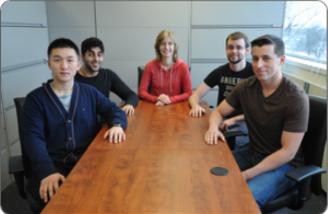
The mockup displays a mobile interface for providing feedback. At the top, the status bar shows 'Sprint', '6:32 PM', and '77%' battery. The main title is 'Rate Your Experience'. Below this is a 5-star rating system where the first four stars are filled with blue, and the fifth is an outline. A horizontal line separates the stars from the 'Comments' section. The comment text reads 'What a great process! My support agent was great!' and is followed by a score of '90'. At the bottom, there are two buttons: a red 'Decline' button and a green 'Submit' button.



Screen Mockup: Web Application



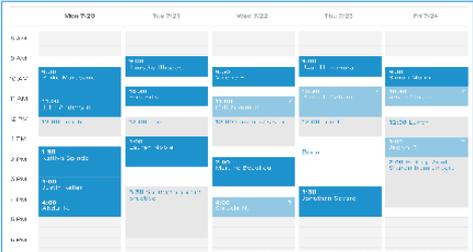
IT Expert Live Help



Team GM | Expert Profile

Online

Calendar Sync



Current Rating

★★★★★

Skills

- Microsoft Office
- Internet Explorer
- Skype for Business

Save

Feedback

★★★★★
Joe Dinkha (1/27/2016 - 3:16PM):
Thanks for helping me with my browser display issues!

★★★★★
Jenna Sanocki (1/15/2016 - 10:02AM):
I appreciate you helping me set up my Outlook signature settings.

[More Reviews](#)



Screen Mockup: Web Application

- Three-way toggle switch – available, not available, or “default”
 - Default: defer to expert’s calendar schedule
- Calendar display for the scheduling feature
- Current overall rating shown
- Skills shown – select from defined categories
- Recent feedback shown initially, link available to see history of more reviews



Technical Specifications

- Implement iOS app with capability to make Skype calls to a given Skype name
- Mobile app must be bug-free
- Implement web app to allow expert to set availability and expertise
- Web app must be reliable – experts must not get stuck in ‘available’ state

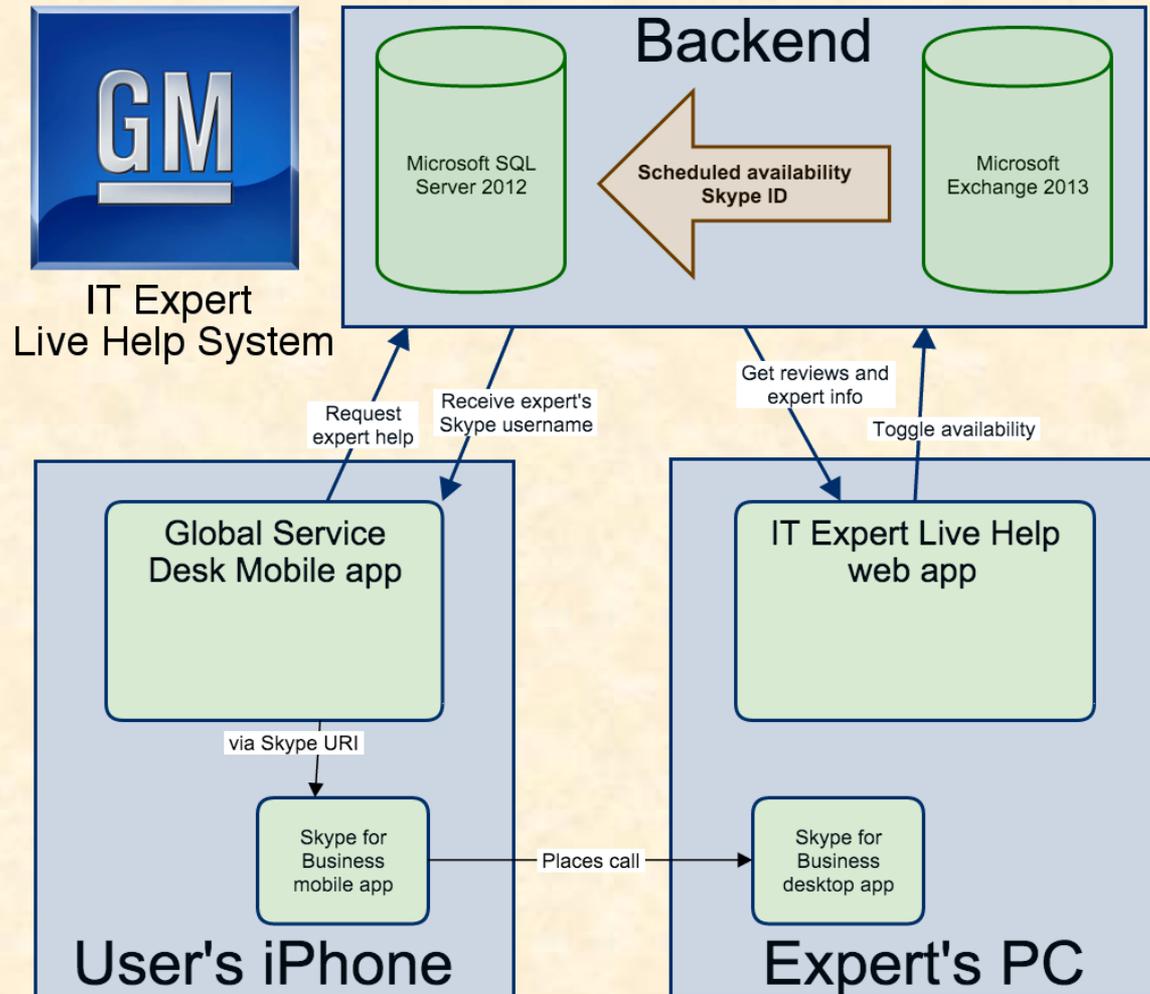


Technical Specifications

- Maintain database of experts and reviews
- Expert determined by matchmaking algorithm on the server
 - Looks for experts who are available, have experience with the topic, and are highest rated
 - Must scale well with 200k+ users
- Feedback system must accurately represent quality of service



System Architecture



System Components

- Hardware Platforms
 - iPhone
 - Any desktop or laptop computer
 - Dell servers
- Software Platforms / Technologies
 - iOS 6 and higher
 - Web browsers (Internet Explorer most importantly)
 - Windows Server '12, SQL Server '12, Exchange '13



Testing

- Mobile app: Check that all features work, ask volunteers to use app in different scenarios
- Web app: Set up several expert accounts, change their schedules and specialties, and request help – matchmaking should still work
- Server: Use Microsoft server administration tools (Best Practices Analyzer)
- Database: Confirm that manual test data matches app-generated data (compatibility)



Risks

- Interaction with existing codebase
 - Start early with loading and testing the existing app to keep all current functionality intact
- Integration of Skype API
 - Research into Skype developer tools
- Expert user data storage
 - Planning database schemas in advance to ensure all necessary data is stored and accessible



Risks

- Exchange calendar integration
 - Research into best practices for parsing Exchange calendars and efficiently, replicate GM account
- Scaling problems
 - Research into best practices for scaling servers with a high volume of users
- Server / development machine corruption
 - Frequent Git code commits, Google Drive asset uploads, and server backups

