

Summer Internship

May-June, 2018

Schlumberger

User Interface Designer at
Schlumberger - Pune India Technology Centre

Hassan Gundu
Communication Design 2017-19

IDC School of Design
अभिकल्प विद्यालय
IIT Bombay



The Foreword

The search for an internship was a tedious task. The options were to intern with a designer, artist, design firm or an organization. Also having enrolled with the Placement cell at IIT-B, I was able to land an Internship as a User Interface Designer (UI Designer) with the Oil field Giant -Schlumberger. Schlumberger is the world's leading provider of technology for reservoir characterization, drilling, production, and processing to the oil and gas industry. The interview process consisted of 4 rounds, where they tested my understanding of brief, visual sense, approach to design and my personality. Finally, on the 11th of July commenced the journey of my 4 week internship.

Prior to the Internship, I also got a chance to take up the Basic Mountaineering course at National Institute of Mountaineering and Allied Sports at Dirang. Operated by the Ministry of Defence, it is considered to be the toughest course of its kind in the entire sub-continent. I applied to the course an year ago to understand the mountaineering scenario in the country. This course is a must have for anyone who wants to make a mark in mountaineering and it's allied sports. Also, since my P0 project "Above little things"- The essence of climbing was based on the same. I was more than excited for this 28 day course which lasted from 07May - 07June, 2018.

My Acknowledgement

I would like to convey my gratitude to Schlumberger -PiTC for giving me the opportunity to intern with them. I would also like to thank my faculty at IDC School of Design for allowing me to pursue Internship and coursework at the place of my choice.

Special thanks to Chetan Pagare, Praful Malwale, Sudeep Srivastava and my Hackathon team at Schlumberger for constantly pursuing me to take better design decisions.

The Internship at Schlumberger

Job Title:

UI Design Intern

Duration:

4Weeks

Location:

Schlumberger, PiTC,
Pune

Objectives

To gain knowledge through real life experience in various areas of User Interface Design while keeping the end user in view

To understand the overall functioning of a Corporate Enterprise along with the roles and responsibilities of a UI Designer in this setup.

To work and deliver creatives as per the briefs and deadlines.

The Letter of Joining

Schlumberger India Technology Centre Private Limited

Office 301, 3rd Floor, Building 8, CommerZone
Samrat Ashok Path, Off Airport Road
Yerwada, Pune, 411006, Maharashtra, India
Phone : +91 20 6741 7900
www.slb.com

Schlumberger

Date: 31-January-2018

**To,
Hassan Kumar Gundu
Pune**

Subject: Internship Agreement Letter

Dear Hassan,

We are pleased to offer you internship with Schlumberger India Technology Center Pvt. Ltd for duration of 1 month starting from **11/06/2018** or on successfully passing of the medical examination. A notice period of 3 working days have to be served in the event of an early termination of this internship agreement.

Located in Pune, you shall report to **Sudeep Srivastava, Delivery Head- Mobility Solutions**

You will be eligible to receive a monthly stipend of **INR 25,000** (subject to Tax regulations). You will be provided with housing, travel to Pune by first class train or economy class air fare, transportation to and from the office and breakfast and dinner at your place of accommodation or hotel.

The offer is subject to satisfactory completion of:

- A medical examination by a doctor of our choice, which will be conducted prior to the commencement of the internship.
- You shall be required to produce the documents listed in Appendix 1 of this offer. Please let us know if you do not have passport and degree certificate (at least provisional).
- Your acceptance of further documents pertaining to Schlumberger Code of Ethics and Confidentiality of information.

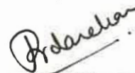
Please note that this letter is for the requested internship for the period described above only and does not constitute an offer of employment or guarantees employment with Schlumberger at a future date.

Please indicate your agreement and acceptance to the above terms by signing the duplicate of this letter and returning it to us as your acceptance thereof.

Congratulations and we wish you all the best in your future endeavours.

Sincerely,

Agreed & Accepted,



Priyanka Prabhu Desai
PITC Talent Acquisition Manager

Name:
Date:

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The Introduction

I would like to convey my gratitude to Schlumberger -PiTC for giving me the opportunity to intern with them. I would also like to thank my faculty at IDC School of Design for allowing me to pursue Internship and coursework at the place of my choice.

Special thanks to Chetan Pagare, Praful Malwale, Sudeep Srivastava and my Hackathon team at Schlumberger for constantly pursuing me to take better design decisions.

Also, heartfelt thanks to all my Instructors at NIMAS and teammates during my course there for pushing me in the most difficult of times.

About Schlumberger

*Spelled as **Sch-lum-bur-zay**, they are the world's leading provider of technology for reservoir characterization, drilling, production, and*

They are in the business of helping their customers find and produce oil and gas in ways that demonstrate respect for both people and the environment, since 1927. The long-standing pioneering attitude of the Schlumberger founders made its way to India in 1933 and has never stopped growing since.

They hire the best and the brightest, offering them rewarding career-long development opportunities, with work locations in more than 85 countries. Schlumberger has always embraced new ways of thinking and understands the need and the challenges faced for new ideas, techniques and solutions.

Schlumberger operates three technology centers in Pune that are focused at creating a digital backbone for the company and deliver technology focused solutions for the Schlumberger enterprise. The centres are as follows:

- *Pune India Technology Center (PITC)*
- *Pune Technology Center (PuTC)*
- *Schlumberger Technical Services India (STS-I)*

Products

Seismic
Drilling
Characterization
Completions
Subsea
Production
Processing and Separation
Well Intervention
Reservoir Testing

Company's Profile

Founded in 1926
by two French
brothers, Marcel and
Conrad Schlumberger

**Operates in
85 countries**

Chairman and CEO
Paal Kibsgaard

**Incorporated in
Curacao**, a Caribbean
offshore haven with
ties to the Netherlands

Has a **long standing
policy** against
donating to political
parties or candidates

Market capitalisation



Revenue 2014



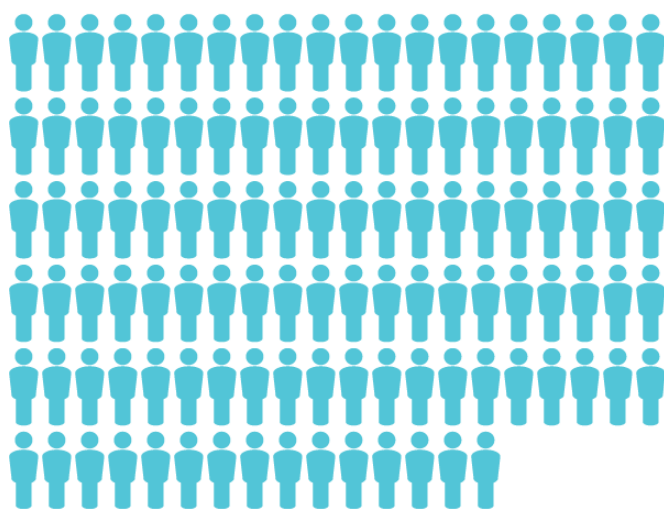
Pre-tax profit 2014



Tax paid 2014



Number of employees



One figure = 1,000 employees

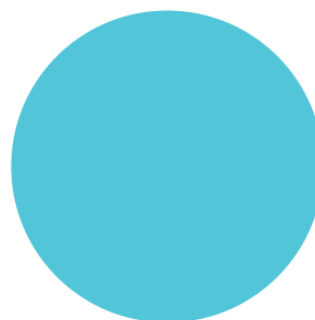
**Top institutional
investors**

Vanguard
5.92%

Dodge & Cox
4.49%

State Street
4.48%

**Wellcome Trust
investment**



**Bill and Melinda
Gates Foundation
investment**

● **\$3.7m**

Source: The Guardian

Global Footprint

● Significant areas of business

● Principal offices

Straddling multiple jurisdictions, Schlumberger has four "principal offices" on both sides of the Atlantic

● Other offices

Schlumberger has offices in some of the most challenging parts of the world, including countries that score poorly on Transparency International's annual corruption perceptions index

● Offshore havens

Ultimately incorporated in Curacao, the tiny island in the south Caribbean, Schlumberger routes its companies through subsidiaries in offshore havens

● US sanctions

Schlumberger has been served with a \$232m penalty by US authorities for doing business in both Iran and Sudan between 2004 and 2010



1 Canada

A strong presence in Canada's controversial development of oil sands

2 US

Has been instrumental in the so-called shale revolution, pioneering fracking techniques

3 Russia

Was behind a major oil discovery in the Russian Arctic last year

4 Iraq

Worked with BP to develop Rumaila, one of the largest oilfields in the world

5 Saudi Arabia

One of Schlumberger's key markets, especially today as the petrostate pushes its oil production to record-breaking highs

6 China

Has already moved to take advantage of China's push to explore for potentially vast reserves of shale gas

Team

Mobility Solutions teams are being built out in Houston and Pune.

I was asked to Join the Mobility Solutions team at Schlumberger. The team aims to leverage mobility solutions to make a paradigm shift in the manner in which its workforce will service the customer, transact and execute.

More than 70% of Schlumberger's business is conducted in remote Oilfield locations in the 85 countries it operates in. More than 200 applications currently support its Operations, Manufacturing and Shared Services arms of the this giant company.

As its strategic objectives, Mobility Solutions aims to significantly improve operational efficiency, improve safety and accelerate time to market across this complex suite of applications which cover CRM, Supply Chain, Finance, asset tracking and maintenance, people management and resourcing.



Sudeep Srivastava
Manager



Julie Lowe
Lead UX Archi.



Chetan Pagare
Sr. UI Designer



Praful Mawale
Sr. UI Designer

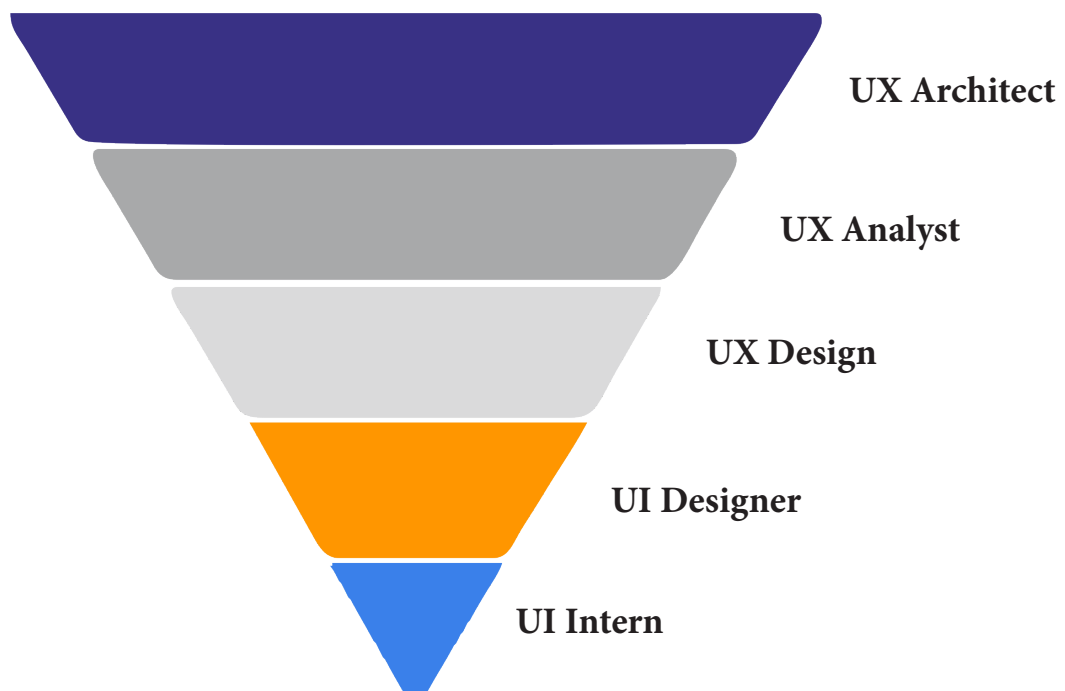


Rahul Patki
Developer



Vivek Bhawe
Developer

Structure



The Ux Team - Houston

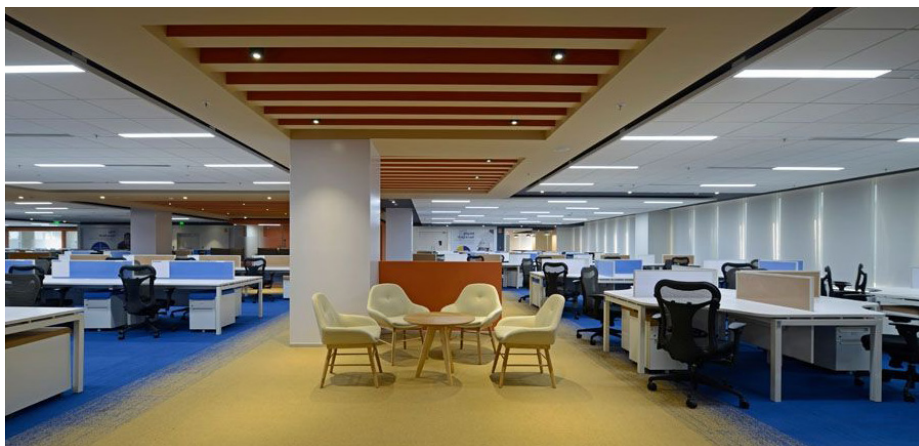
The team at Houston for Mobility Solutions is lead by Julie Lowe, the lead UX Architect, followed by Sally and the intern Thomas along with others.

Julie is primarily the one who goes on trips across the fields and gains user stories and inputs from the field.

All the research for the Projects occur at Houston.

Also, the paper prototypes and wireframes are sometimes solely designed by the Houston team, or on the other occasions as a collaboration between PiTC and the Houston office.

The Office



The PiTC and PuTc working space

Key Responsibilities of the Role

- Understanding the existing brand guidelines laid down by the company to produce new ideas and concepts and developing assets for Schlumberger's varied kind of Mobile Application
- Prepare rough drafts and present the ideas to team at Houston
- Using the complete and available understanding of the subject at hand to work with the design brief within the constraints of cost and time
- Pick visual cues from the existing applications and improvise on the same.
- Submit designs for approval by the chain of command
- Collaborate with the entire team to produce accurate and high quality work
- Demonstrate illustrative skills with rough sketches and working on layouts whose wireframes have been done.

The Projects

During the period of my internship I primarily worked on the ***PowerDrive Project***. In this section I will focus on the work carried out in individual weeks which also includes a ***Hackathon*** too which had 100+ teams, 400 participants across 32 centres of Schlumberger across the world.

Week 1 - Onboarding

Things Carried out:

The **Official Orientation** and Official formalities with special emphasis on HSE i.e Health, Safety and Environment. Which forms the core of Schlumberger.

Getting familiar with **IOS Design** guidelines and framework.

Understanding the **existing brand guidelines** of schlumberger.

Going through the books provided including **Universal Principles of Design, The Design of Everyday Things and Don't Make me think.**

The Difference between UX and UI and how both the fields are different.

MOBILITY SOLUTIONS Design Guidelines

iOS | iPhone

DRAFT

Schlumberger

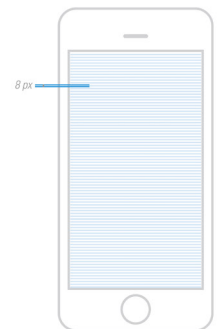
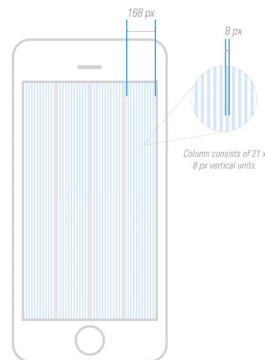
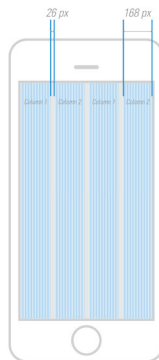


iOS_iPhone_Mobility Solutions Design Guidelines_v1

Our grid is built with a **4 column split with 26 px gutter**.

Each column is 168 px wide, divided into **21 x 8 px vertical units**.

We're also employing an **8px baseline grid** to help with vertical alignment of page components. Slavish adherence to the baseline isn't necessary for all typography but it does help to create vertical rhythm on the page.

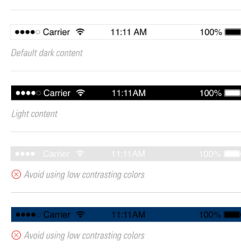


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Choose a status bar content color that coordinates with your app. Ensure that significant contrast is always seen between the content and background color.

Prevent scrolling content from showing through the status bar. To give users the impression of spaciousness while still ensuring maximum readability, make sure the status bar has a background that obscures the content behind it.



Try not hide the status bar, hiding the status bar means that the user must switch away from the app to read the time or to find out whether they have a Wi-Fi connection.



Avoid hiding the status bar

Hiding the tool bar is ok for quick actions like short media watching.



Hiding the status bar is ok for quick actions media

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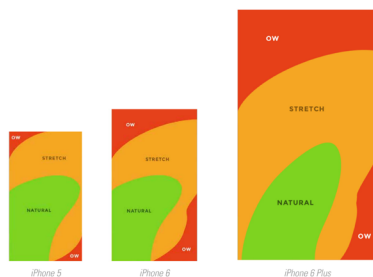
42

THUMB ZONE

Research from Steven Hoober, author of *Designing Mobile Interfaces*, concluded that the majority of users prefer to use smart phones one-handedly. The term Thumb Zones derived from this research following the most common use case:

- one handed use
- right thumb on the screen
- thumb anchored in the lower-right-hand corner

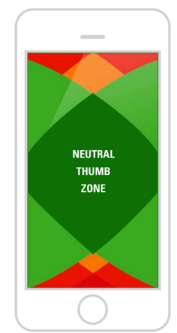
The Thumb Zone inherently changes with each user and device as hand size and screen dimensions differ with each and every user. The trick is to find an average range and aim to keep your mobile design patterns as friendly as possible in larger or smaller use cases.



THE NEUTRAL THUMB ZONE

Research indicates that approximately 90% of mobile users are right handed.

The neutral thumb zone targets doesn't just cater to righties, but also equally accommodates lefties. However, with only 10% of users being left-handed, the need often seems to fall to the wayside as we design for the largest audience.



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Week 2 - PowerDrive

Things Carried out:

Going through the brief given by the lead architect Julie Lowe, and understanding the Powerdrive system.

Creating various options for icons of PowerDrive.

Creating High Fidelity Screens for Low Flow and High Flow.

Working on Animations of Switching the Flow of the PowerDrive.

The Brief:

What does the app do?

The primary feature of the app is to help directional drillers with the timings of downlinks which are sent through downlinks which are specific patterns created by either (1) alternating the pump speed between a high flow rate and low flow rate or (2) alternating the motor rotation between a high rpm and low rpm.

Why will the app exist?

Schlumberger has started to rent some of the directional drilling tools, specifically the PowerDrive family. This tool allows the directional driller to steer the bit. The app will assist with the timings needed to send downlinks. Since the tools are being rented, the people operating them are not Schlumberger employees and do not have Schlumberger specific training. The app will be a companion to help them steer the tool successfully.

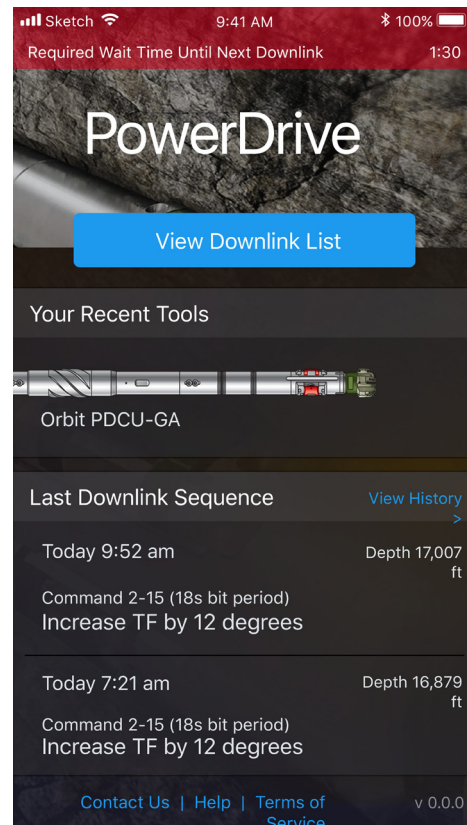
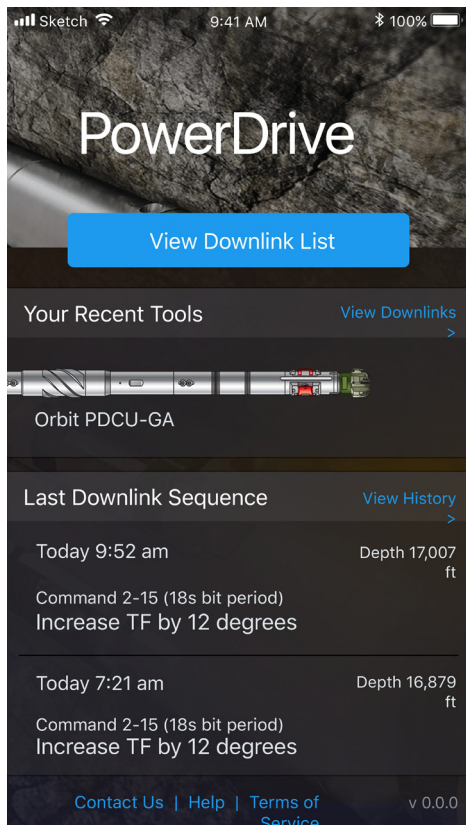
Who will use the app?

- * Directional drilling Schlumberger customers (existing and potential).
- * Directional drilling SLB employees

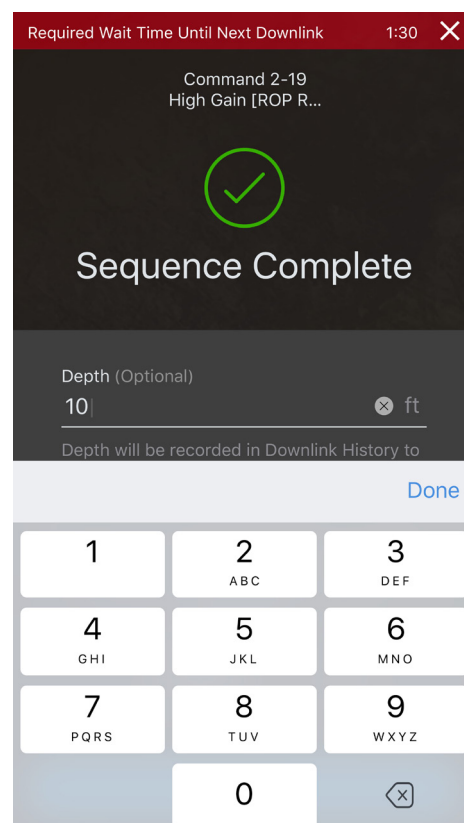
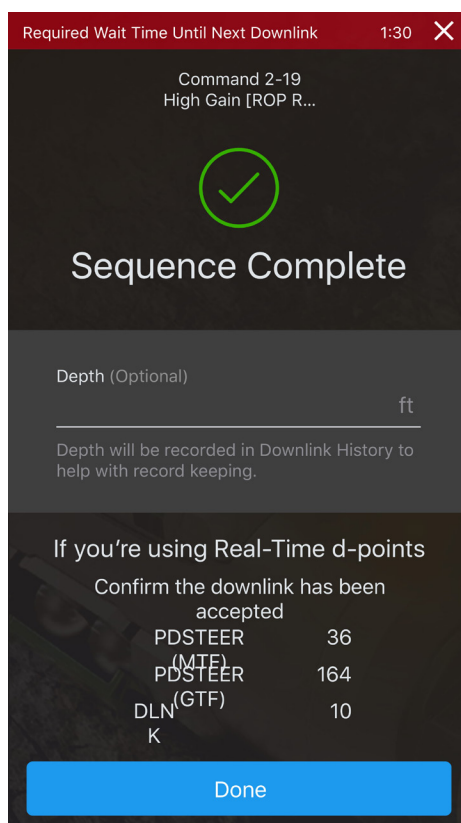
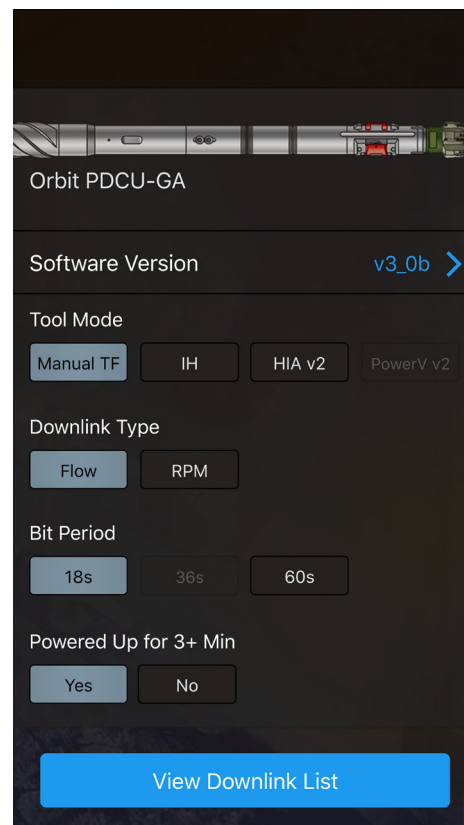
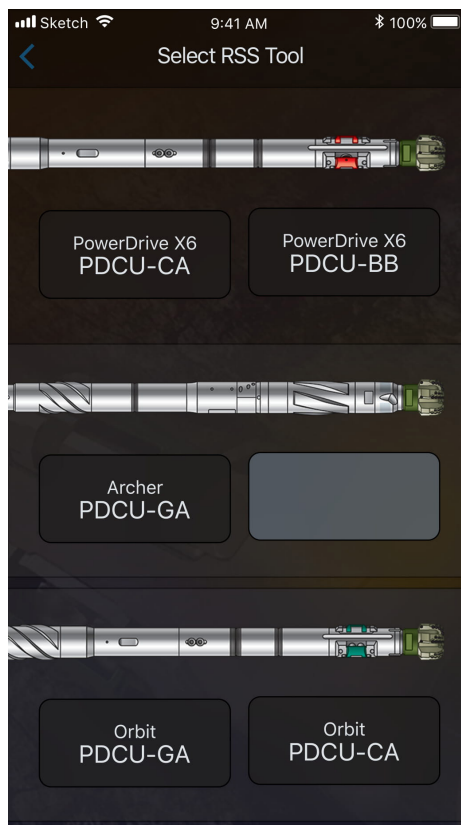
Keywords

Drill to plan, Azimuth, Inclination, Steering Ratio, Toolface, Precision, Guidance, Focus, Timing, Downlink, Alternating, Flow Rate, Directional Drilling, Kickoff Point

The Screens Built:



Screens for Viewing the Downlink list



***Clockwise:** Selection of RSS Tool, Selecting the drill mode, Screens to manually enter the depth of drill, Downlink acceptance*

Required Wait Time Until Next Downlink 1:30 X

Command 2-19
High Gain [ROP R...

Sequence Complete

Depth
100 ft Save

Depth will be recorded in Downlink History to help with record keeping.

If you're using Real-Time d-points
Confirm the downlink has been accepted

PDSTEER	36
(MTE) PDSTEER	164
(GTF) DLN K	10

Done

Required Wait Time Until Next Downlink 1:30 X

Command 2-19
High Gain [ROP R...

Sequence Complete

Depth
100 ft Save

Depth will be recorded in Downlink History to help with record keeping.

If you're using Real-Time d-points
Confirm the downlink has been accepted

PDSTEER	36
(MTE) PDSTEER	164
(GTF) DLN K	10

Done

Required Wait Time Until Next Downlink 1:30 X

Command 2-19
High Gain [ROP R...

Cancelling Downlink

Depth
100 ft Save

Depth will be recorded in Downlink History to help with record keeping.

You will receive a notification after the remaining time for the cancelled downlink and the waiting period between downlinks is complete.

Done

Sketch 9:41 AM 100%

Contact Us

First Name*

Last Name*

Company*

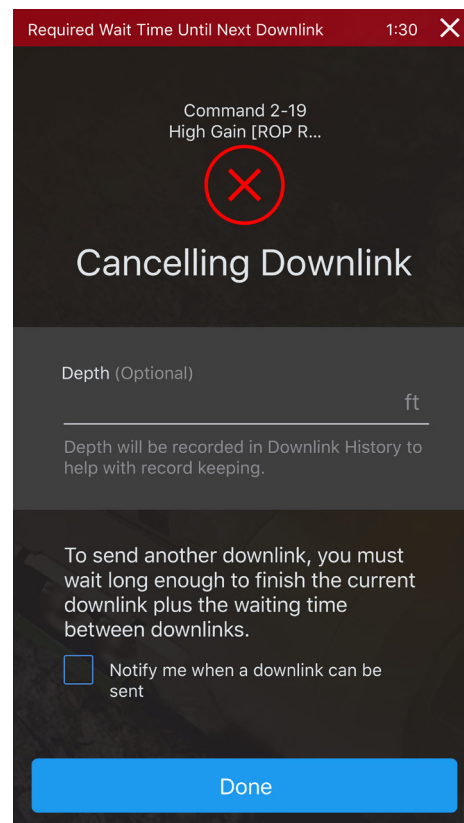
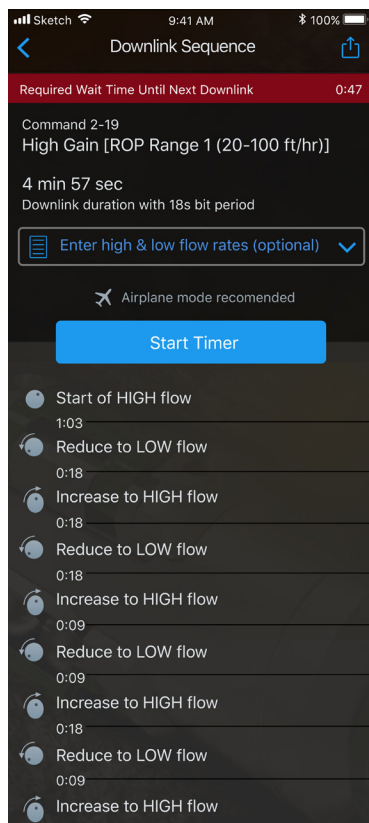
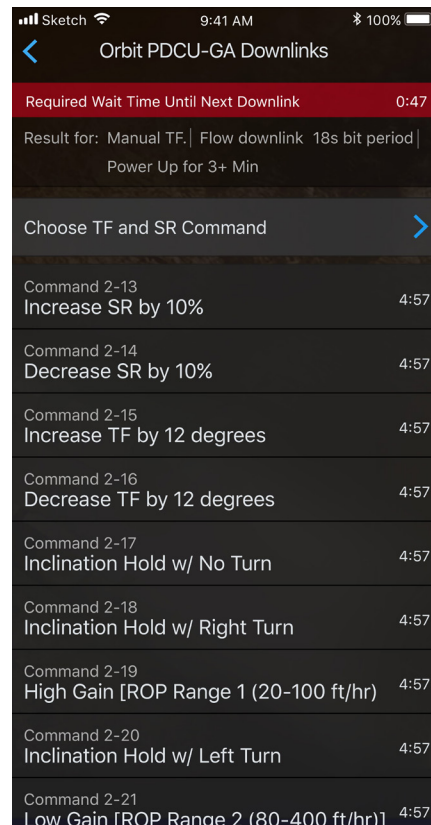
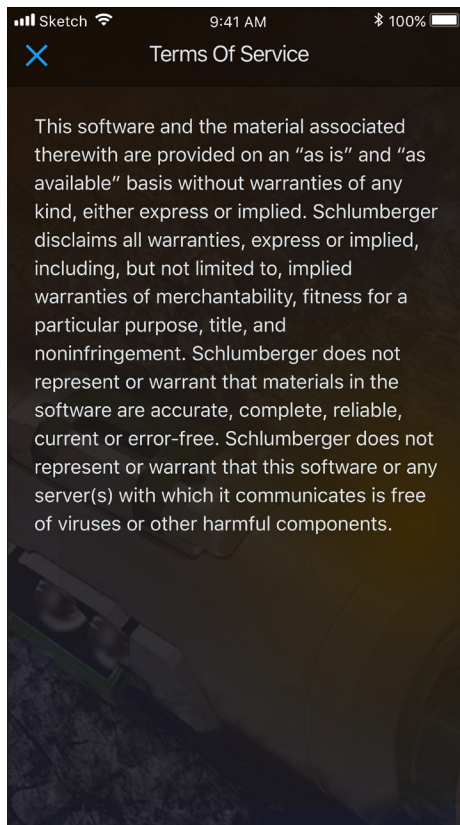
Phone Number

Email*

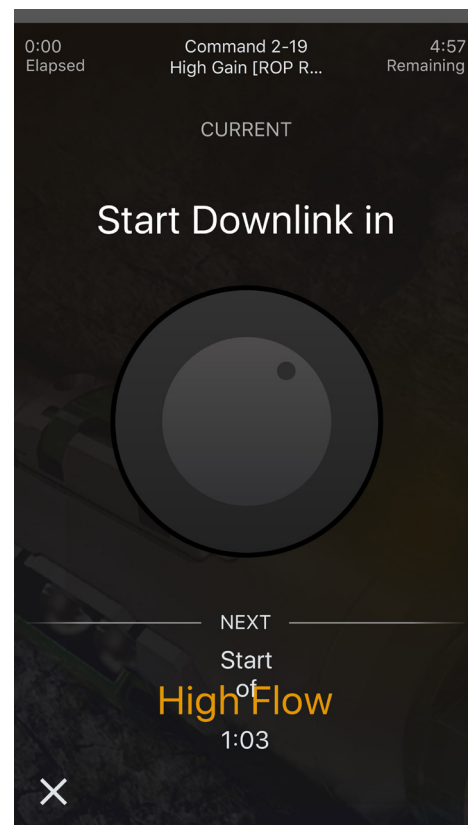
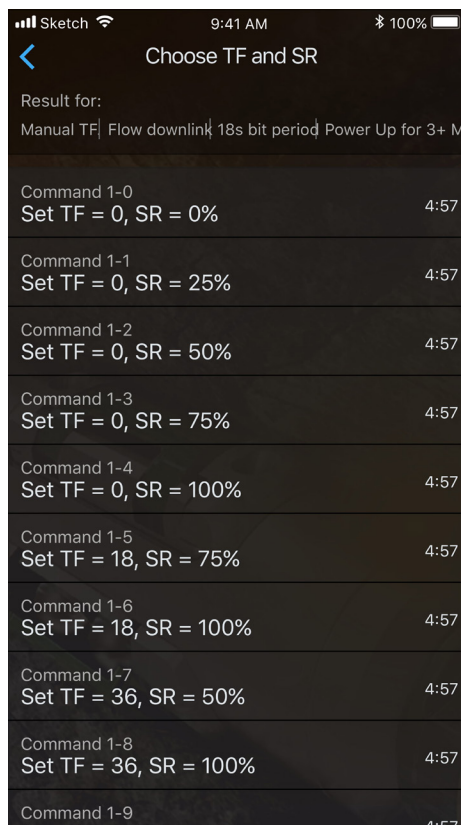
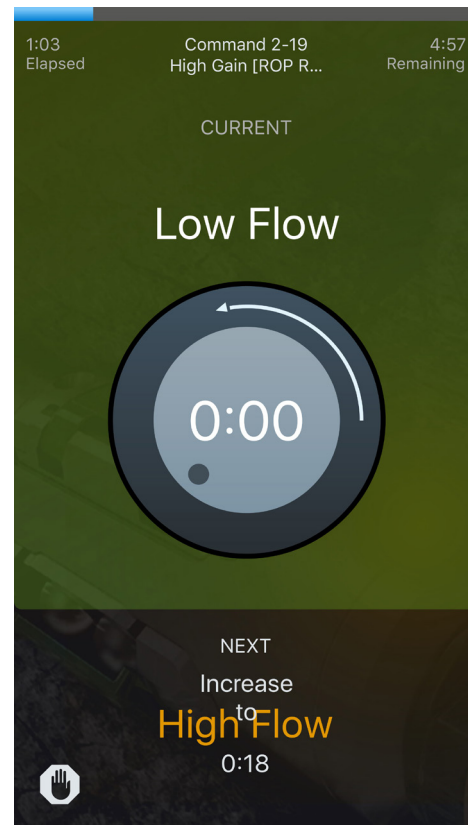
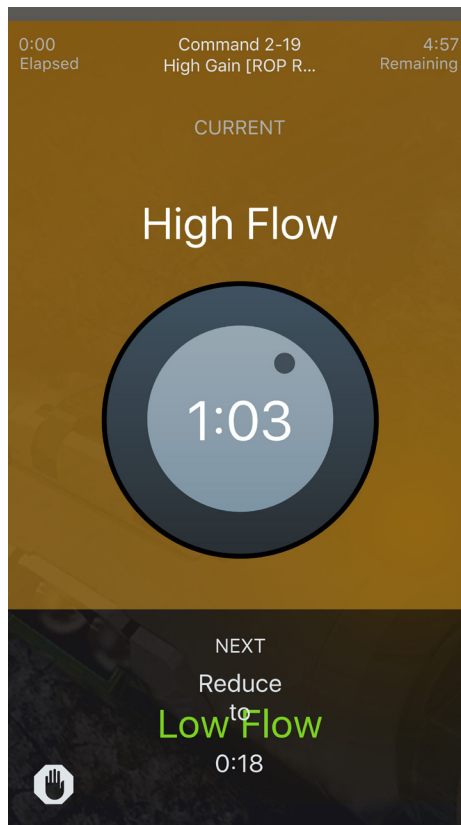
Feedback or Comments

Send

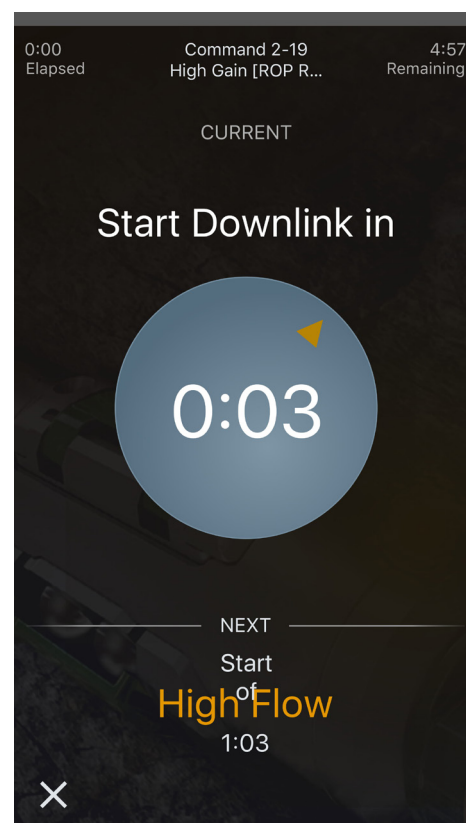
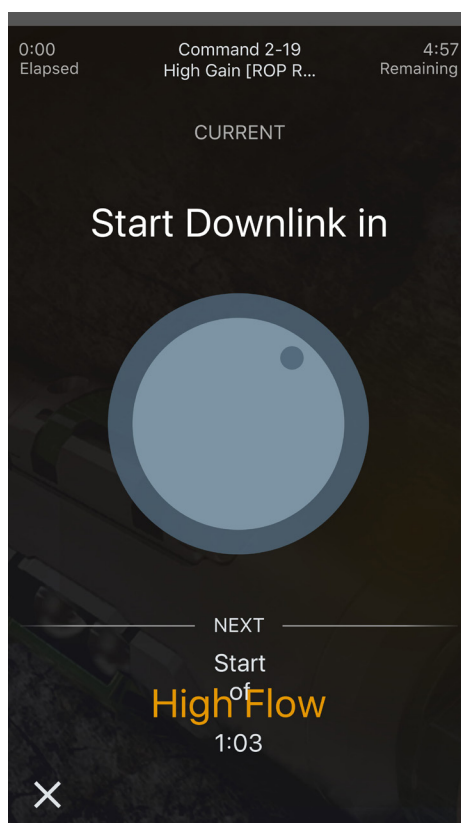
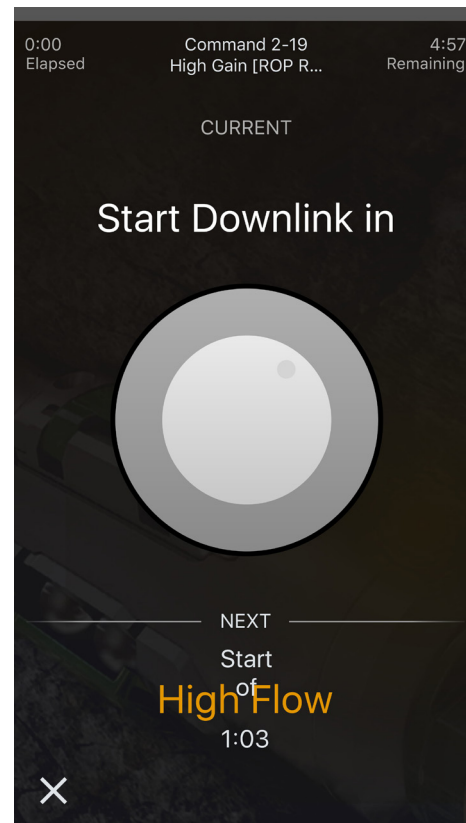
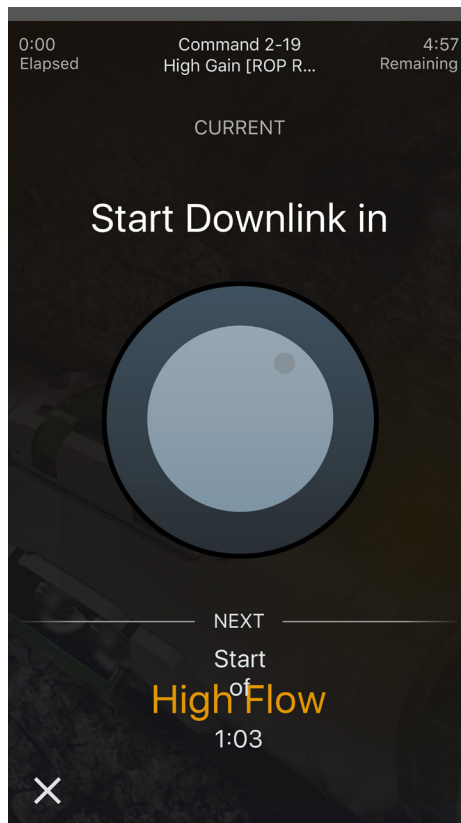
Clockwise: Screen to demonstrate save option when inputs are given, A Contact us screen, Cancelling Downlink Screen



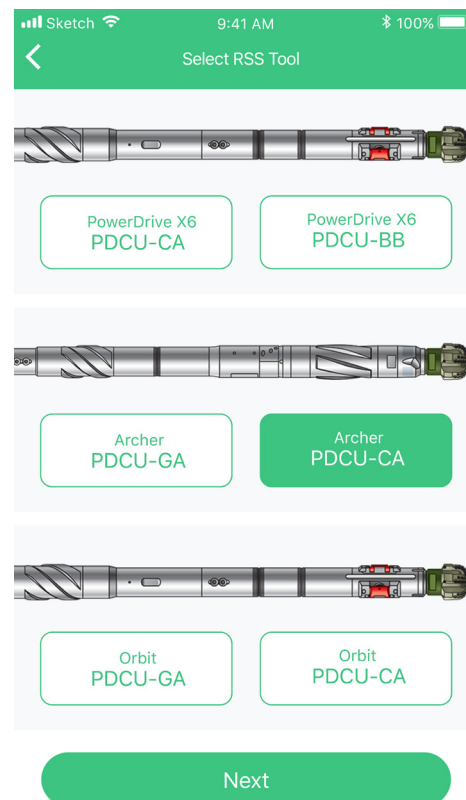
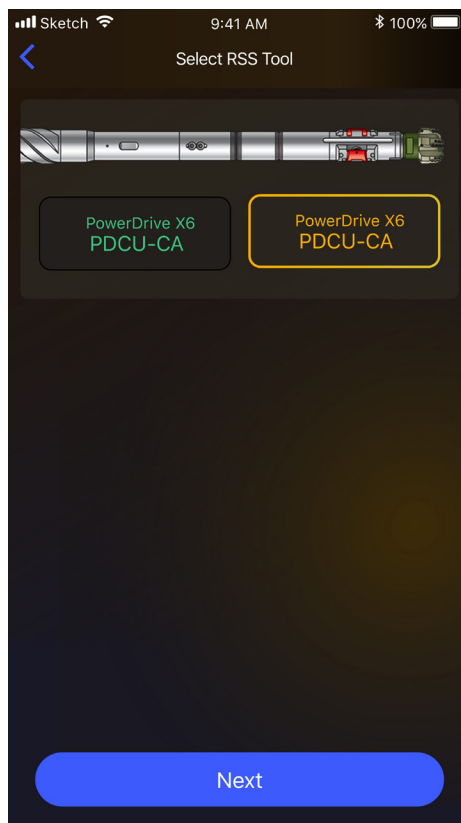
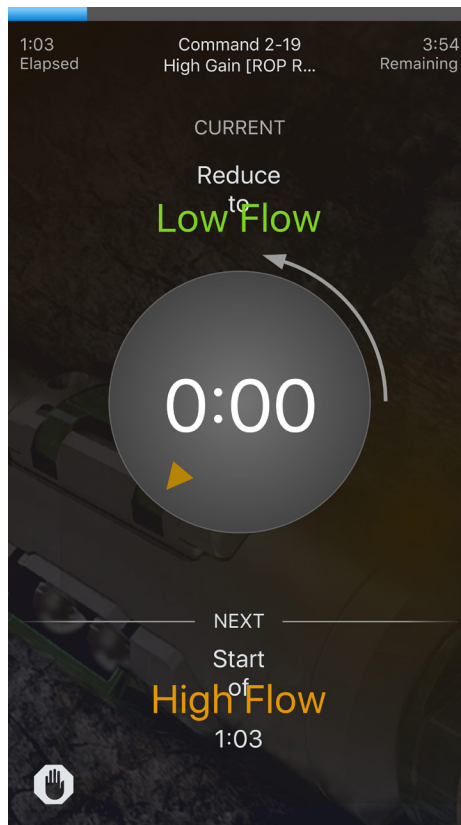
***Clockwise:** Terms and Conditions Screen, Orbiter's Commands at Glance, Downlink Sequence Initiator, Cancelling Downlink when fields are empty*



***Clockwise:** Screen to demonstrate reducing to Low Flow, Screen for Switching to high flow, Initial Screen of Flow, Choosing the Tool Face and SR ranking.*



Clockwise: Screens to demonstrate different kinds of Knob Options available



Clockwise: Knob Option, Tool selection variant 1, Tool Selection variant 2, Tool selection variant 3.

Variant:
White on Blue



Variant:
Solid on White



Variant:
Outline



Variant:
White on Black



Variant:
Blue on Black



Variant:
Blue on White



Variant:
White on Blue



Icon abstracted
off the idea of
Azimuthal and
Inclination Angles



Icon abstracted
off the idea of
Rotational
function
of the drill



Icon abstracted
off the idea of
Conical drill bits
and Rotational
function
of the drill



Icon abstracted
off the idea of
fluctuations
between high
flo and low
flo of PowerDrive



Icon abstracted
off the idea of
Conical Drills

Images: Icons created for PowerDrive

Week 3 - Adding Hackathon

Things Carried out:

Wireframing and fine tuning the PowerDrive screens based on inputs by the lead UX team.

Participating as a UI Design person in the Hackathon for 72Hrs. Using Microsoft ***PowerApps and Azure Cloud.***

The Hackathon project was guided by Fabien Houeto, where an internal fitness app needed to be designed by the Mobility Solutions team.

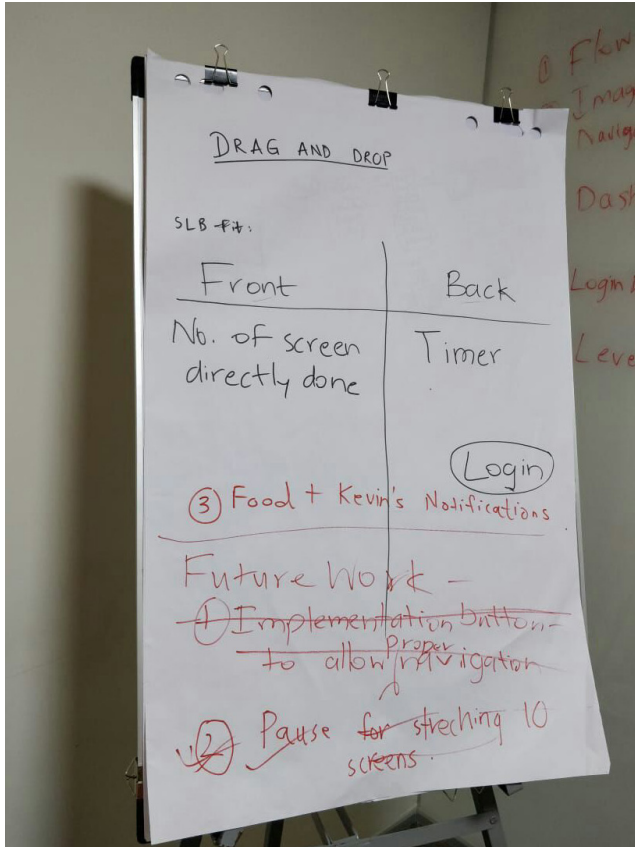
The Abstract for the Hackathon:

A major issue observed these days is the sedentary lifestyle of the employees. Throughout the day employees are constantly engaged in their work which restricts their physical movements. Also, by the time they are done with the office hours they are already tired and are left with little to no motivation to engage in active physical activities such as walking, hitting the Gym, cycling etc. This eventually takes a toll on their health and leads to many health-related issues and conditions which develops over time.

Even though the office space is huge, the employees hardly tend to move around because of work and even for people with motivation to move around (like to talk to a colleague), they seldom do as the various collaboration tools (lync, Team) encourage them rather to exchange information remotely rather than face to face. One way to break a habit is to create a system which promotes and develops new habits in place of the old ones. And this system is exactly what we are looking at.

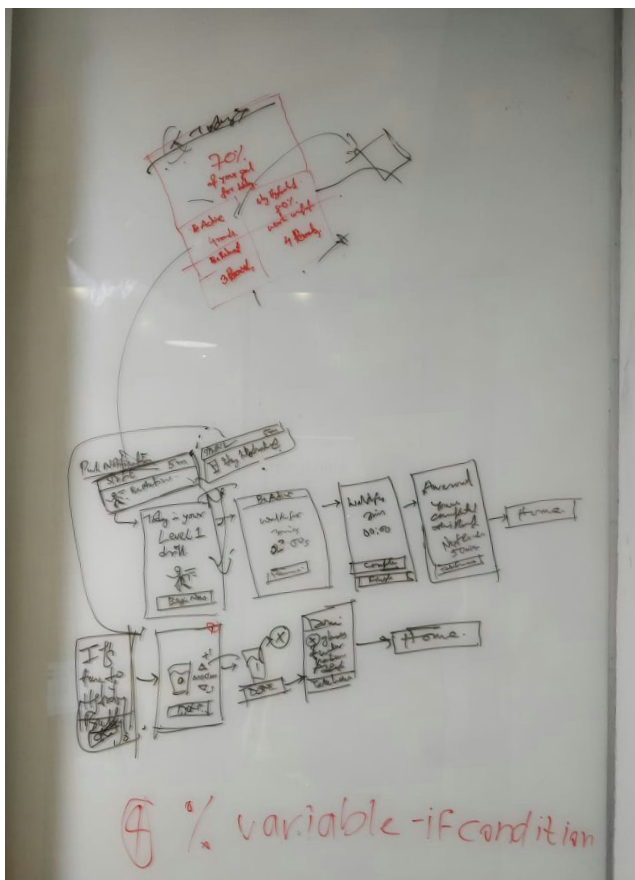
The system or the app that we are proposing aims at promoting healthy habits to the employee, by sending him/her regular reminders and notifications. The notifications will be about being more active, hydration / food choices, reducing stress levels, improving work ergonomics and seasonal updates.

We would have various modules reminding employees about different habits. The Active Module will consist of reminders about moving around the floor space/ area at regular intervals. The Hydration / food module helps the employee track their water intake throughout the day such as the number of glasses of water /day and making healthy food choices. The stress module will consist of notifications which persuades the employees to take breaks during extended periods of time. The Work ergonomics will contain reminders regarding sitting postures, stretches etc.



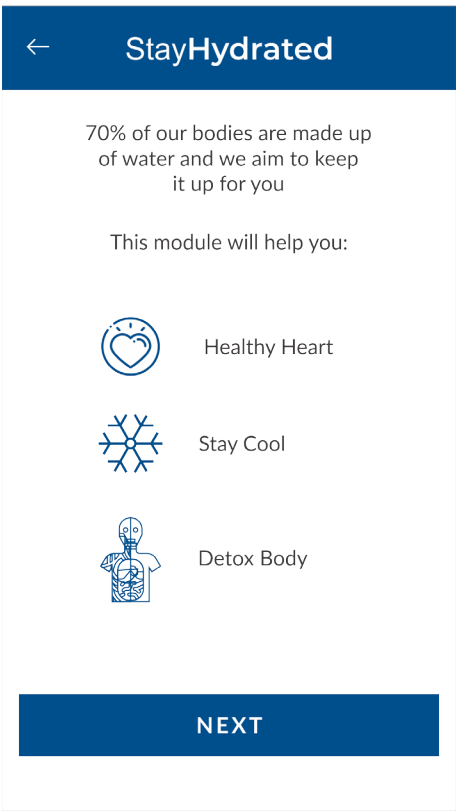
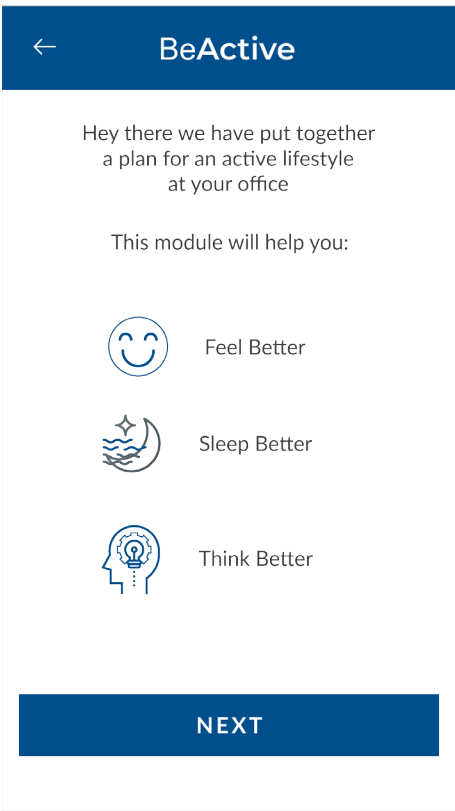
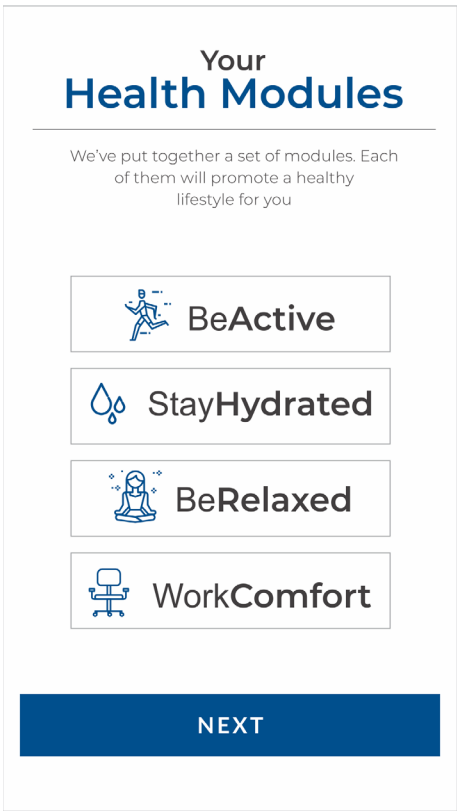
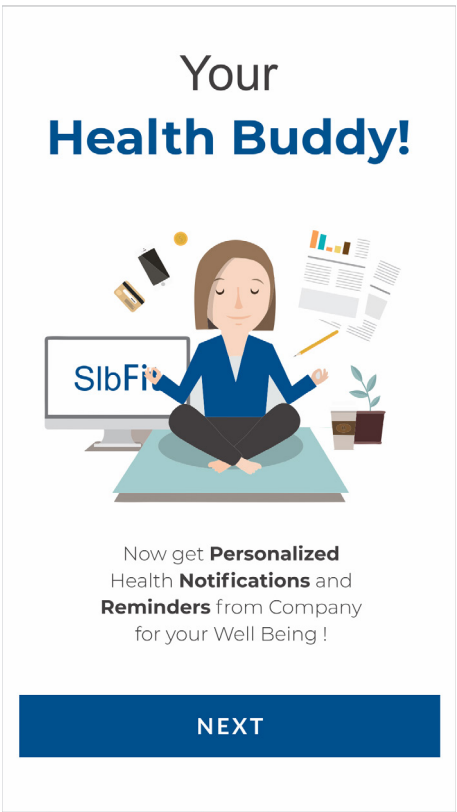
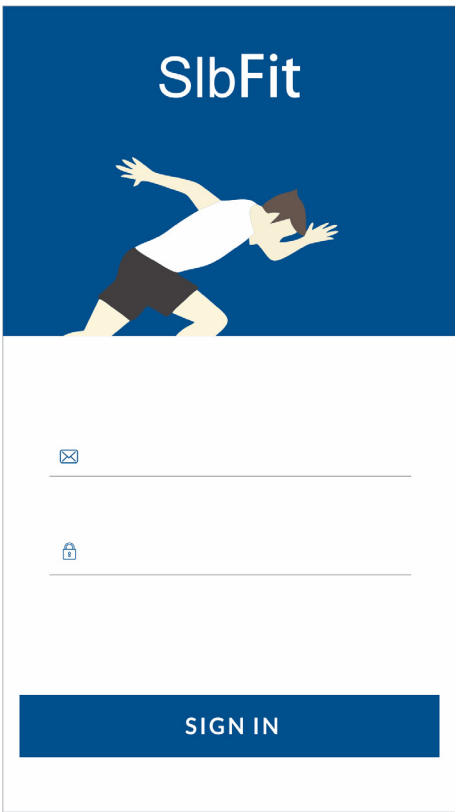
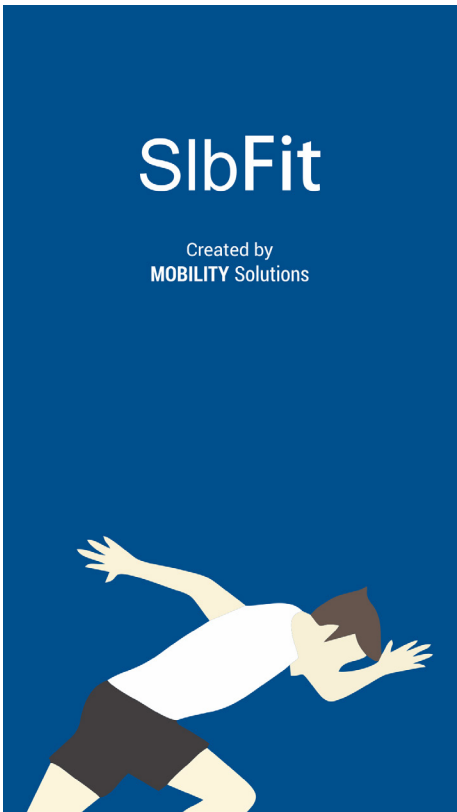
The seasonal updates module will push important notifications to the employees (e.g. during important air quality issue period, during any pandemic outbreak, during extreme heat period, etc.). All these notifications can either be built in the application or be pushed in by the HSE department.

The proposed system main value for SLB are two folds. It enables HSE people to have an efficient communication with the employees and enable them to promote healthy lifestyle habits. The second reason is that people form the basis and backbone of any successful company. Investing a bit of technology and resources in improving their health will in turn boost productivity in the long run and create a healthy work-environment.

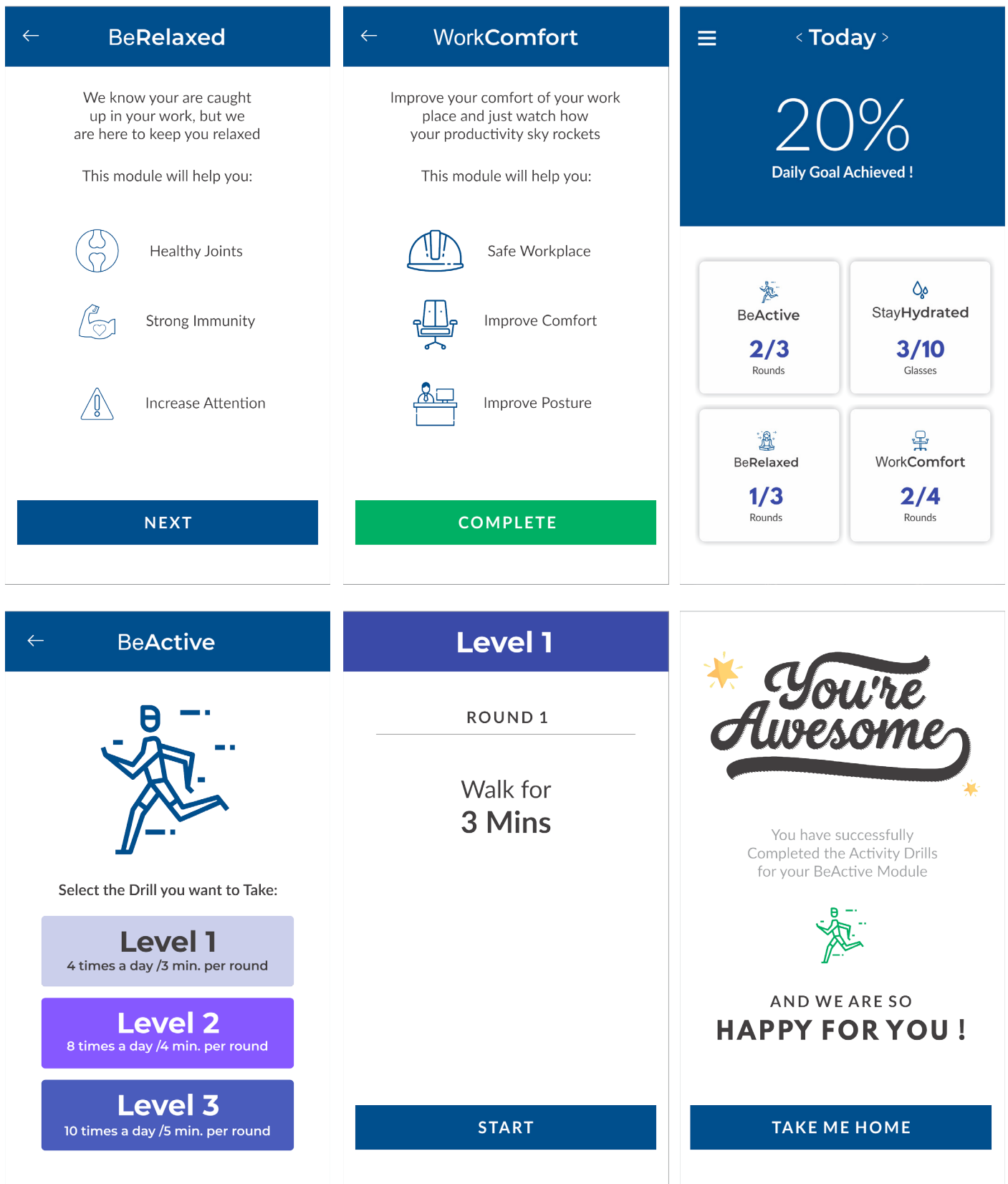


- ① Flow Finish - Rough
- ② Image of each screen - Hassan
- ③ Navigation - coding - J, V, R
- ④ Dashboard - Screen + Backend - tomorrow
- ⑤ Login Backend with Excel - tomorrow
- ⑥ Level-2 & 3 - screen


Images: Photographs taken during the Hackathon.



Images: SlbFit's Splash, Login and Guide Screens




Clockwise: SlbFit's Guide Screens, Dashboard and Be Active Module



It's
Time to
get you
**Hydrated
Buddy!**

GOT IT

← WorkComfort



TODAY'S GOAL
2/3
Rounds


or

TAKE DRILLS

Next Round at
4.30PM

← WorkComfort

PLEASE CHECK
YOUR SITTING POSTURE




- ✓ Shoulders Relaxed
- ✓ Back Support
- ✓ Thighs Horizontal

START STRETCHES

WorkComfort

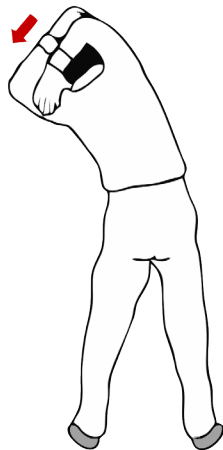
DO THE FOLLOWING
STRETCHES



NEXT STRETCH IN

WorkComfort

DO THE FOLLOWING
STRETCHES



NEXT STRETCH IN

Clockwise: SlbFit's Hydration and Be Work Comfort.

The Learning So Far...

One of the goals of every student is to land a successful and learning internship which gives him a good insights into the working of the industry and that is exactly what I was able to achieve in my journey so far here at Schlumberger.

Being a student of Communication Design here at IDC School of Design, IITB, my skill set was befitting for the post that I had applied for.

But I was in the dark to what actually happens in the real world, with questions constantly coming to my mind such as “Is my work good enough?”, “What if I make mistakes?”, “Can my work and thought process be actually used in making a product in real world?” and how change in requirements can affect the whole design.

My first week was where a lot of learning occurred as I was subjected to some of the most prolific books in the field of design, following was my first chance of gaining insights into the world of Apple’s design. Also in this very time I learnt to work within constraints of an existing brand guideline.

During the Hackathon, I learnt how different developers think compared to designers. How a lot of people don’t know that this is what exactly it is what they want till they actually see it. Guided by Fabien Houeto, it was good to know that your opinions as a designer also matters a lot.

The Bi-weekly meetings scheduled over skype with the Houston UX team, along with data and inputs from the actual field helped understand, “How wrong it is to make assumptions when it comes to user” and there is no such thing as a stupid user but only a stupid designer. It is his job to think holistically about his approach.

Initially everyone was unknown but as soon as I started producing work I was able to catch the attention. The office culture was extremely relaxed, probably the best corporate experience for me till date.

“You make Decisions of your own, backed by a process and rationale”

After the first week things started to get a little overwhelming and then I was free of structure. Once I received a brief synopsis of a project, it was pretty much up to me to make a plan and use the skills I have learned to move the project forward. And neither my manager or my mentor was there to give me a step by step guide of what to do. It was upto me to backup my design decisions.

“You create your own constraints, deadlines and deliverables”

You shouldn't expect the manager to tell you what needs to be get done. Because if you lack the initiative, it shows that you ain't interestred in your work. Also, Design School and Job are totally different, sometimes you simply have to agree to the stakeholders demands, you can't always hold your fort !

“You can make mistakes and will make them, but always make the habit of learning from them”

Being an Intern people will expect you to make mistakes and still be okay. No one is expecting you to know everything. In fact, they want you to explore more as you are a fresh mind to the company. They even encourage you to fail as often (and quickly) as possible in order to improve and become a better designer over time.

“Learn to take Leadership in the critical of times, accept challenges and never be afraid to ask for help”

During the crunch times such as Hackathon, when teams often fall apart, people are always looking up for someone to take up the front. At that time, one should not back out of that responsibility but instead step up for the same and sort out the issues, and always no matter how good you are at your work never shy away from Help.