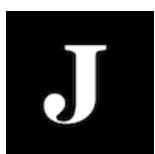


Audi MIB2+ User Testing

TIANCHEN QIANG
October 2017



OVERVIEW

When the development of MIB2+ gets to the end, it is a good time to review the current system. By doing the user testing, the Audi HMI designers can have a better understanding on what problems the system has now and what improvements the system can be done in the future.

GOALS

1. Define MIB2+ main problems
2. Generate an overview for MIB2+ each function
3. Summarize design concepts for in-vehicle infotainment system

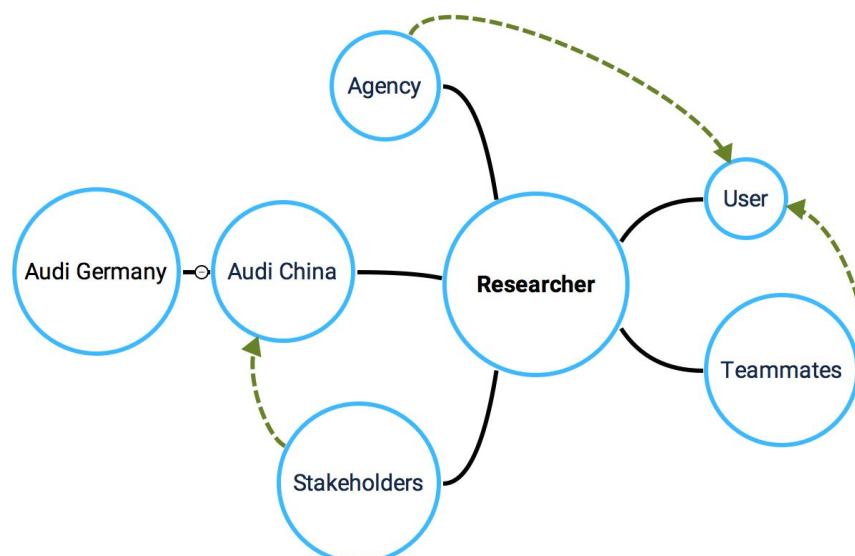
DURATIONS

6 weeks.

PARTICIPANTS NUMBER

10 people.

PEOPLE RELATIONSHIPS

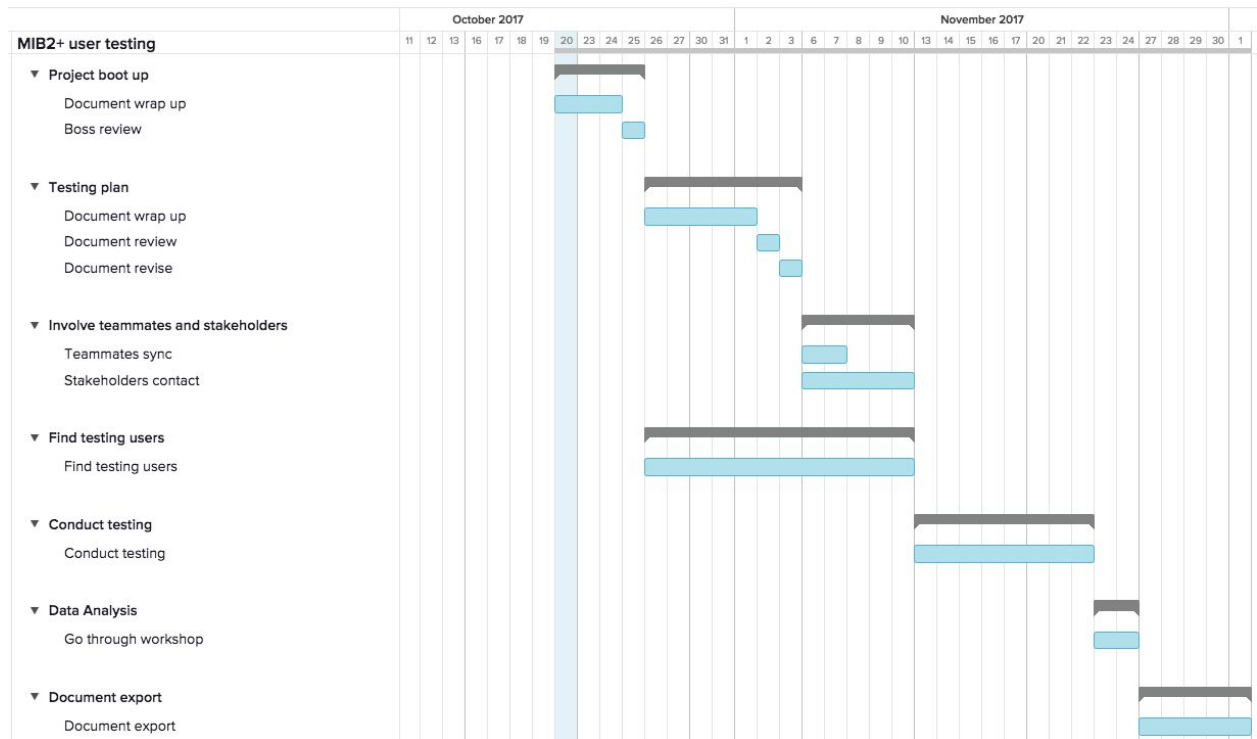


Key Points:

1. Chinese customer's ideas
2. Function owner's ideas

3. Agency's cost fee
4. Manager's ideas
5. Stakeholder(VW)'s ideas

GANTT CHART



Key Points:

1. Testing location confirmation
2. Testing people schedule confirmation
3. Testing car booking
4. Testing document editing
5. Testing process recording
6. Testing report writing

MILESTONES

Project Boot Up - 10.25

Apply money from manager for this project. Confirm the agency which helps us to find 10 users. Consider potential risks for postponing the project.

Testing Plan - 11.3

When and where users will meet interviewers. Prepare the testing document. Involve teammates and managers to improve the document.



4 Navigation

To be added

U4.1: Please setup your NAVI to 国家图书馆

Speech

Find Testing People - 11.10

Finalize interviewing time and people. Think of back-up plan in case exceptional things happen.

Conduct Testing - 11.23

Conduct testing and collect all data that we need for later analysis. Prepare car and camera.

Document Export - 11.30

Analyze user feedback and export analysis document to achieve project goal.

TESTING GUIDELINE EXCERPTS

Summary:

Participant ID 被访者编号, 姓名	
User Category 被访者类型	
Test Sequence 测试顺序	
购买时间	
车内配置	
Start Time 开始时间	
Date 日期	
Interviewer 访问员	

Part 1	Warm up / Pre-interview 前期访问	~ 20 min	Venue 场地
Part 2	User experience evaluation - static 静态评估	~ 60 min	In car 在车里
Part 3	User experience evaluation - dynamic 动态评估	~ 30 min	In car 在车里
Part 4	Post Interview/Final evaluation 最终评估	~ 10 min	At suitable location 在合适地点

P1: Warm up	-	
P2: Static	AC	U1.1
		U1.2
		U1.3
	MFL	Q2.1
		Q2.2
		Q2.3
		U2.4
		U2.5
	MMI in general	Q3.1
		Q3.2
		Q3.3
		Q3.4
		U3.5
		U3.6
Navi		
SDS		
Audi connect		
xxx		
xxx		
xxx		
P3: Dynamic	xxx	
	xxx	
	xxx	
	xxx	
	xxx	
	xxx	
	xxx	
P4: Post Interview		

Section I: Warm up / Pre-interview (20min) 前期访问 (20 分钟)

0. Introduction of the interviewer / the institute: 访问员自我介绍

INT Please provides the following information:

My name is ...and I work for Audi China..... We are conducting this usability study 自我介绍姓名, 此次研究目的

I am looking forward to talking to you about a very interesting topic in the next two hours. The focus of this study lies on the evaluation of future in-car system, and it will help us to improve them in the future.接下来两个小时会和您讨论一个有趣的话题:我们会来评价一下现有车内的功能,以帮助我们未来的开发。

0.1 Description of the process: 描述流程

INT Please provides the following information:

The interview will consist of three parts: 访问分为三部分:

Part 1 includes the introduction and contains preparatory questions (20 min) 第一部分: 简介和一些初步询问的问题 (20 分钟)

Part 2 we will sit in test car and have you experience the different in-car system (60 min) 第二部分：在测试车内完成指定的测试项目（60分钟）

Part 3 you will do a test drive on the specified route and perform some further tasks, our interviewer will guide you the direction of diving. (30 min) 第三部分: 在指定的线路上驾驶, 同时完成一些测试项目; 我们的访问员会指引您驾驶的路径。

Part 4 will include your final evaluations and some other topics (15 min) 第四部分：事后评估和一些其它相关话题（10分钟）

The Interview will be audio- and video-recorded for analysis purposes only. The legal obligations regarding data protection and anonymity will be ensured.告知录音录像, 隐私保护相关内容。

Please tell us everything that comes to mind during the interview. Think out loud, there is no "right" and "wrong" answer Your feedback will help us to improve future cars.在整个访问过程中大声说出自己当时的想法,没有对错之分,您的想法会帮助我们改造我们的产品,请畅所欲言。

0.2 Demographics / Vehicle Statistics

Person related data 个人相关数据

a) Age 年齡_____岁

b) Gender 性别

1 <input type="checkbox"/>	Male 男
2 <input type="checkbox"/>	Female 女

c) Marriage status: Are you married? 您的婚姻状况是?

1 <input type="checkbox"/>	Married 已婚
2 <input type="checkbox"/>	Single 单身

d) Kids in household: How many kids (below 18 years) currently live in your household?

1 <input type="checkbox"/>	No kids 无小孩	
2 <input type="checkbox"/>	1 kid: _____	Age
3 <input type="checkbox"/>	2 kids: _____	Age
4 <input type="checkbox"/>	3 kids: _____	Age



- e) Years of driving 驾龄: _____ 年
f) Profession 职业: _____

0.3 Vehicle usage 车辆使用

Average driving time every day _____, 平均一天您驾驶时间

1 <input type="checkbox"/>	<30 minutes
2 <input type="checkbox"/>	30-60 minutes
3 <input type="checkbox"/>	60-90 minutes
4 <input type="checkbox"/>	90-120 minutes
5 <input type="checkbox"/>	>2 hours



Section II: Static user experience evaluation - Intuitive impression and operation 静态评估-直 观感受和操作

ACT -> Please take the respondent to the Audi vehicle. 带被访者至车辆 (静态测试)

ACT -> Please check the following: 检查:

1. Make sure all the systems are reset. 确保系统已重置。
2. Make sure the display is main menu. 确保在主菜单。
3. Make sure the smartphone is turned on and with power source. 确保手机开机并充电
4. Make sure the video recording system is power on and working properly. 确保视频录像设备已打开并正常工作。

ACT -> Please enter the car: 入车:

4. Power on the car 打开点火开关
5. Interviewer sits in the passenger seat 访问员坐在副驾驶座位
6. Remind respondent not to operate anything in the car until interviewer told. 告知受访者先不要操作车内的任何设备, 直到访问员要求开始操作。
7. Please adjust the seat to your most comfortable position, just like what you did in your own car. 现在请您调节座椅, 按照您平时开车时最喜欢的姿势来调节。

Please provide this information: 请向被访者说明:

- Now we would like to test some of the functions of the in-car system. I will ask you to perform individual tasks in a sequence. 现在我们想要测试一下系统的一些功能。我会要求您按顺序完成一些单项任务。
- As mentioned earlier, there is no right or wrong when you perform these tasks. We are not testing your skills; only the vehicle's operating system is being tested here. 正如之前提到的那样, 在您进行操作的时候不存在正确或者错误的操作, 我们并没有在测试您的技巧, 这里仅仅是在测试车辆的操作系统。
- Very important: When you execute these tasks, please think out loud and express everything that comes to mind, whether it is negative or positive. 非常重要的一点是, 在您进行这些任务的时候, 请说出所有您脑海中思考的内容, 无论是正面的还是负面的。




1 AC

1.1 U1.1: Turn on AC / Adjust temp. 打开空调 / 设定温度

"Please activate the air conditioning and adjust the temperature to a certain degree of your choice." "请打开空调，并调到您选择的温度。"

1.1.1 Observations 观察

Complete 完成情况	<input type="checkbox"/> Instant Success 一次成功 <input type="checkbox"/> Success 成功 <input type="checkbox"/> Failed 失败																
Attempts 尝试 路径 (3 max)																	
Observation 访问员观察 评分	Rating 访问员评级： <table border="1"> <tr><td>1</td><td>No problems 没问题</td></tr> <tr><td>2</td><td>Imitation 有点犹豫</td></tr> <tr><td>3</td><td>Minor errors 小错误</td></tr> <tr><td>4</td><td>Massive errors 大错误</td></tr> <tr><td>5</td><td>Help from RA 需要访问员帮助</td></tr> </table> Problems can be tracked back to (MA)...问题的原因是 (可多选)： <table border="1"> <tr><td>1</td><td>System 系统</td></tr> <tr><td>2</td><td>Human c 操作者</td></tr> <tr><td>3</td><td>No differentiation possible 无法区分</td></tr> </table>	1	No problems 没问题	2	Imitation 有点犹豫	3	Minor errors 小错误	4	Massive errors 大错误	5	Help from RA 需要访问员帮助	1	System 系统	2	Human c 操作者	3	No differentiation possible 无法区分
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2	Human c 操作者																
3	No differentiation possible 无法区分																

1	System 系统
2	Human c 操作者
3	No differentiation possible 无法区分

1.1.2 How would you rate your satisfaction of the functions tested? 您会如何评价对此项设置的满意度?

-2	-1	0	1	2
Not satisfied at all 一点也不满意	不太满意	中立	比较满意	Very satisfied 非常满意
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.1.3 Did you experience any difficulties? Please name obstacles and difficulties. What exactly needs to be improved? 您师傅遇到困难或者不方便的地方? 请说出遇到的障碍和困难，或者改进的意见。

--

1.2 U1.2: Set to inner cycle / adjust wind direction 设置内循环 / 风向调节

"Now please use the Air inner cycle. Afterwards adjust the wind flow to the foot area." "现在请使用空气内循环。之后调节至脚部出风。"

1.2.1 Observations 观察

Complete 完成情况	<input type="checkbox"/> Instant Success 一次成功 <input type="checkbox"/> Success 成功 <input type="checkbox"/> Failed 失败
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Attempts 尝试 路径 (3 max)																	
Observation 访问员观察 评分	Rating 访问员评级： <table border="1"> <tr><td>1</td><td>No problems 没问题</td></tr> <tr><td>2</td><td>Imitation 有点犹豫</td></tr> <tr><td>3</td><td>Minor errors 小错误</td></tr> <tr><td>4</td><td>Massive errors 大错误</td></tr> <tr><td>5</td><td>Help from RA 需要访问员帮助</td></tr> </table> Problems can be tracked back to (MA)...问题的原因是 (可多选)： <table border="1"> <tr><td>1</td><td>System 系统</td></tr> <tr><td>2</td><td>Human c 操作者</td></tr> <tr><td>3</td><td>No differentiation possible 无法区分</td></tr> </table>	1	No problems 没问题	2	Imitation 有点犹豫	3	Minor errors 小错误	4	Massive errors 大错误	5	Help from RA 需要访问员帮助	1	System 系统	2	Human c 操作者	3	No differentiation possible 无法区分
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5	Help from RA 需要访问员帮助																
1	System 系统																
2	Human c 操作者																
3	No differentiation possible 无法区分																

1.2.2 How would you rate your satisfaction of the functions tested? 您会如何评价对空调设置的满意度?

-2	-1	0	1	2
Not satisfied at all 一点也不满意	不太满意	中立	比较满意	Very satisfied 非常满意

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

1.2.3 Did you experience any difficulties? Please name obstacles and difficulties. What exactly needs to be improved? 您师傅遇到困难或者不方便的地方? 请说出遇到的障碍和困难，或者改进的意见。

--

1.3 U1.3: Check the AQI / Close AC / 查看空气质量指数 / 关闭空调

"Now please check the AQI and then close AC" "现在请尝试查阅空气质量指数，之后关闭空调。"

1.3.1 Observations 观察

Complete 完成情况	<input type="checkbox"/> Instant Success 一次成功 <input type="checkbox"/> Success 成功 <input type="checkbox"/> Failed 失败																
Attempts 尝试 路径 (3 max)																	
Observation 访问员观察	Rating 访问员评级： <table border="1"> <tr><td>1</td><td>No problems 没问题</td></tr> <tr><td>2</td><td>Imitation 有点犹豫</td></tr> <tr><td>3</td><td>Minor errors 小错误</td></tr> <tr><td>4</td><td>Massive errors 大错误</td></tr> <tr><td>5</td><td>Help from RA 需要访问员帮助</td></tr> </table> Problems can be tracked back to (MA)...问题的原因是 (可多选)： <table border="1"> <tr><td>1</td><td>System 系统</td></tr> <tr><td>2</td><td>Human c 操作者</td></tr> <tr><td>3</td><td>No differentiation possible 无法区分</td></tr> </table>	1	No problems 没问题	2	Imitation 有点犹豫	3	Minor errors 小错误	4	Massive errors 大错误	5	Help from RA 需要访问员帮助	1	System 系统	2	Human c 操作者	3	No differentiation possible 无法区分
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评分	1	No problems 没问题
	2	Irritation 有点犹豫
	3	Minor errors 小错误
	4	Massive errors 大错误
	5	Help from RA 需要访问帮助
Problems can be tracked back to (MA)...问题的原因是 (可多选):		
	1	System 系统
	2	Human c 操作者
	3	No differentiation possible 无法区分

1.3.2 How would you rate your satisfaction of the functions tested? 您会如何评价对此项设置的满意度?

-2	-1	0	1	2
Not satisfied at all 一点也不满意	不太满意	中立	比较满意	Very satisfied 非常满意
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.3.3 Did you experience any difficulties? Please name obstacles and difficulties. What exactly needs to be improved? 您曾遇到困难或者不方便的地方? 请说出遇到的障碍和困难, 或者改进的意见。



2 Multi-steering wheel 多功能方向盘

2.1 Q2.1: Now let us focus on the steering wheel; please try to describe to me the function of each button according to your understanding. 现在我们讨论一下方向盘, 请根据您的理解描述每一个按键的功能。



Item	Understand correctly? (Y/N) 是否理解?	If not correct, record the respondents' understanding, and then explain the right function description. 如理解错误, 记录受访者的理解, 并解释正确功能。
1		仪表盘, 切换选项
2		仪表盘视图显示切换
3		返回, 上一级菜单
4		调出选项菜单
5		旋转/选择功能, 按压确认
6		电话功能, 通话结束通话, 电话列表

7		语音对话 SDS
8		调节音, 按下 MMI 静音
9		上一个/下一个曲 H
10 (* 自定义)		方向盘加热 *自定义键
11		重复上一次导航播报 (确认)

2.2 Q2.2: Most used buttons/features 最常用的三个键/功能

1. _____
2. _____
3. _____

2.3 Q2.3: Which feature do you need to put on the steering wheel but currently is not available? 你最想放在方向盘上的操作/功能, 而目前上面没有提供的是?

2.4 U2.4 Please set the "*" key with function daylight nightlight map. 请尝试通过方向盘或者 MMI 设置方向盘上的自定义按键*键的功能为日间地图夜间地图切换。

2.4.1 Observations 观察

Complete 完成情况	<input type="checkbox"/> Instant Success 一次成功 <input type="checkbox"/> 2 nd time success 成功 <input type="checkbox"/> 3 rd time success 成功 <input type="checkbox"/> Failed 失败
Attempts 尝试 路径 (3 max)	1) 长按*键选择 2) 车辆 -> settings&service -> steering wheel buttons



Observation 访问员观察 评分	Rating 访问员评级：	
	1	No problems 没问题
	2	Imitation 有点犹豫
	3	Minor errors 小错误
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Problems can be tracked back to (MA)...问题的原因是（可多选）：		
1	System 系统	
2	Human c 操作者	
3	No differentiation possible 无法区分	

2.4.2 How would you rate your satisfaction of the functions tested? 您会如何评价对空调设置的满意度？

-2	-1	0	1	2
Not satisfied at all 一点也不满意	不太满意	中立	比较满意	Very satisfied 非常满意
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.4.3 Did you experience any difficulties? Please name obstacles and difficulties. What exactly needs to be improved? 您是否遇到困难或者不方便的地方？请说出遇到的障碍和困难，或者改进的意见。

2.5 U2.5 Please activate the map in kombi and zoom in and our on the map. 请在虚拟座舱屏幕（液晶仪表盘）上打开地图界面，然后将地图放大或者缩小。

2.5.1 您是否有虚拟驾驶舱？

- a. 有
b. 没有

2.5.2 Observations 观察

Complete 完成情况	<input type="checkbox"/> Instant Success 一次成功 <input type="checkbox"/> 2 nd time success 成功 <input type="checkbox"/> 3 rd time success 成功 <input type="checkbox"/> Failed 失败																
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-2	-1	0	1	2
Not satisfied at all 一点也不满意	不太满意	中立	比较满意	Very satisfied 非常满意
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



☐
☐
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☐
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2.5.4 Did you experience any difficulties? Please name obstacles and difficulties. What exactly needs to be improved? 您是否遇到困难或者不方便的地方？请说出遇到的障碍和困难，或者改进的意见。

TEST RECORDING

TCB.

DATA ANALYSIS

TCB.

DOCUMENT EXPORT

TBD

- 用一个定量的方法, 让乔梁想一个数据分析问题量化
- 如果要排序, 根据问卷内容确定是否要增加用户再次来
- 保密协议
- 开车的测试内容
- 开始前, 中, 后照片, 视频