

Chapter 7: Data Gathering

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Intro HCI
02/21/2013

Data gathering

Key Issues

Key issues

Setting goals



3

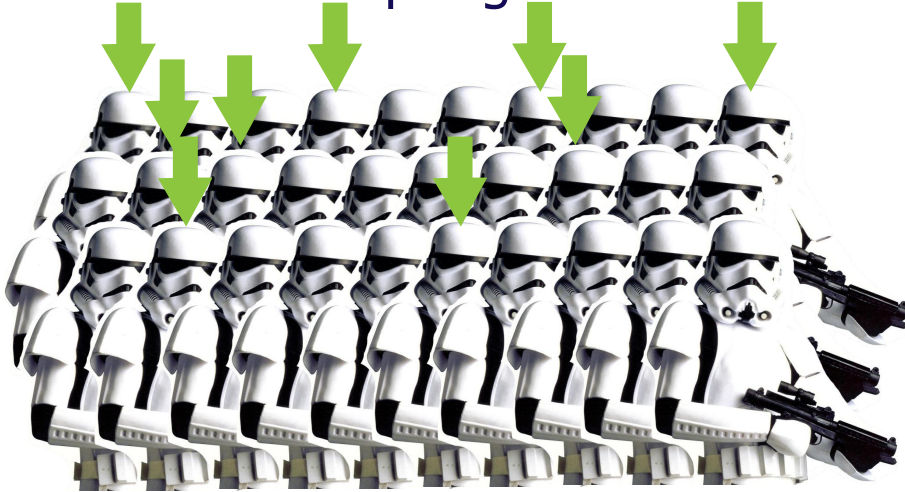
Key issues

Key Issues: Identifying Participants

4

Identifying Participants

Random sampling

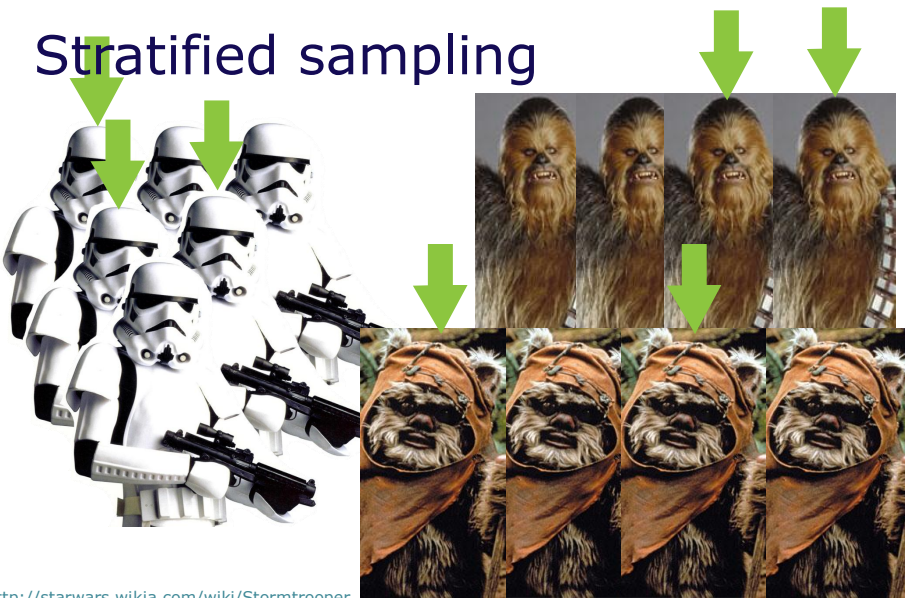


<http://starwars.wikia.com/wiki/Stormtrooper>

5

Identifying Participants

Stratified sampling

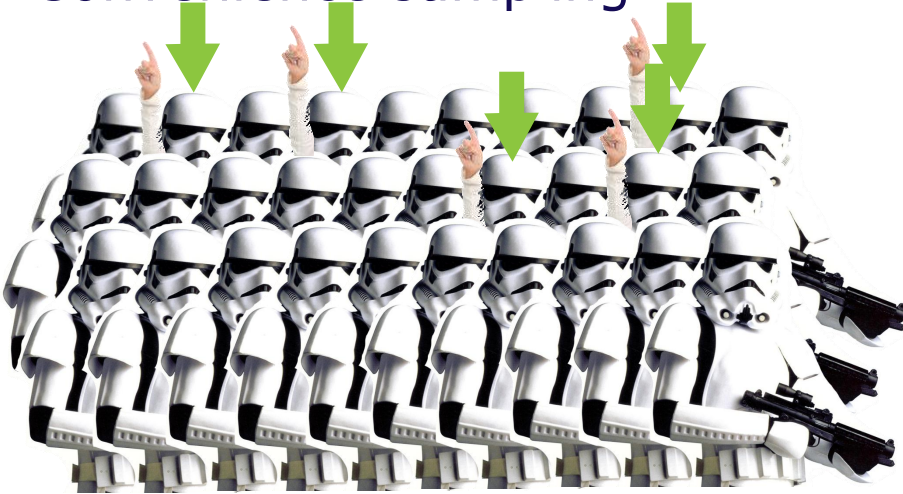


<http://starwars.wikia.com/wiki/Stormtrooper>,
<http://kotaku.com/5650591/then-why-we-still-got-ewoks>,
<http://simplicitymom.blogspot.com/2011/10/fishing-for-wookie.html>

6

Identifying Participants

Convenience sampling



<http://starwars.wikia.com/wiki/Stormtrooper>

7

Key issues

Key Issues:
Relationship with Participants

8

Relationship with participants

Clear and professional



<http://starwars.wikia.com/wiki/Stormtrooper>

9

Relationship with participants

Informed consent form

- Confirm purpose
- Data use
- May withdraw
- OK to continue



<http://starwars.wikia.com/wiki/Stormtrooper>

10

Relationship with participants

Data gatherer (You)

- Analyze data
- Share info
- Publish reports



11

Relationship with participants

Data provider (User)

- Privacy
- Social security
- Child protection

<http://starwars.wikia.com/wiki/Stormtrooper>

12

Relationship with participants

Exception to informed consent



<http://starwars.wikia.com/wiki/Stormtrooper>

13

Relationship with participants

Incentives



14

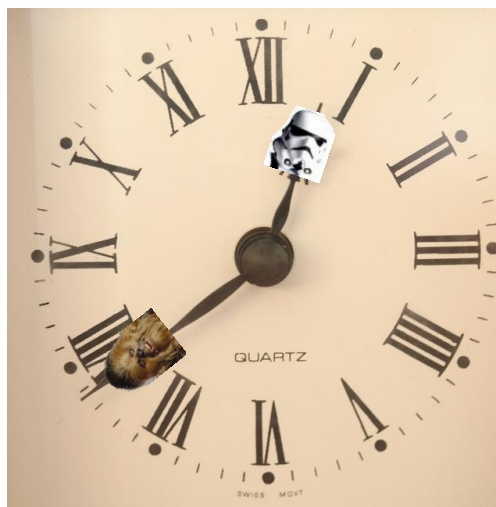
Key issues

Key Issues: Triangulation

15

Triangulation

Data: Time



<http://starwars.wikia.com/wiki/Stormtrooper>, <http://simplicitymom.blogspot.com/2011/10/fishing-for-wookie.htm>16

Triangulation

Data: Place



<http://starwars.wikia.com/wiki/Stormtrooper>

17

Triangulation

Data: People



<http://starwars.wikia.com/wiki/Stormtrooper>,
<http://kotaku.com/5650591/then-why-we-still-got-ewoks>,
<http://simplicitymom.blogspot.com/2011/10/fishing-for-wookie.html>

18

Triangulation

Investigator



19

Triangulation

Theory



Perceptual



Cognitive



Motor

20

Triangulation

Methodology



<http://starwars.wikia.com/wiki/Stormtrooper>

21

Key issues

Key Issues:
Pilot Studies

<http://www.collegefashion.net/inspiration/movie-inspiration-fashion-inspired-by-top-gun/>

22

Data gathering

Data Recording

23

Data recording

Exceptions

<http://starwars.wikia.com/wiki/Stormtrooper>

24

Data recording

Data Recording: Types

25

Types

Notes plus still camera



26

Types

Audio plus still camera



27

Types

Video



28

Data recording

Data Recording:
Depends on...

29

Depends on...

Context

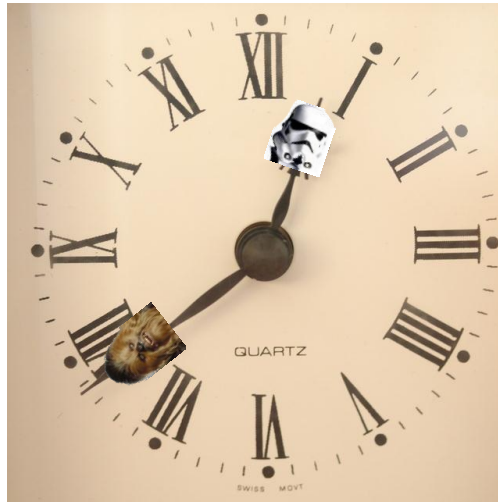


<http://starwars.wikia.com/wiki/Stormtrooper>

30

Depends on...

Time



<http://starwars.wikia.com/wiki/Stormtrooper>, <http://simplicitymom.blogspot.com/2011/10/fishing-for-wookie.htm>31

Depends on...

Sensitivity



32

Data Recording: Affects...

33

Detail



34

Data recording

Intrusive



35

Types

Which to use?

- Notes (hand-written)
- Notes (typed)
- Audio
- Photo
- Video
 - Fixed/Roving
 - Where to point
 - Impact of recording



<https://en.wikipedia.org/wiki/Mario>

36

Interviews

37

Interview Types

38

Interview Types

Unstructured



<http://starwars.wikia.com/wiki/Stormtrooper>

39

Interview Types

Structured



<http://starwars.wikia.com/wiki/Stormtrooper>

40

Interview Types

Semi-structured



<http://starwars.wikia.com/wiki/Stormtrooper>

41

Interview Types

Focus group



<http://starwars.wikia.com/wiki/Stormtrooper>

42

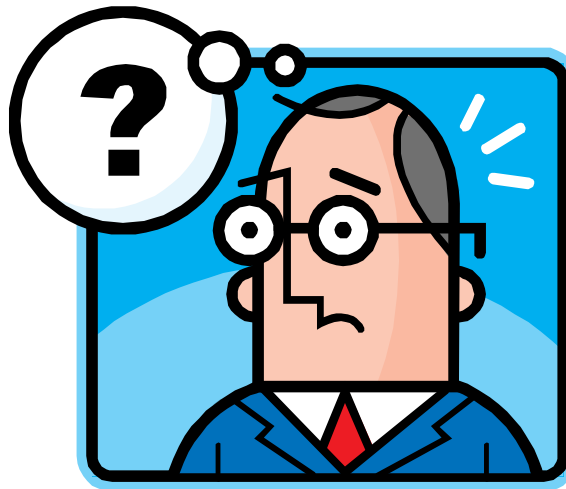
Interviews

Interview Planning

43

Interview planning

Develop questions



44

Interview planning

Documents



45

Interview planning

Equipment



46

Interview planning

Structure

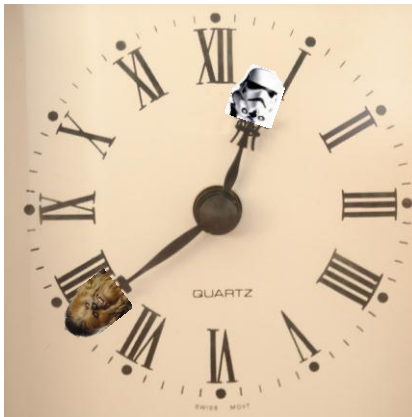


<http://starwars.wikia.com/wiki/Stormtrooper>

47

Interview planning

Time and place



<http://starwars.wikia.com/wiki/Stormtrooper>, <http://simplicitymom.blogspot.com/2011/10/fishing-for-wookiee.htm>

48

Interview planning

Prepare interview

- Goal
- Way of recording
- Open ended Qs
- Closed Qs



<https://en.wikipedia.org/wiki/Mario>

49

Interviews

Running the Interview

50

Running the interview

Comfortable and informed



<http://starwars.wikia.com/wiki/Stormtrooper>

51

Running the interview

Listen



<http://starwars.wikia.com/wiki/Stormtrooper>

52

Running the interview

Sympathy



<http://starwars.wikia.com/wiki/Stormtrooper>

53

Running the interview

Enjoy



54

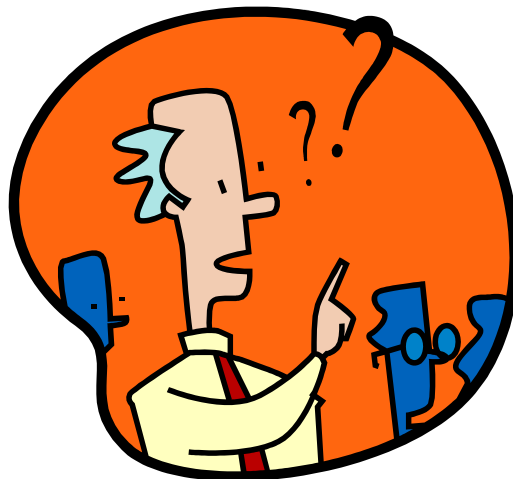
1. Introductions



<http://starwars.wikia.com/wiki/Stormtrooper>

55

2. Warm-up



56

3. Main session



<http://starwars.wikia.com/wiki/Stormtrooper>

57

4. Cool-off



58

5. Closing session



<http://starwars.wikia.com/wiki/Stormtrooper>

59

Perform interview

1. Introduction
2. Warm-up
3. Main session
4. Cool-off
5. Closing session



<https://en.wikipedia.org/wiki/Mario>

60

Data gathering

Questionnaires

61

Questionnaire

What and why



<http://starwars.wikia.com/wiki/Stormtrooper>,
http://studentweb.cortland.edu/Karen.Jordan/miniproj3/election_questionnaire.html

62

Questionnaires

Questionnaire Structure

63

Questionnaire structure

Start with demographic info



<http://starwars.wikia.com/wiki/Stormtrooper>,
<http://kotaku.com/5650591/then-why-we-still-got-ewoks>,
<http://simplicitymom.blogspot.com/2011/10/fishing-for-wookie.html>

64

Questionnaire structure

Order



<http://starwars.wikia.com/wiki/Stormtrooper>

65

Questionnaire structure

Different versions



<http://www.superrobin.com/free-gadgets/free-laptops>

66

Questionnaire structure

Clear instructions



67

Questionnaire structure

White space vs. compact



68

Questionnaires

Questionnaires: Q and A Format

69

Q and A format

Check boxes and ranges



Looking for 15 years and up? Try [For Her](#) or [For Him](#).

https://37signals.com/holiday/01_finders/by_age.html

70

Rating Scales: Likert

Answer these questions on a scale from 1 to 5.
5 is strongly agree. 1 is strongly disagree.

1. I felt like a strong math student at the start of the year.
2. I feel like a strong math student now.

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

Please circle the number that represents how you feel about the computer software you have been using

I am satisfied with it
Strongly Disagree ---1---2---3---4---5---6---7--- Strongly Agree

It is simple to use
Strongly Disagree ---1---2---3---4---5---6---7--- Strongly Agree

<http://blog.mrmeyer.com/?p=261>, <http://www.hkadesigns.co.uk/websites/msc/remel/likert.htm>

71

Rating Scales: Semantic differential

6. Please rate the Package Image

	-3	-2	-1	0	1	2	3	
A. Low Quality	☐	☐	☐	☐	☐	☐	☐	High Quality
B. Economical	☐	☐	☐	☐	☐	☐	☐	Luxurious
C. Masculine	☐	☐	☐	☐	☐	☐	☐	Feminine
D. Flavorless	☐	☐	☐	☐	☐	☐	☐	Flavorful

Inaccessible Totally Accessible

1 2 3 4 5 6 7

Rude Courteous

1 2 3 4 5 6 7

Caring Unsympathetic

1 2 3 4 5 6 7

<http://www.wiscosurvey.com/webhelp/semantic-differential.htm>,
<http://archive.zipe.org/view.asp?art=a1690597&pdf=yes>

72

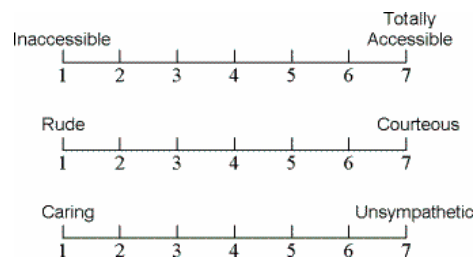
Rating Scales: Issues

Answer these questions on a scale from 1 to 5.
5 is strongly agree. 1 is strongly disagree.

1. I felt like a strong math student at the start of the year.
2. I feel like a strong math student now.

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---



<http://blog.mrmeyer.com/?p=261>, <http://archive.ajpe.org/view.asp?art=aj690597&pdf=yes>

73

Questionnaire

- Check box
- Range
- Likert
- Semantic differential



<https://en.wikipedia.org/wiki/Mario>

74

Data gathering

Observation

75

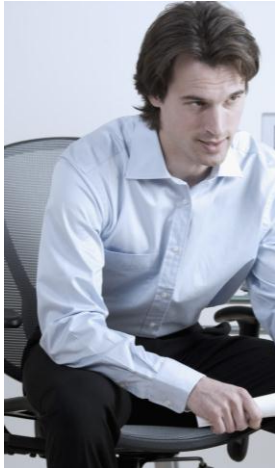
Data gathering

Direct Observation in the Field

76

Direct observation in field

Participation

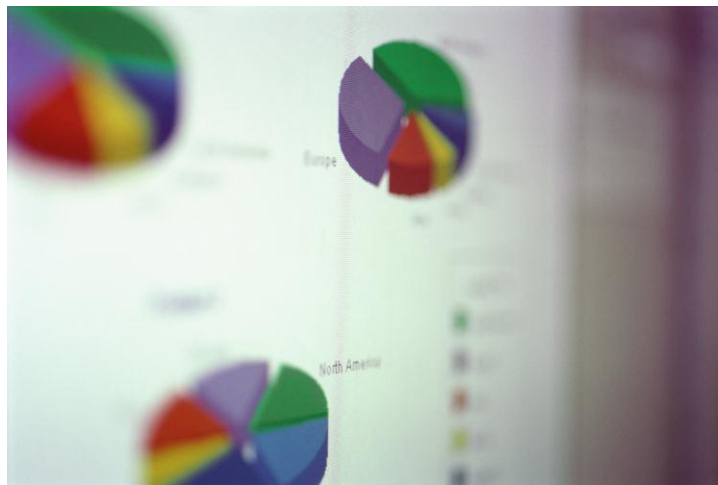


<http://starwars.wikia.com/wiki/Stormtrooper>

77

Direct observation in field

Data



78

Direct observation in field

Acceptance



<http://starwars.wikia.com/wiki/Stormtrooper>

79

Direct observation in field

Sensitive issues



<http://starwars.wikia.com/wiki/Stormtrooper>

80

Direct observation in field

Perspectives



<http://starwars.wikia.com/wiki/Stormtrooper>,
<http://kotaku.com/5650591/then-why-we-still-got-ewoks>,
<http://simplicitymom.blogspot.com/2011/10/fishing-for-wookie.html>

81

Direct observation in field

Include everyone



<http://kotaku.com/5650591/then-why-we-still-got-ewoks>,

82

Direct observation in field

Notes



<http://starwars.wikia.com/wiki/Stormtrooper>

83

Direct observation in field

Direct Observation in the Field: Frameworks

84

Direct obs in field: Frameworks

Simple example



<http://starwars.wikia.com/wiki/Stormtrooper>

85

Direct obs in field: Frameworks

Robson

<http://starwars.wikia.com/wiki/Stormtrooper>

86

Direct obs in field: Frameworks

Robson: Space



87

Direct obs in field: Frameworks

Robson: Actors



<http://starwars.wikia.com/wiki/Stormtrooper>,
<http://kotaku.com/5650591/then-why-we-still-got-ewoks>,
<http://simplicitymom.blogspot.com/2011/10/fishing-for-wookie.html>

88

Robson: Activities



<http://starwars.wikia.com/wiki/Stormtrooper>

89

Robson: Objects



<http://starwars.wikia.com/wiki/Stormtrooper>

90

Robson: Acts



<http://starwars.wikia.com/wiki/Stormtrooper>

91

Robson: Events



<http://starwars.wikia.com/wiki/Stormtrooper>

92

Direct obs in field: Frameworks

Robson: Time



<http://xtrapics.blogspot.com/2011/08/blog-post.html>

93

Direct obs in field: Frameworks

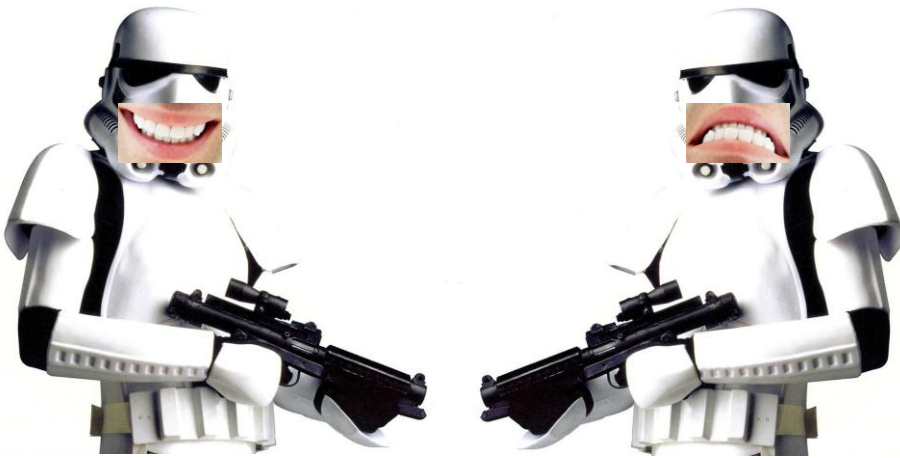
Robson: Goals



<http://starwars.wikia.com/wiki/Stormtrooper>

94

Robson: Feelings



<http://starwars.wikia.com/wiki/Stormtrooper>

95

Rogers and Bellotti



<http://starwars.wikia.com/wiki/Stormtrooper>

96

Ethnography



<http://starwars.wikia.com/wiki/Stormtrooper>

97

Other Methods

98

Other methods

Direct observation in controlled environment



<http://starwars.wikia.com/wiki/Stormtrooper>

99

Other methods

Indirect observation



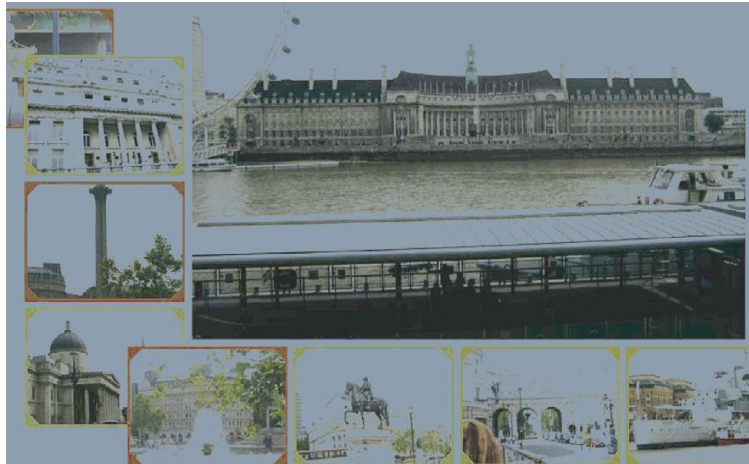
<http://starwars.wikia.com/wiki/Stormtrooper>

100

Choosing and Combining Techniques

101

Example



102

Think about

- Focus
 - Participants
 - Nature of technique
 - Available resources
-
- Interview
 - Questionnaire
 - Observation



<https://en.wikipedia.org/wiki/Mario>

103