Introduction to Digital CATI Recording

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University of Wisconsin Survey Center

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It all started when…

- Spring of 2002 Wisconsin Longitudinal Study wanted to record cognitive test portions of ~29,000 interviews
- Recording essential to administration of the interview
- 29,000 recordings on cassette tapes?
- Talked to others who were doing digital CAPI recording, but not CATI recording

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Google reveals SBWinLogger

- Captures and records audio input
- Command-line interface allows code to be called from and controlled by the CASES instrument
- IVs not required to start recording – instrument turns recording on and off automatically
- Can adjust recording bitrate to match low quality analog phone audio
- Records audio as standard .wav files

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File Storage Requirements (or "Let's Just Record the Whole Thing!")

- 10 minutes of audio = 6.5 MB
- Typical WLS interview = 50 MB
- 200 WLS interviews per week
- 12 GB audio per week
- Client purchased 873GB RAID system (price today is about $3500)
- 255GB of audio to date

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How well does it work?

- WLS success rate ~ 97%
- MIDUS success rate is 99.9%
  - Learned some lessons in WLS
  - MIDUS is much simpler instrument
  - Interviews done in one session
  - One lost recording (out of 500+) due to IV who ignored recording test failure

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Essential Hardware

1) Phone
2) PC with soundcard
3) Recording software
4) Sufficient HD space
    - Both Local and Server
5) External Recording Box

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External Recording Box

- Need hardware box to carry audio signal from phone to PC mic jack
- Radio Shack makes $25 version
- JKAudio makes $225 version which provides passive boost to incoming signal and allows user to adjust signal strength

Radio Shack

JK Audio

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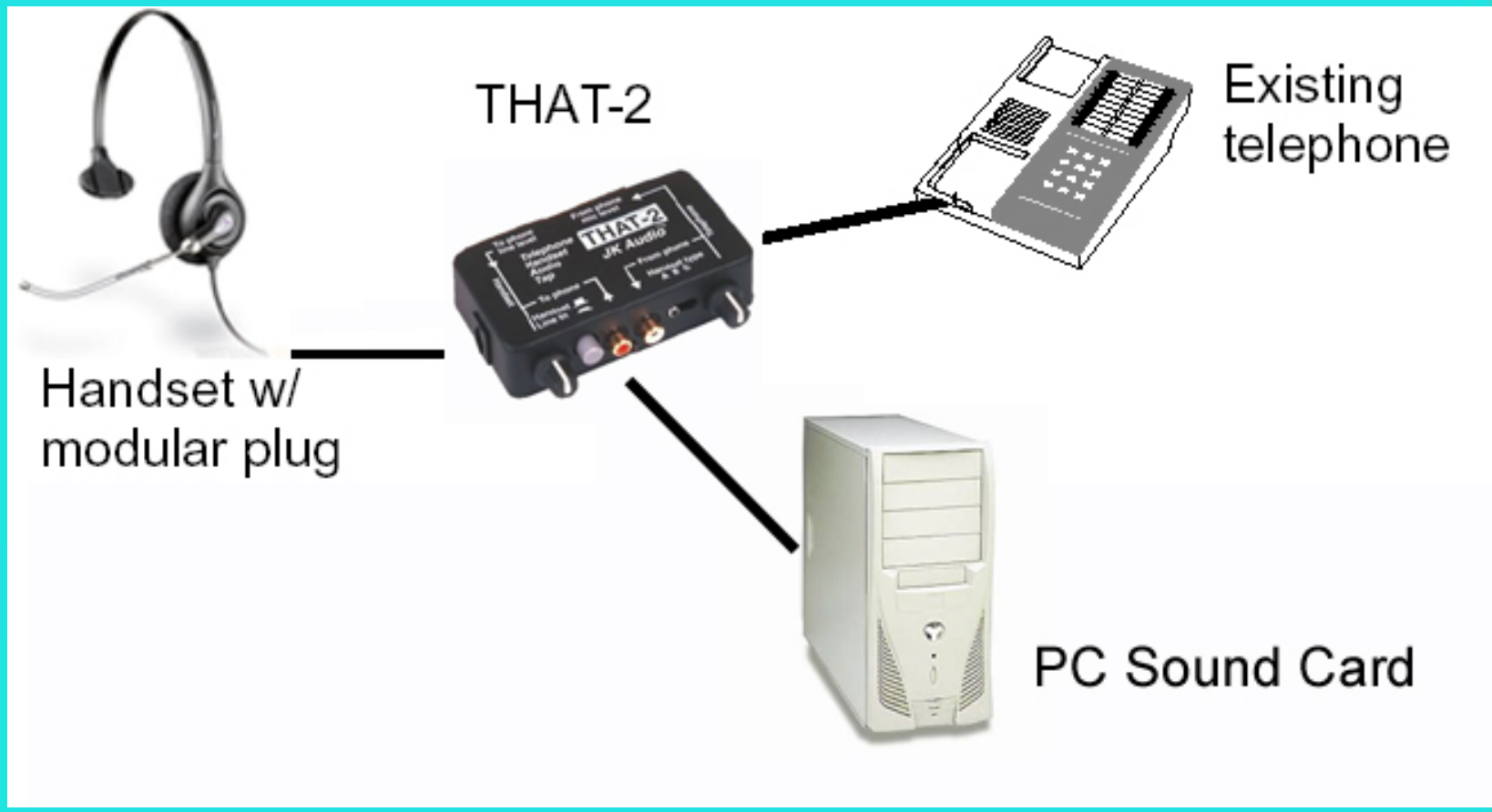
Setup Schematic



Total Cost per Booth

$200	THAT-2 with bulk discount
$39	SBWinLogger per seat (based on site license)
1 hour	hardware and software installation, fine-tuning configuration and testing
1hour	maintenance/year

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Integrating Recording into CASES instrument

- Use CASES ‘call’ command
- Several bugs encountered
  - SBWinlogger cut off sound files
  - Strong naming standards
  - Developing code that only executed on the first pass

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Applications to Survey Research

1. Scoring cognitive interviews (WLS, MIDUS)
2. Comparison of tobacco use in concurrent Wisconsin RDD Study
3. Competency screening for follow-up biological & medical studies
4. Public opinion poll, religious & ethnic diversity survey, law office study
5. Interviewer training and instrument review

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MOON

C:\WINNT\System32\cmd.exe - mcogprac

Caseid: 98383
Item: z160@a

Now please tell me as many words as you can remember.

INT
IF
ENT
PRE
PRE

<b>
<cf
<cl
<cr
<d>

<o>
<x>
<q>

32 SECONDS ELAPSED

C:\WINNT\System32\cmd.exe - mcogprac

Caseid: 98829
Item: z160@m

Now please tell me as many words as you can remember.

INTERVIEWER: PERMIT UP TO ABOUT 1.5 MINUTES
IF R STOPS: "THERE IS STILL TIME LEFT, CAN YOU THINK OF ANY MORE?"
ENTER LETTER FOR WORDS RECALLED. ENTER/ARROWS TO MOVE TO NEXT FIELD
PRESS x IF YOU CAN NOT RECORD A RECALLED WORD ACCURATELY
PRESS o FOR OTHER WORD NOT IN LIST - PRESS q TO EXIT LIST IMMEDIATELY

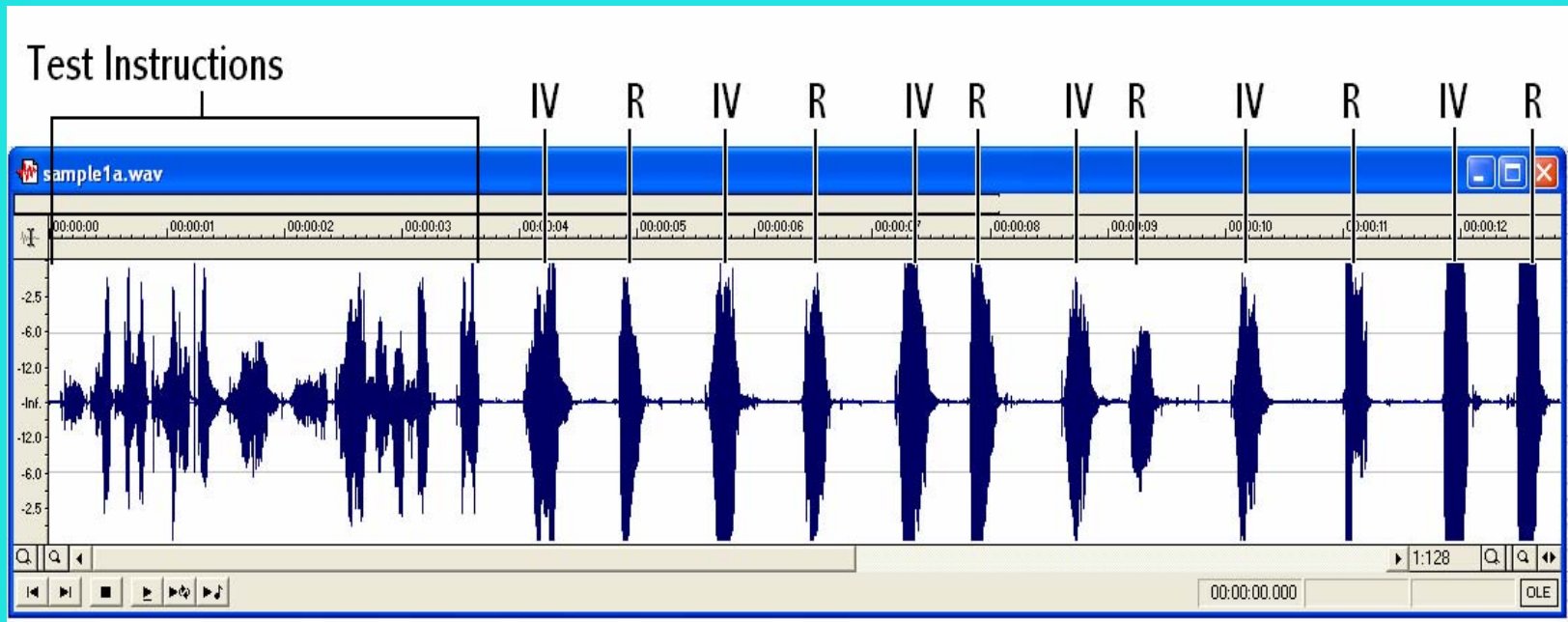
<b>	BELL	<f>	FARMER	<n>	NOSE
<cf>	COFFEE	<g>	GARDEN	<p>	PARENT
<cl>	COLOR	<ha>	HAT	<r>	RIVER
<cr>	CURTAIN	<ho>	HOUSE	<s>	SCHOOL
<d>	DRUM	<m>	MOON	<t>	TURKEY

<o> OTHER WORD NOT IN LIST
<x> PROBLEM HEARING/UNDERSTANDING/RECORDING WORD
<q> QUIT QUESTION / LIST IMMEDIATELY / TIME EXPIRED

b d f m ha t s g ha f n t

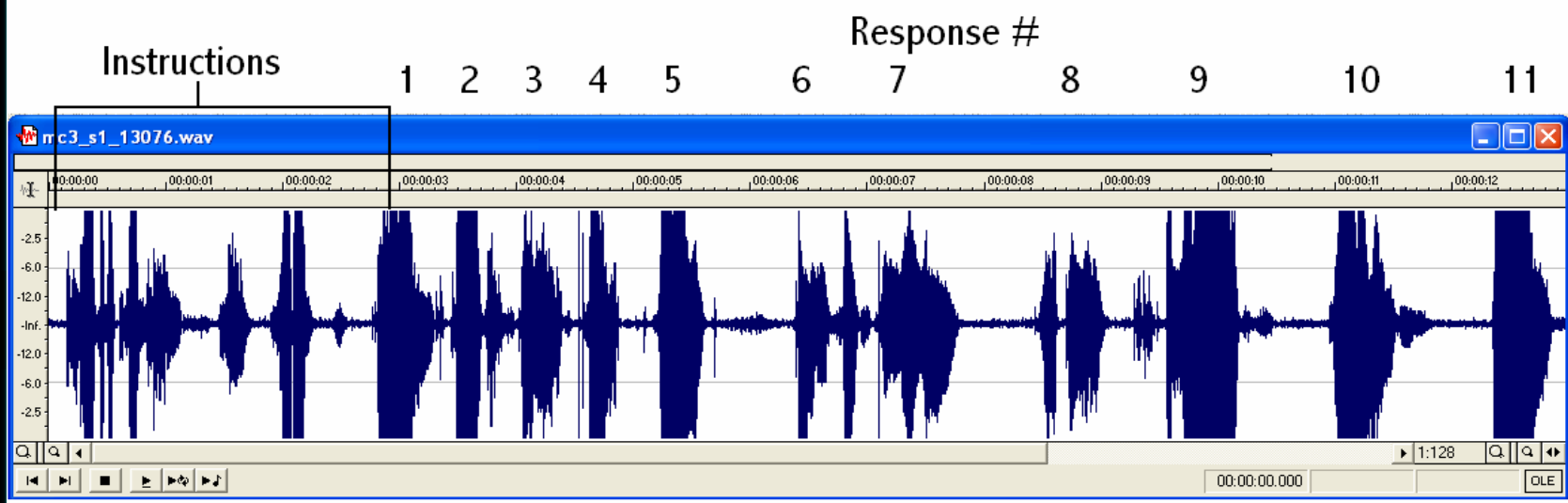
Application to Cognitive Battery Administration

- Subjects' response time (latency) measured as a measure of cognitive ability



Application to Cognitive Battery Administration

- Category fluency recorded to capture more complex responses than interviewer can record in short time



Elapsed Time: in Seconds	0.1	0.5	1.1	1.7	2.3	3.5	4.2	5.6	6.7	8.1	9.5
Notes:	OK lion	OK tiger	OK bear	OK cat	OK dog	OK elephant	OK gorilla	OK leopard	OK giraffe	Invalid lion **repeat #1**	Invalid bear **repeat #3**

Application to Cognitive Battery Administration

- Records responses which could not be captured by interviewers due to complexity or rapidity
- Recording interview assures researchers that test was administered within acceptable limits
- Allows PIs to review each case separately and have detailed record of each R
- Recordings used as a screening tool to select Rs for further specialized studies

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Compare Interview Administration

Similar questions about tobacco use in concurrent RDD surveys of WI residents yielded different results

We began recording these questions to determine if any external effects could be influencing the results.

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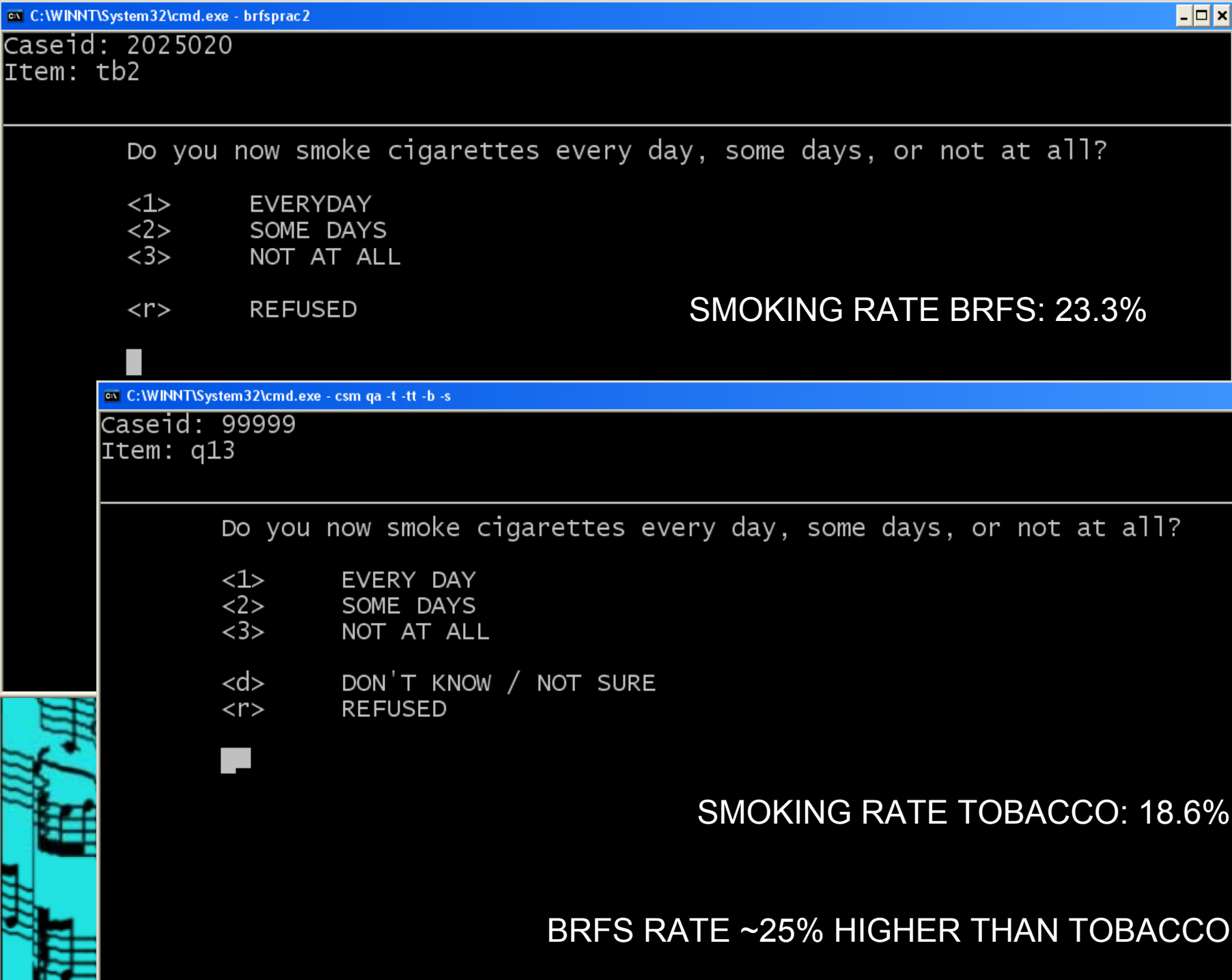
C:\WINNT\System32\cmd.exe - brfsprac2
Caseid: 2025020
Item: tb2
Do you now smoke cigarettes every day, some days, or not at all?
<1> EVERYDAY
<2> SOME DAYS
<3> NOT AT ALL
<r> REFUSED
SMOKING RATE BRFS: 23.3%
C:\WINNT\System32\cmd.exe - csm qa -t -tt -b -s
Caseid: 99999
Item: q13
Do you now smoke cigarettes every day, some days, or not at all?
<1> EVERY DAY
<2> SOME DAYS
<3> NOT AT ALL
<d> DON'T KNOW / NOT SURE
<r> REFUSED
SMOKING RATE TOBACCO: 18.6%
BRFS RATE ~25% HIGHER THAN TOBACCO

Contact Information

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JKAudio: www.jkaudio.com

Radio Shack: www.radioshack.com

SBWinLogger: www.versadial.com

Sound Forge, Gold Wave or Adobe Audition

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