TELEPATH Help Contents

Telepath is a program designed to test computer-to-human "telepathic" communication.

Use the scroll bar to see portions of entries not currently visible in the Help window.
To learn how to use Windows Help, press F1 or choose Using Help from the Help menu

Options Menu

Other Help Topics:

Options: Menu Choices

Days of Week
Colors
People
Numbers
Big Numbers

Sound

Transmit Slowly
Transmit Normally
Transmit Quickly

Quit

Days of Week
Colors
People
Numbers
Big Numbers

Choosing one of these selects the type of items the Tester will be able to select from.

Sound

Toggles sound on or off.

Transmit Slowly|Normally|Quickly

Determines how quickly or slowly the computer will "transmit" its "telepathic" signal after the Tester selects an item.

Quit

Quits the Program.

How to Run Tests

Telepath requires two people, the Tester and the Subject.

First, the two should select the type of choices to use under the OPTIONS menu.

Next, the Subject either turns his or her back to the computer or leaves the room. The Tester then chooses one of the item buttons (or can click on the top button as many times as necessary to "shuffle" the choices). Once an item has been selected, the computer will immediately begin "transmitting".

Once the transmitting stops, the Subject can then return and face the computer. If the Subject has successfully received the computer's transmission, he or she can then tell the Tester which item was chosen. At this time clicking on the top button will reveal the correct choice (this keeps the Tester honest!).

As many tests as necessary can be performed to verify that the Subject's ability to get correct answers is not due to random chance. One 1 of 8 Subjects will get one answer correct, 1 out of 64 will get two in a row correct, 1 out of 512 will get three in a row correct, 1 in 4096 will get four in a row correct, and only 1 in 32768 will get five in a row correct.

Hopefully, the Tester will eventually discover how to receive the computer's transmissions as well!

Tester

The Tester is the observer who administers the test to the Subject. The Tester should be careful to ensure that the Subject does not cheat by watching which item is selected. The Tester must also be careful not to give subtle clues or hints to tip-off the Subject.

Subject

The Subject is the person being tested for the ability to receive and understand an unusual form of radiation emitted by many computers. The computer will attempt to transmit to the Subject which item was selected by the Tester.

The Scientific Explanation

Before you read on, first see if you can figure out on your own how the computer transmits information about which selection the Tester makes.

Are you **sure** you want me to tell you?

Before you give up, here are a few hints:

The sounds the computer makes have nothing to do with it. If the Tester doesn't believe it, then turn the Sound off on the options menu.

The pictures of the men and the moving graphics on the screen during "transmission" have nothing to do with it. Since the Subject either has his back turned or is out of the room during the selection and transmission, he can't see them anyway. (In fact, both the sound effects and these graphics were designed only to distract and confuse the Tester!)

In fact, nothing appearing on the computer monitor screen has anything to do with it.

Yet - the computer **really is** using an unusual form of radiation to communicate to the Subject!

Are you still completely stumped?
OK, here goes.

People who worked with computers in the VERY OLD DAYS (mid 1970's and before) are more likely to figure out the trick involved. You see, many of the earliest computers did not have computer terminals or even printers to communicate with the users. In many cases, the only output the computer could use to communicate with the user was a bunch of light bulbs or LED's, each of which could be either ON or OFF.

This is called a BINARY CODE. A binary code simply means each object, such as a light bulb, can have only one of TWO values.

ON or OFF
YES or NO
TRUE or FALSE
HEADS or TAILS
ONE or ZERO

All of these are different representations of a binary code.

If this were all the information computers could handle, they certainly wouldn't be very useful. However, you can combine two or more binary "digits" to make more complex codes.

Let's use **1** for **ON** and **0** for **OFF**.

If we use **two** light bulbs, we can communicate **four** different values: **00**, **01**, **10**, and **11**. We could let these values represent the four numbers 0, 1, 2, and 3. You could also let them represent the four suits in a card deck (hearts, diamonds, clubs and spades).

If we use **three** light bulbs, we can communicate **eight** different values: **000**, **001**, **010**, **011, 100**, **101**, **110**, and **111**. This would let us represent eight different values, such as the numbers 0-7 or the letters A-H.

Do you notice anywhere on you computer where there are three lights or indicators?

Assuming you have a standard PC keyboard, you have, from left to right, a **Num Lock**, a **Caps Lock**, and a **Scroll Lock** indicator lights. So yes, your computer was using an unusual form of radiation (light) - the lights from these three indicators! With these three lights the computer could indicate any one of eight choices.

In our normal decimal system, each position of a digit in a number represents some power of ten. In the number 436, the six represents ones (100), the three represents tens (101), and the four represents hundreds (102). In the binary system, each position represents a power of 2. So in the binary number 110, the zero represents ones (20), the middle one represents twos (21), and the first one represents fours (22).

We can make a simple table:

BINARY	DECIMAL
000	0
001	1
010	2
011	3
100	4
101	5
110	6
111	7

Binary numbers don't end here. As with our decimal numbers you can make as big a number as you want. For example, binary 100000000 is 256.

So to use our indicator lights as a binary code, we'll let the **Num Lock** be **4**, **Caps Lock** be **2**, and **Scroll Lock** be **1**. Just add up the numbers for the lights that are on to get the answer.

Each of the different groups of items in our Telepath test can be associated with the values of 0 through 7 we can get from our indicator lights. The single digit numbers 0-7 are obvious. The "big numbers" are easy too - once you know to just look at the middle digit!

Days of the week are Sunday=1, Monday=2, … (and we can use 0 to mean none of the above).

For People, there is only one name (either first or last) beginning with the seven letters A-G (1-7).
So 4 means D, which is Leonardo **d**a Vinci (again we use 0 to mean none of the above).

For Colors, no lights (0) is Black and all lights on (7) is White. Numbers 1-6 correspond to the colors of the spectrum or rainbow: Red, Orange, Yellow, Green, Blue and Violet.

There is really no limit to the number of other different codes relationships you could create. In any case, now you can amaze your friends with your "computer telepathic" abilities!

More about binary numbers…

Most PC's use what's called an ASCII code to represent all the numbers and letters and punctuation marks on your keyboard. Using eight binary digits you can generate values from 0 to 255. The ASCII value for "A" is 65, or 01000001 in binary. Note that these values are completely arbitrary - there's no particular reason why 65 is A. In fact, many mainframe computers use the EBCDIC code, which has different values for most of the letters.

Computers also use binary numbers to store pictures and programs. Whether it's using RAM chips, magnetic floppy or hard disks, electrical signals to the modem or printer, or reflective pits and bumps on CD-ROMs, your computer is always storing and transmitting information in some binary format.

By the way, you don't have to be using a computer to use binary numbers. When you flip a coin and call Heads or Tails, you are using a binary code. In fact, you could flip a coin three times (with Heads as 1's and Tails as 0's) to randomly generate the values 0 - 7. Four flips would give you 0 - 15. So the next time you lose the dice to your favorite game, just pull out a coin instead!

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About the Author

Telepath was written by Chris Williams, Ph.D. (who is also the founder and Director of the American Free Electronic Library).

Hi!

I wrote this simple program as a fun way to teach binary arithmetic and to get people to understand a little better how computers "think".

Thanks to my oldest kids Bethany (9) and Matthew (6), who helped with my testing.

If anyone gets any benefit from this program, to Jesus Christ be the glory!

-CW

PS - That's not a very good picture of me…