



## The Short Version

(An Outline of The Jack Principles of the Interactive Conversation Interface)



The collective vision from the interactive design experience at

First Edition ©1997-2002, Jellyvision Inc.

written by Harry Gottlieb

# Table of Contents

A Definition .....	2
The Jack Principles .....	6
Maintaining Pacing.....	8
Creating the .....	9
Maintaining the .....	11
Concluding Thoughts .....	12

# An Introduction to Jellyvision and the Interactive Conversation Interface (iCi)

Jellyvision does many things well, but our specialty lies in creating uniquely original interactive experiences. Our goal is to pioneer the "**Interactive Conversation**"—to create the sense that there's a real human being with you just behind the screen. We do this by incorporating a set of design concepts that we call, for the sake of brevity, "The Jack Principles."

The Jack Principles is a set of practical guidelines for creating interactive programs that shares specific key characteristics with the principles that make TV so engaging for a mass audience—the focus on writing, controlled pacing, and high production values; yet, unlike television, our experiences are aware of the user in the present moment. We take into account the user's actions, past and present, and write, record and sequence audio files so smoothly and artfully that the users actually feel that the program is responding to them in a very real and human way.

Not coincidentally, the best example of The Jack Principles is the game for which they're named. YOU DON'T KNOW JACK® remains a unique interactive experience, one in which the illusion of awareness on the part of the program creates the sense of a conversation between user and host. With branching scripts and pre-recorded audio files programmed to play in response to specific user input, YDKJ allows users to forget that they are interacting with a machine and feel like the character in the computer is "talking" to them.

In short, The Jack Principles define a vision for the *Interactive Conversation Interface (ICI)* — the essence of what we do — and then outline the rules by which such programs can be designed. It is our hope that The Jack Principles will serve not only as a practical tool for designers, but will illuminate a clear vision for interactive programming for a mass audience.

## THE DEFINING QUALITY—MODELING HUMAN CONVERSATION

An iCi program has a particular defining quality that separates it from all other forms of communication: it feels like someone is talking with you. Indeed, an iCi program appears to create a continuous conversation between the character in the program and the human sitting in front of the screen.

This doesn't mean the conversation can be about *anything* the way a real human-to-human conversation can. The topic is constrained by the goals and design of the program's creators. If the host of a program asks you:



**“So, do you like books about politics?”**

As the user of the program, you can't respond by saying, "Speaking of politics, what do you think about this silly confirmation hearing going on in the Senate?" You can only respond with one of the choices the program recognizes (which in this case might be "Yes", "No" or "Sort of").

#### THE SUSPENSION OF DISBELIEF

It appears, however, that in a well-designed iCi program, the audience will accept those inherent limitations without question. They accept those limitations so that they can buy into the illusion that the character is really talking *to them*. At a movie, we find ourselves watching a sweet, little orange alien with a penchant for Reese's Pieces and allow ourselves to forget that such a creature doesn't actually exist. We do this quite naturally. It allows us to be entertained by the film. This phenomenon is commonly known as "the suspension of disbelief."

iCi programs can work because a user will suspend her disbelief and buy into the illusion that the character is really talking to her.

**“So, do you like books about politics?”**

You select "No."

**“No? Not even historical politics? Lincoln-Douglas debates...that sort of thing? Any interest in that?”**

You select "No."

**“O.K., no problem. I won't recommend any books on politics...  
....How about sci-fi? Are you interested in science fiction at all?”**

In this case, you are responding by just saying "no." If it were a real conversation with a human, you'd probably say "no" and start explaining why you don't like politics. With an iCi program, however, it appears people will naturally accept limitations on their responses. Thereby, the suspension of disbelief becomes possible.



This is true even when the questions are more open-ended. When a character in a program asks:

**“Of the movies that came out this year, which was your favorite?”**

Most people will accept typing out the answer to the question directly, as opposed to changing the subject.

First time users of interactive programs that model human conversation often test the limits of the program’s ability to respond. People type in swear words and all sorts of stupid things. Sometimes a program can handle this intelligently, but you can always find some way to answer an open ended question so that the program can’t respond intelligently. Quickly, however, the novelty of “cracking” the technology wears off. Most people will soon get caught up in the flow and real purpose of the program, suspend their disbelief, and allow themselves to feel that the character is actually talking to them.

## SHARED CONTROL

In an iCi program you are not so much controlling what the program does, as you are constantly reacting to prompts from a character. Control is *shared* between the user and the program.

Every moment in an iCi experience has been pre-defined and every path has been prefigured by the creative design team. You, however, impact which moments you experience and the path you go down. You don’t definitively *decide* the path, but rather your reactions to a program’s characters *influence* the path down which the program takes you.

In the earlier example, if you had responded that in fact you enjoyed books on politics, the program would have played back a different piece of dialogue:

**“Yeah? You’re into politics? How do you feel about, say, autobiographies on contemporary politicians? Would you be into something like that?”**

You respond “no.”

**“No? How about books on the history of political campaigns?”**

You respond “yes”

**“Great. I’ve got an excellent one I can review for you...”**

Your responses have changed the sequence of events from above. You didn’t consciously *decide* to hear these pieces of dialogue, but the responses you gave



*influenced* the program to select this sequence. If you want to hear the host repeat that last line of dialogue over and over again, you can't. Then again, you usually can't get a human being to do that either.

Shared control also manifests itself in the way the program limits the options it gives you. A television program gives you no options at all. The Web and multimedia programs usually allow you to go anywhere at any time you want. An iCi program falls between these extremes. It will only allow you to do a relatively small number of things at any one time (like responding to a single question). What the program allows you to do at any moment is up to the designers of the program, not you. Reciprocally, as you can see from the example above, how you respond to the program will then influence what other things the character in the program asks you to do and possibly the order in which he asks you.

So, you are not without *influence* over what you will experience, although you cannot completely *decide* what you will experience.

This models the dynamic of talking to a human being. In a conversation, you can't unilaterally decide what gets discussed. The other person is not a machine. He can place his own limits on the conversation. He can steer the conversation in one direction, just as much as you can. The control of the conversation is shared.

For iCi, the sharing happens between the creative design team and the individual user. The design team arranges for all the possible experiences. The individual's actions determine which experience actually transpires.

#### THE "FEEL" OF ICi

In terms of the "feel" of an iCi program, think of a continuously flowing "conversation" between you and a character in a program whose voice is synchronized with his image and/or other visual effects.

If you need to quickly describe the key qualities of an iCi program you would say:

***"It's cinematic and makes you feel like you're really talking to someone."***



# The Jack Principles



**T**he Principles serve one purpose: to give designers a specific set of guidelines in order to create iCi programs.

The Principles are not abstract theoretical concepts. They are design principles that have evolved organically out of our interface work at Jellyvision. We now use these design principles intuitively with each new program we develop.

The Principles break-out into three basic sections:

#### **MAINTAINING PACING**

Principles that help a designer maintain the pacing of an iCi program.

#### **CREATING THE ILLUSION OF AWARENESS**

Principles that help a designer *create* the illusion that the characters on the screen are actually aware of the person sitting in front of the screen. Human conversation is modeled using these principles.

#### **MAINTAINING THE ILLUSION OF AWARENESS**

Principles that a designer must follow to *maintain* the illusion that the characters are actually aware of the person sitting in front of the screen. The audience's suspension of disbelief depends on adhering to these principles.





# Maintaining Pacing

**A**n iCi program has available to it almost all of the same techniques that television and film use to achieve pacing, but must also employ some techniques which are specific to iCi programs.

Television uses music, sound effects, movement of characters and objects on the screen, camera movement and all manner of editing techniques to give a program pacing. The way characters exchange dialogue and the unfolding of the show itself through the plot also create a feeling of movement that draws the audience into the program. Pacing means paying attention to the timing of events.

YDKJ carefully times dialogue, music and sound effects to screen movement. Like a television game show, it pulls the audiences' attention through the program in part with the anticipation of a climatic final round.

YDKJ and all iCi programs have an additional challenge that television programs do not. The audience has to interact with the program. The program does not have complete control of its pacing. It has to share that control with the audience.

In an iCi program, the audience must be *drawn* into the overall pacing of the program. This can be accomplished by use of all or any combination of the following principles:

## JACK PRINCIPLES TO MAINTAIN PACING

- 1. Give the user only one task to accomplish at a time**
- 2. Limit the number of choices the user has at any one time**
- 3. Give the user only meaningful choices**
- 4. Make sure the user knows what to do at every moment**
- 5. Focus the user's attention on the task at hand**
- 6. Use the most efficient manner of user input**
- 7. Make the user aware that the program is waiting**
- 8. Pause, quit or move on without the user's response if it doesn't come soon enough.**



# Creating the Illusion of Awareness

**M**aintaining pacing is one of the key factors that makes an iCi program television-like. Personalizing the program so that it individually responds to the user or users is what makes an iCi program...interactive. Ultimately, the distinguishing power of an iCi program is its ability to create the illusion that the character in the program is aware of the person sitting in front of the screen.

In order for a program to simulate the way a human would respond—to make it seem like the program is truly aware of its audience—its responses must betray real human intelligence and emotions.

Currently, there is no reliable way to do this with what has been called “artificial intelligence.” There are no algorithms that can evaluate the input of a human being and respond intelligently with emotions that would fool anyone into thinking that the software program is “aware” like a human. There is no Hal.

It’s hard to predict when and if such technology will ever come into being. Nonetheless, it is safe to say that it will take a mammoth leap of human imagination to even begin to approach the problem of faithfully modeling the non-logical aspects of the human brain, let alone the human spirit.

So, for the time being, to create the illusion of human awareness, we must use actual human beings to do it. Such human beings are called writers and actors. It will be up to writers to apply their craft, answering at every moment of user interaction in a program, “how would my character respond to that?” Then the writer must script it out for an actor to perform. Just like television.

An iCi program can *create* the illusion of awareness by utilizing any combination or all of the following principles:



## JACK PRINCIPLES TO CREATE THE ILLUSION OF AWARENESS

### **Specifically Respond with Human Intelligence and Emotion to:**

- 1. The user's actions**
- 2. The user's inactions**
- 3. The user's past actions**
- 4. A series of the user's actions**
- 5. The actual time and space that the user is in**
- 6. The comparison of different users' situations and actions**



# Maintaining the Illusion of Awareness

# A

As an iCi program creates the illusion of human awareness, there are many moments in a program where that illusion can be inadvertently shattered.

In order to *maintain* the illusion of awareness, a designer should adhere to each of the following principles:

## JACK PRINCIPLES TO MAINTAIN THE ILLUSION OF AWARENESS

- 1. Use dialogue that conveys a sense of intimacy**
- 2. Make sure characters act appropriately while the user is interacting**
- 3. Make sure dialogue never seems to repeat**
- 4. Be aware of the number of simultaneous users**
- 5. Be aware of the gender of the users**
- 6. Make sure the performance of dialogue is seamless**
- 7. Avoid the presence of characters when user input cannot be evaluated**



# Concluding Thoughts

The question was once raised: “So what is so good about this form of communication? How does this help the world?”

No form of mass communication is intrinsically good or bad. Like literature, radio, television, theater, film and magazines, iCi is just a way of communicating. There are great books and horrible books. There are delightful films and others that are derogatory and insipid. There are fabulously informative websites and others that encourage violence. People will use the medium of iCi no differently.

Whether this medium will ultimately be seen as helping the world or hurting it depends on the virtue of the people who master and practice the craft. We are incredibly fortunate to be alive at a moment in history when science has handed us a completely new and powerful way of entertaining, informing, serving and educating millions of people at once.

The possibilities are nothing short of glorious.

If the ideas in this document have made sense to you, by all means, please set out and take advantage of them.

And use them in a way in which you can be proud.

