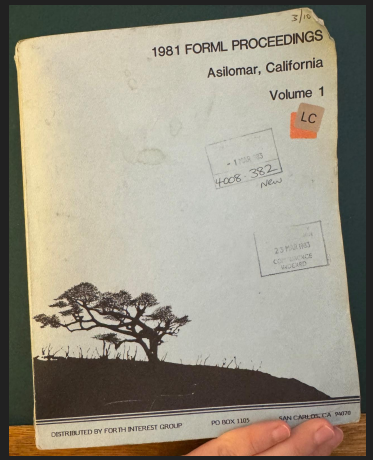
A Journey Through The FORML Archives

Kay Lack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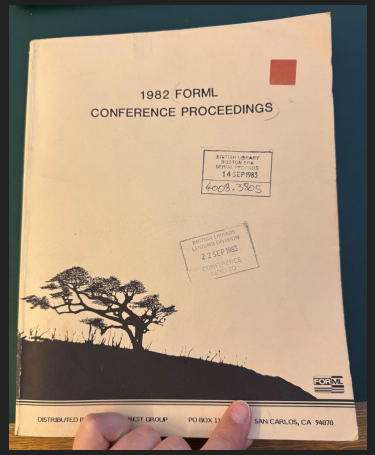
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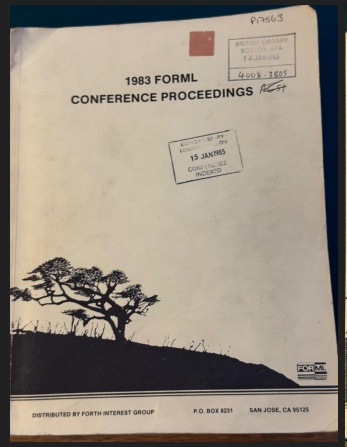
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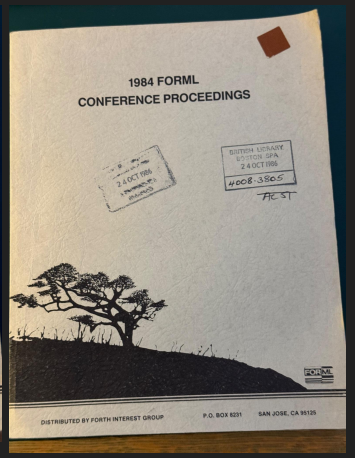
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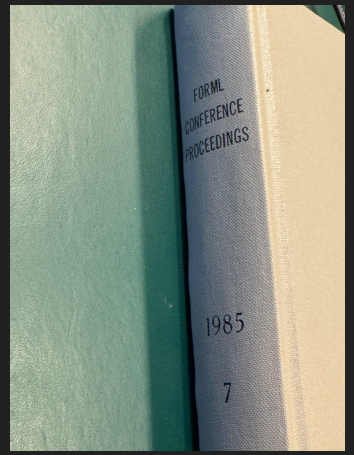
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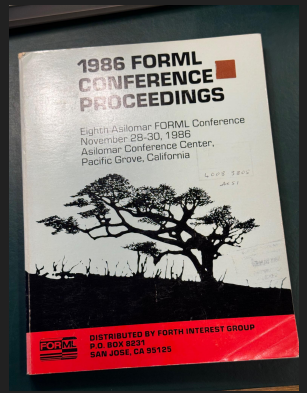
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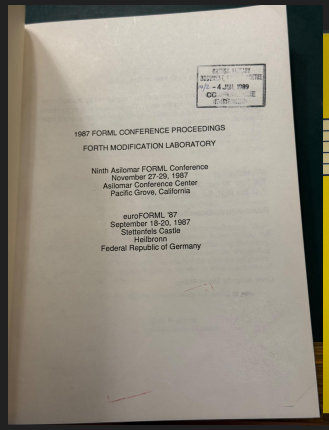
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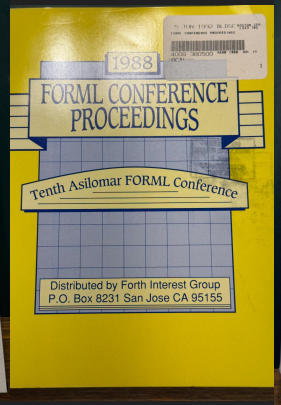
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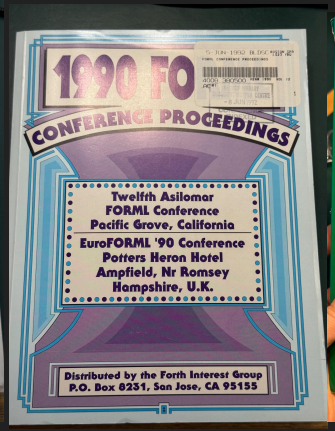
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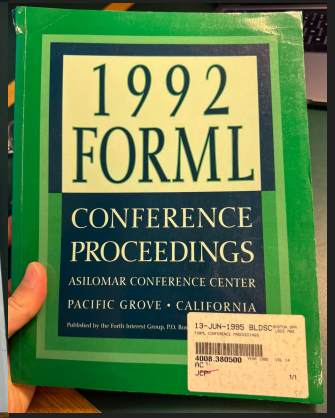
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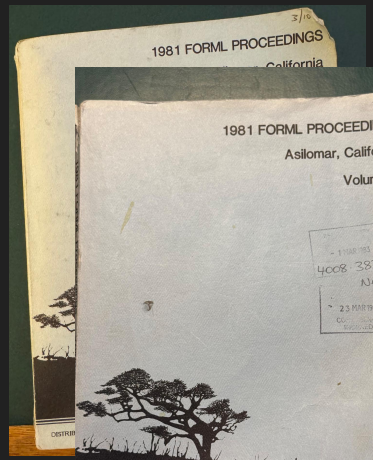
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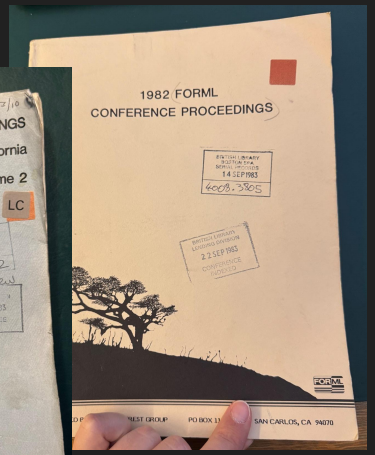
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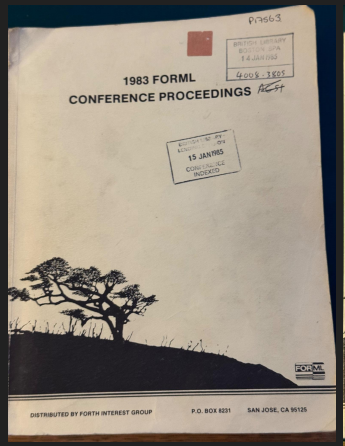
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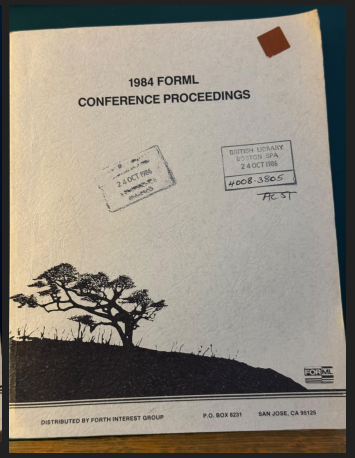
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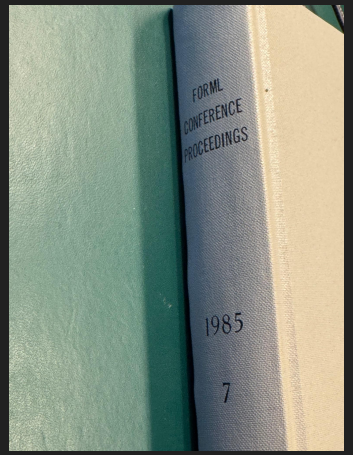
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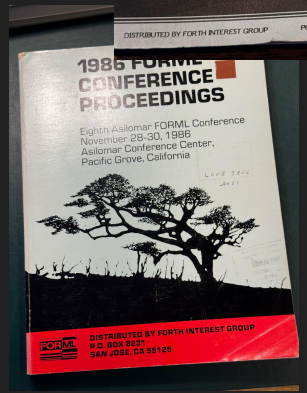
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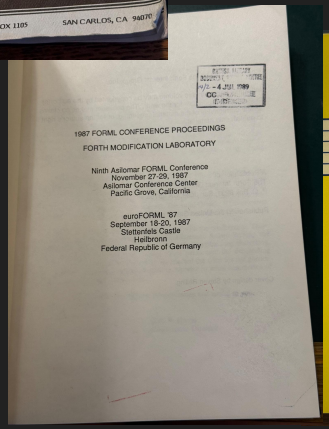
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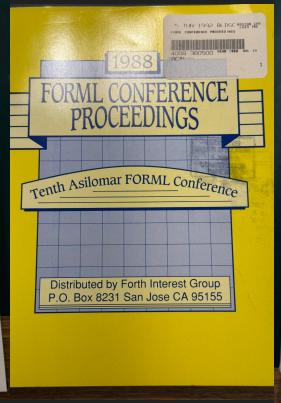
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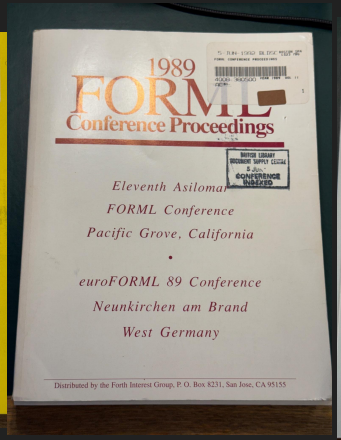
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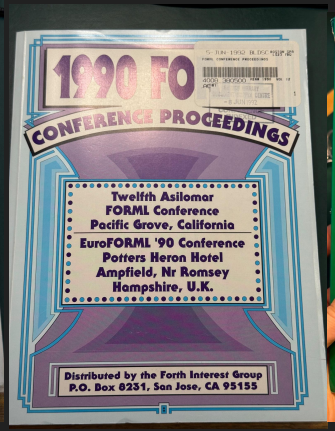
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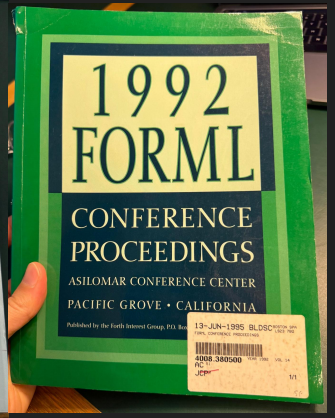
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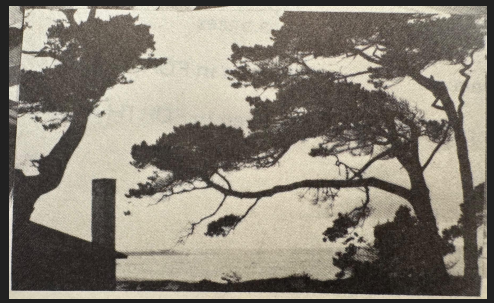
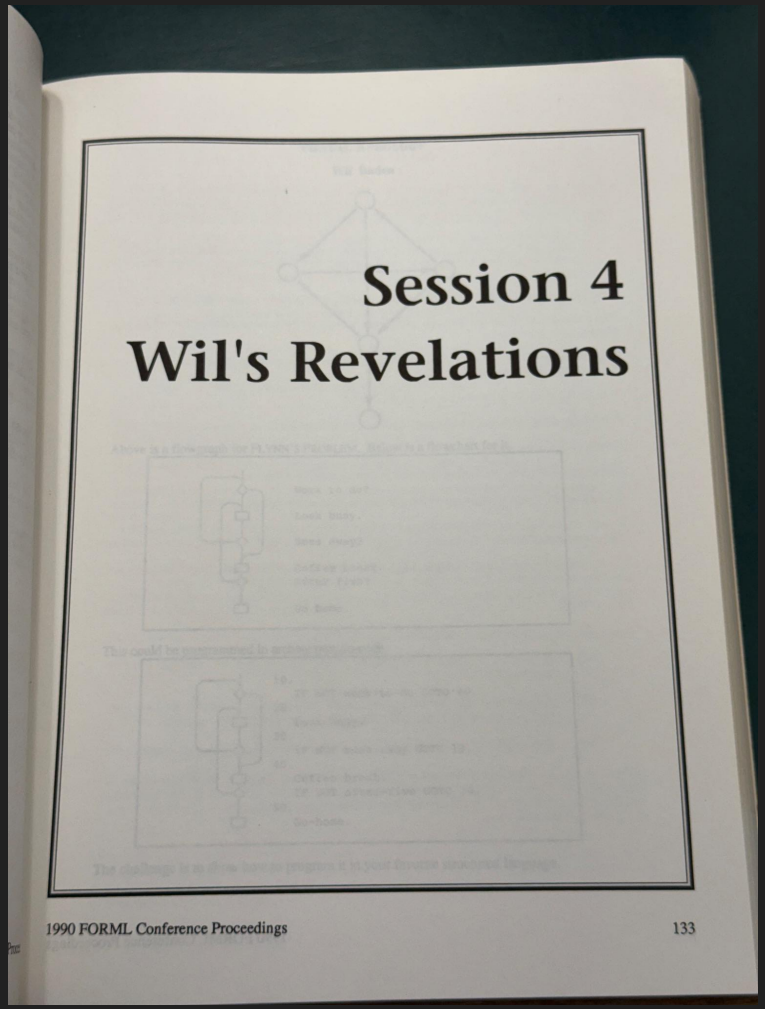


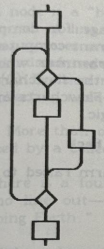


Photos from forth.org, contributed by Bill Ragsdale

CHARTING FORTH

Wil Baden 339 Princeton Drive Costa Mesa CA 92626

There is a direct relationship between structured flowcharts and Forth program logic. This demonstrates the fundamental nature of the traditional Forth structured programming words—they are not arbitrary but reflect the essence of Forth as a natural language for man-machine communication. In any extension to Forth this relationship should be maintained.



GO TO WORK.

BOSS WATCHING?
LOOK BUSY.
TAKE COFFEE BREAK.

5:00?
GO HOME.

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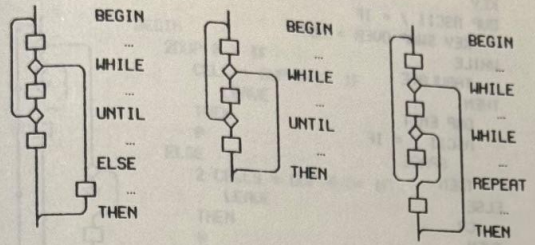
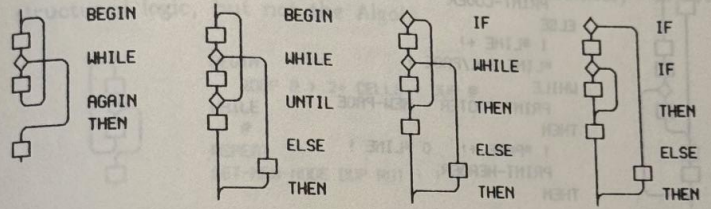
Some other patterns are



WHILE is used when there a conditional forward branch out of a structure, and can be used with *IF*. Writing flowtrees with the backward branches going up the 'wrong' way may help see the sense.



AGAIN THEN is equivalent to *REPEAT*.

83 Modern Control Logic
84 Nonce Defining Words
85 Interpretive Logic
A Set of Formal Rules for Phrasing
86 Charting Forth
Escaping Forth
Hacking Forth
Leaping Forth
87 Write Once, Read Never
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Restarting Forth
The Forth Connection with Flowcharts
88 Fast Double Unsigned Multiply and Divide
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Control Flow words from Basis9
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How to Uncook Spaghetti
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Optimizations in Low level Forth

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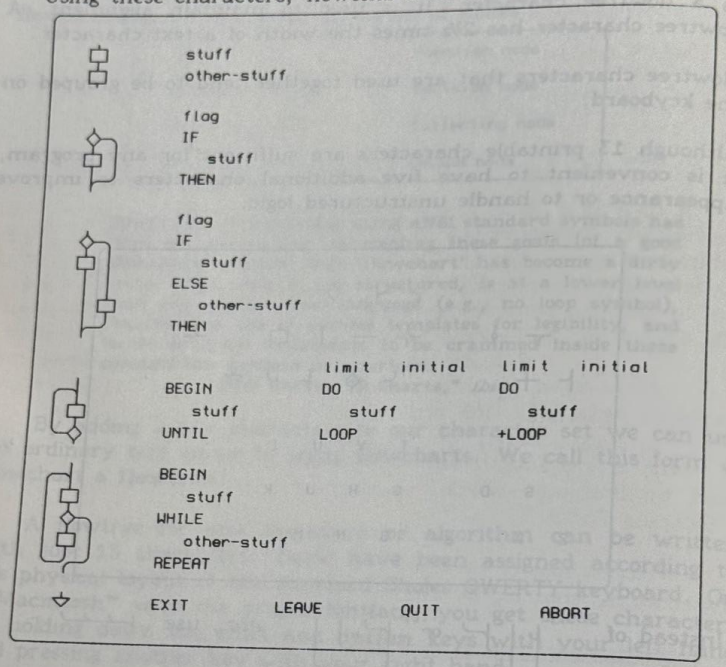
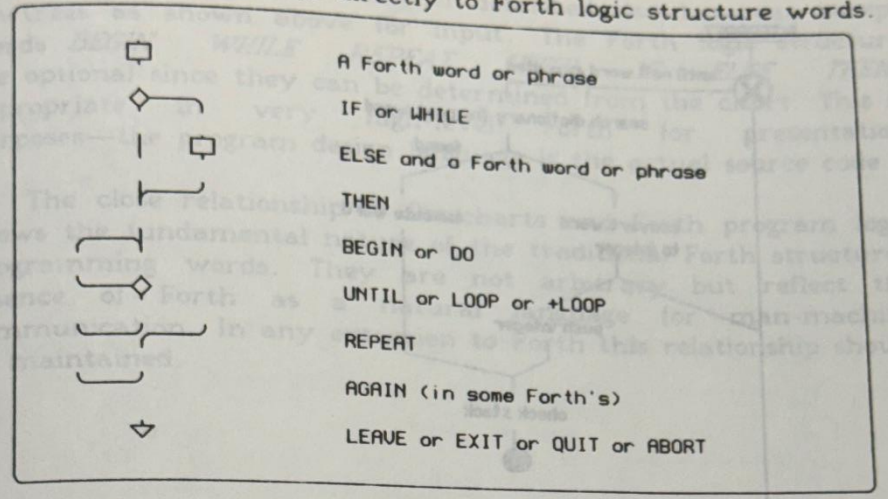
Using these characters, flowcharts for Forth can be written:



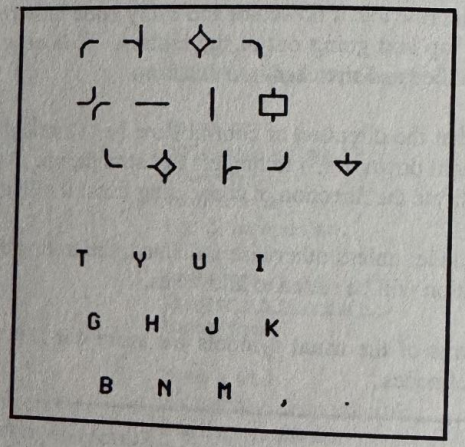
There is a remarkable thing about Forth program logic words: more so than any other language they have a direct correspondence with the nodes of a flowchart. It works both ways: a structured flowchart can be drawn automatically from a Forth program; a Forth program can be written automatically from a structured flowchart.

Flowchart nodes relate directly to Forth logic structure words.



By adding a few characters to our character set we can use an ordinary text editor to *write* flowcharts. We call this form of flowchart a *flowtree*.

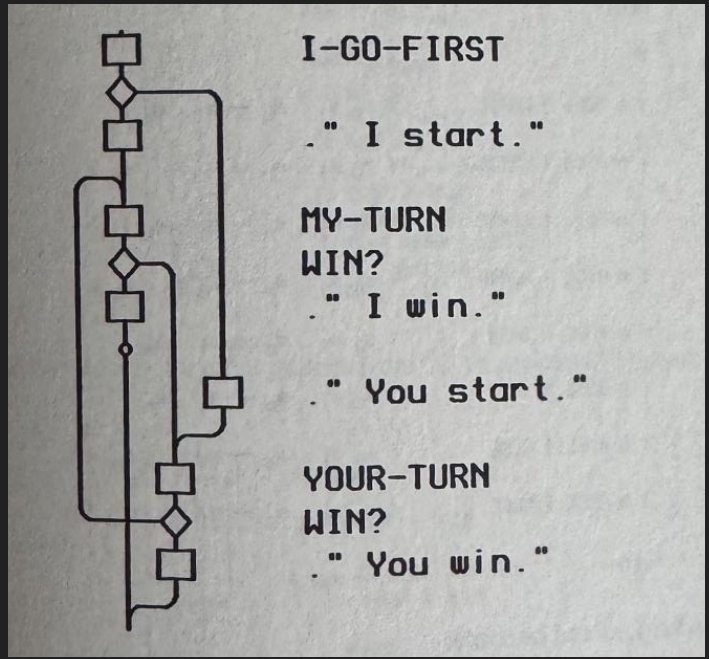
A flowtree for any procedure or algorithm can be written with just 13 characters. These have been assigned according to the physical layout of the standard Sholes QWERTY keyboard. On a Macintosh™ with the proper fontface, you get these characters by holding down the shift and option keys with your left hand and pressing another key with your right hand.

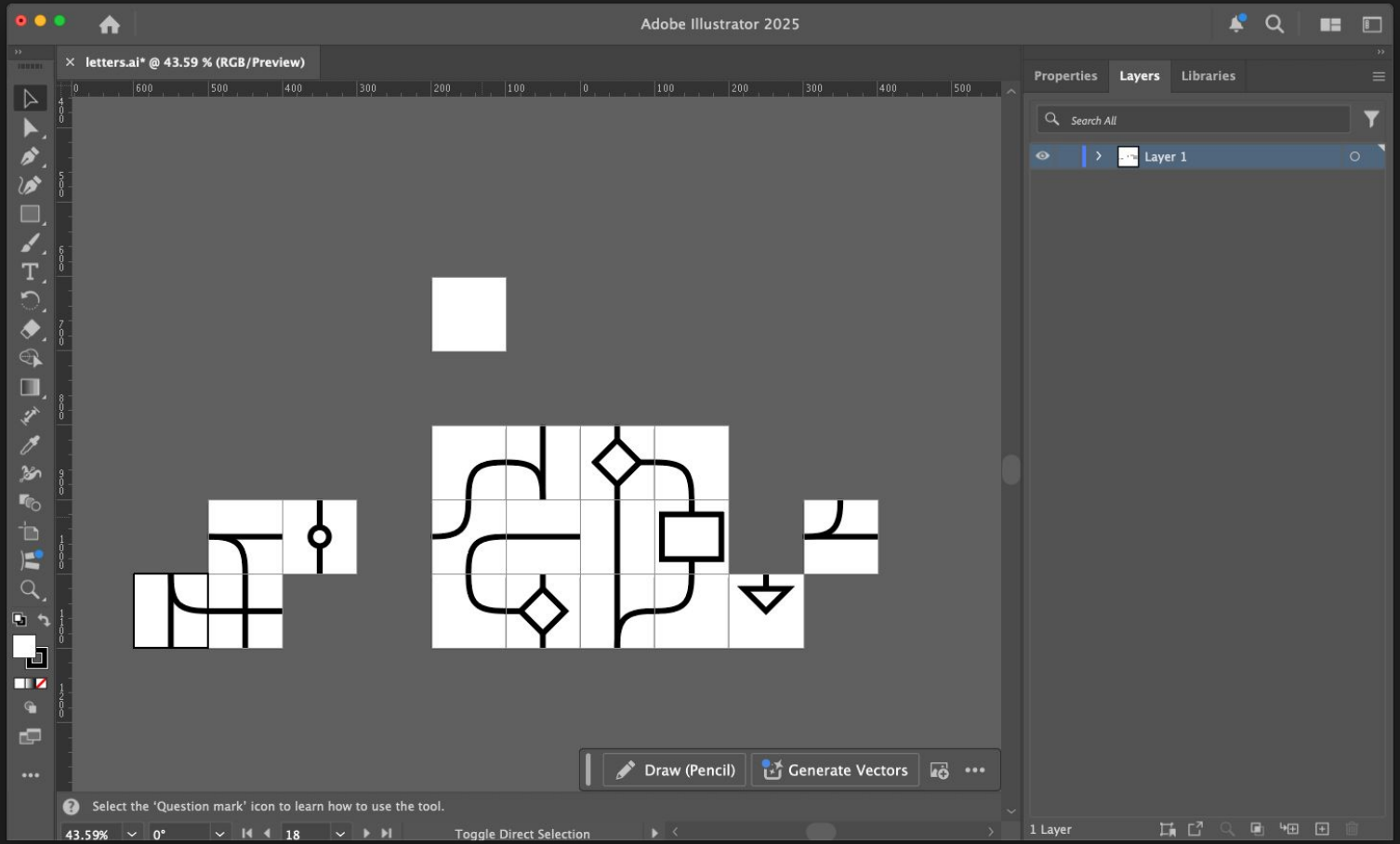


The shift-option-spacebar (or option-spacebar) is as wide as a flowtree character. It is used to maintain alignment. A flow-tree character has 2-1/2 times the width of a text character.

Flowtree characters that are used together tend to be grouped on the keyboard.

Although 13 printable characters are sufficient for any program, it is convenient to have five additional characters to improve appearance or to handle unstructured logic.

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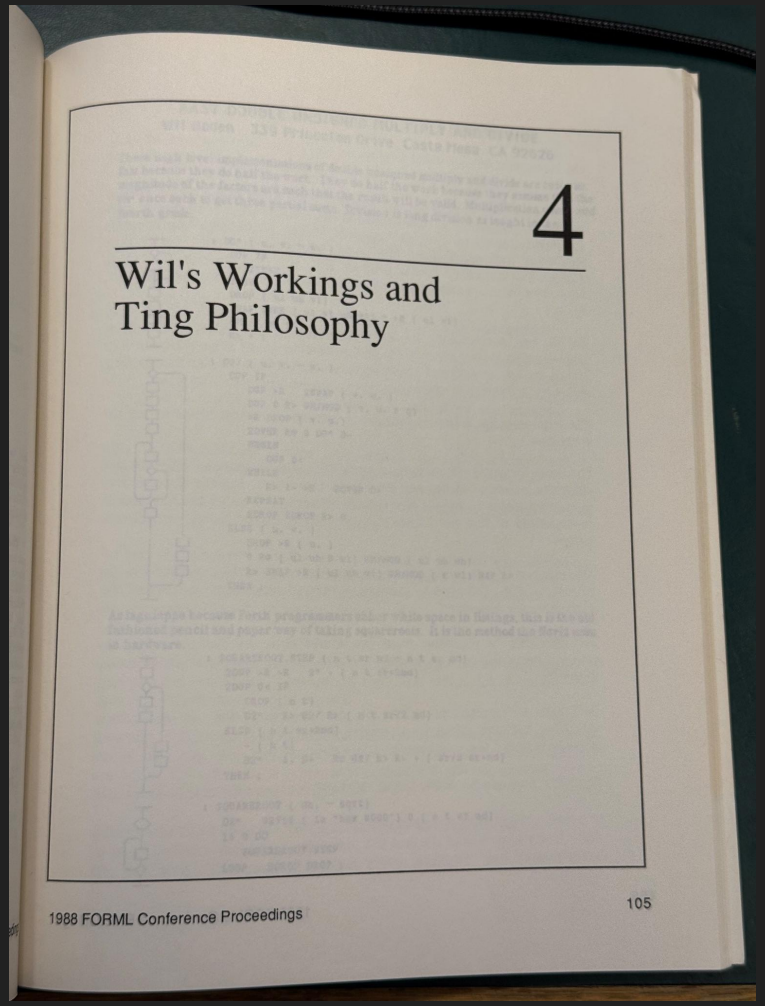
Toggle Direct Selection
1 Layer

Live Demo!

Portrait posted by Peter Forth on Forth2020 Group



4

Wil's Workings and Ting Philosophy

Tao of Forth

C. H. Ting

Abstract

This paper attempts to simplify Michael Ham's description of Forth.

ZEN AND FORTH

C. H. Ting
Offete Enterprises, Inc. San Mateo, CA

I. INTRODUCTION

What I like to focus on tonight is the religious aspect of Forth. Zen is the religious development in China which was a synthesis of Buddhism and Taoism. Its history and development had many charisteristics similar to Forth. I would like to use it to open up our discussions.

Zen stresses simplicity. Enlightenment is not as complicated as traditional Buddhism lead us to believe. It is not in the canons. It is not in the churches or temples. It cannot be conveyed by words. It is not in the established practices. It is in yourself. You have it already. But you have to discover it yourself. It is also an expierence, which can only be passed from mouth to mouth, and from heart to heart, not by books or written words. It became an oral tradition.

Forth is the Zen of computing. It forges the lightest but tightest union between a Man and a Computer. Anything and everything superfluous to this union are stripped away so that the Computer becomes a natural extension of the Man.

Zen stresses simplicity. Enlightenment is not as complicated as traditional Buddhism lead us to believe. It is not in the canons. It is not in the churches or temples. It cannot be conveyed by words. It is not in the established practices. It is in yourself. You have it already. But you have to discover it yourself. It is also an expierence, which can only be passed from mouth to mouth, and from heart to heart, not by books or written words. It became an oral tradition.

Tao of Forth

C. H. Ting

Abstract

This paper attempts to simplify Michael Ham's description of Forth.

Tao Te Ching, Chapter 48

为学日益

为道日损

损之又损

以至于无为

无为而无不为

Most people want to increase their knowledge every day, thus making their lives ever more complicated. Tao cultivated are the opposite – they want to simplify a little bit every day.

This process of simplification continues until they reach the state where they have no attachments at all. This state is a direct experience of the Tao, a perfect flow in the present moment where nothing is impossible.

Paraphrase Translation, Derek Lin

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George Shaw, Terri Sutton, Jerry Tifft, Richard Astle, Jim Stephenson

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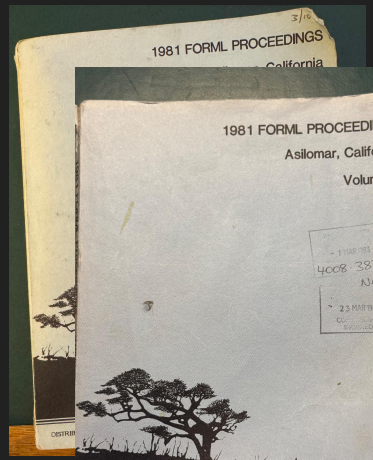
C.H. Ting	Longest Biography/Most Papers
Marina Kern	Best Performance
John Hayes	Presentation at Highest Baud Rate
Mike Perry	Perfect Attendance/Best Simple Solution
Martin Tracy	Gizmo Award
Mike Elola	Most Repeated Concept (paper & impromptu talk on same subject)
Neil Bawd	Most Vociferous Absence
Charles Moore	For starting it all...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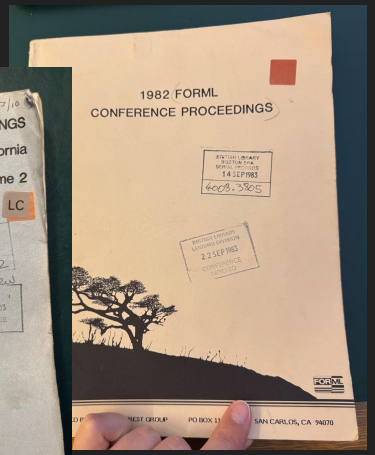
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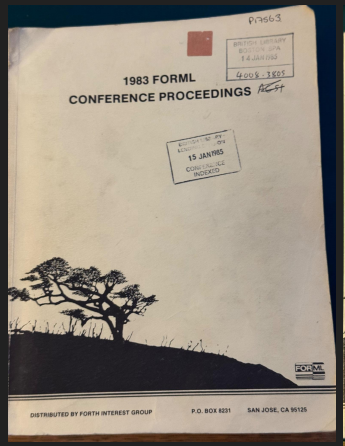
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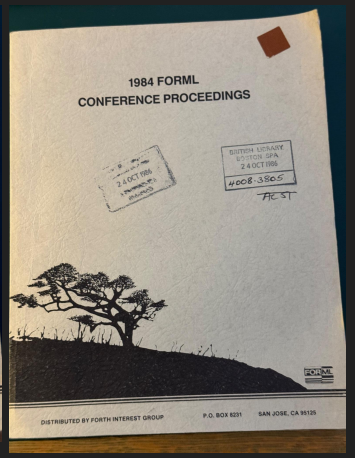
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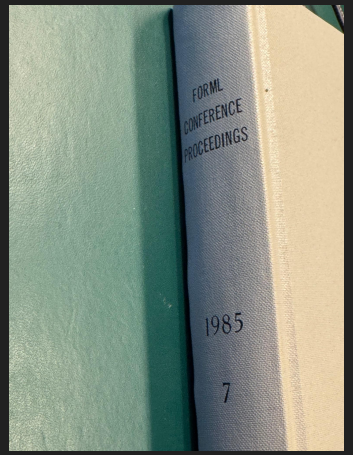
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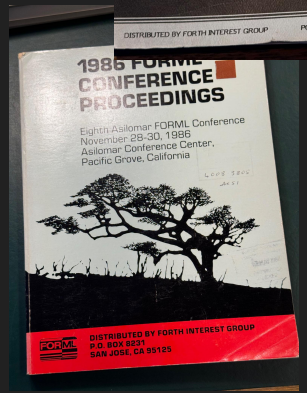
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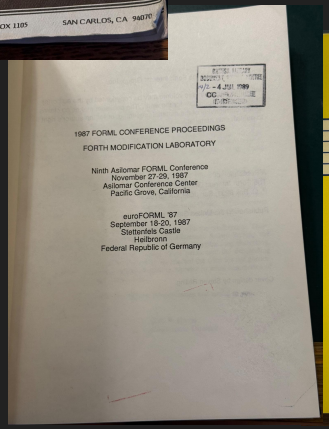
1987 FORML CONFERENCE PROCEEDINGS
FORTH MODIFICATION LABORATORY
Ninth Asilomar FORML Conference
November 27-29, 1987
Asilomar Conference Center
Pacific Grove, California
euroFORML '87
September 18-20, 1987
Stetternfels Castle
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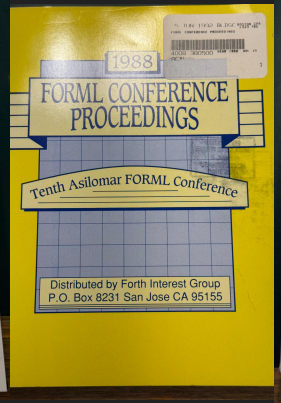
1988
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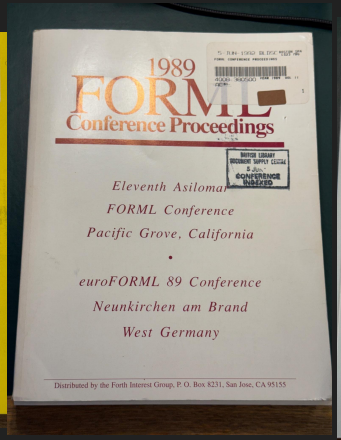
1989
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Eleventh Asilomar
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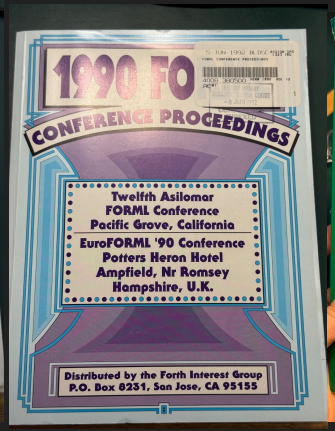
1990 FO
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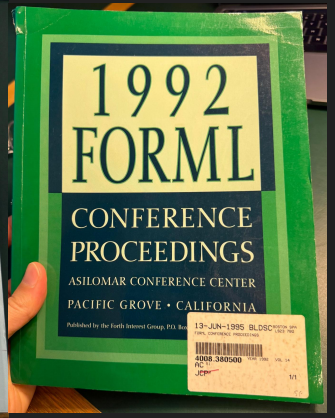
1992
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PROCEEDINGS
ASILOMAR CONFERENCE CENTER
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Programming a BASIC Compiler in FORTH

By Charles H. Moore
FORTH, Inc.
2309 Pacific Coast Hwy.
Hermosa Beach, CA 90254

My goal is to show how simply a BASIC compiler can be programmed in FORTH.

This exercise will demonstrate:

1. How the FORTH interpreter can be used to interpret nonFORTH input.
2. How the word order characteristic of infix notation can be permuted into the word order required by postfix.
3. How a word can change meaning, depending on context.
4. How loose a relationship can exist between a FORTH definition and the source language which describes it.
5. How, having done a great deal of processing to interpret the BASIC source code, we have not acquired any abilities that were not aready available with FORTH; thus, the whole thing has been an exercise in futility.

Why have I done this? Of all the reasons I should or shouldn't have, three stand out:

1. To illustrate the power of FORTH.
2. To explain the notion of "precedence" and how it influences language.
3. To learn about BASIC and try to understand its popularity.

BASIC was an unsuitable vehicle for this exercise, in keeping with its unsuitability for everything else. As I learned, BASIC is preoccupied with input and output, which it does badly. My concern is with its syntax which is typical of conventional languages.

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6. Computed GOTO, TAB, INT, SQR, RND are missing because I got tired.

7. PRINT and INPUT are slightly different.

8. READ and DATA are omitted as unsuited to variables as we know them.

9. Statement number 1 may not be used.

These omissions could be remedied. But why bother? BASIC is hopelessly cluttered with statement numbers and punctuation. As a tool to learn about computers, it is an obscene misrepresentation of the power and beauty of language.

Kay Lack

kay@kaylack.net

Do you have FORML proceedings 1991, or anything 1996 onwards?

Will you send them to me? I will pay postage and either ship them back to you or ensure they are archived.