In the

Supreme Court of the United States

C. MARSHALL DANN, COMMISSIONER OF PATENTS AND TRADEMARKS,

Petitioner,

--vs--

THOMAS R. JOHNSTON

No. 74-1033

Washington, D. C.
December 9, 1975

Pages 1 thru 42

HOOVER REPORTING COMPANY, INC.
Official Reporters
Washington, D. C.
546-6666

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C. MARSHALL DANN, COMMISSIONER OF PATENTS AND TRADEMARKS, Petitioner	:	
v.	:	No. 74-1033
THOMAS R. JOHNSTON	:	

Washington, D. C.

Tuesday, December 9, 1975

The above-entitled matter came on for argument at 11:36 o'clock a.m.

BEFORE:

WARREN E. BURGER, Chief Justice of the United States
WILLIAM J. BRENNAN, JR., Associate Justice
POTTER STEWART, Associate Justice
BYRON R. WHITE, Associate Justice
THURGOOD MARSHALL, Associate Justice
LEWIS F. POWELL, JR., Associate Justice
WILLIAM H. REHNQUIST, Associate Justice

APPEARANCES:

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For Petitioner

MORTON C. JACOBS, ESQ., 828 Suburban Station Building, Philadelphia, Pennsylvania 19103
For Respondent

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P R O C E E D I N G S

MR. CHIEF JUSTICE BURGER: We will hear arguments next in No. 74-1033, C. Marshall Dann, Commissioner of Patents and Trademarks, against Thomas R. Johnston.

Mr. Shapiro, you may proceed whenever you are ready.

ORAL ARGUMENT OF HOWARD E. SHAPIRO, ESQ.

ON BEHALF OF PETITIONER

MR. SHAPIRO: Mr. Chief Justice and may it please the Court:

Three years ago in Gottschalk against Benson, this Court held that a method of programming a general-purpose digital computer to convert signals from one form of binary number to another was not a patentable process under Section 101 of the Patent Code.

In this case, the Court of Customs and Patent Appeals has held that a computer program used to keep records of financial accounts is patentable as a new machine rather than as a process even though the application, in our view, claims no new apparatus and the program is carried out in conventional general purpose computers intentionally-designed to handle such programming.

The case is here on a writ of certiorari under Section 1256 of the Judicial Code. The issues before the Court of Customs and Patent Appeals and before this Court

are whether such a program is patentable subject matter under Section 101 of the Patent Code and whether use of computers to keep track of financial transactions as disclosed in the specification in this case is obvious from the prior art.

Now, as the Benson case explains in some detail, a general purpose digital computer operates by performing arithmetical and logical operations on numbers.

Now, all of the data is reduced to digits represented by the symbols 1 and 0 in the binary number system and these numbers can be made physically to correspond to on and off states of electronic signals and these are controlled through the opening and closing of electronic pathways within the system. It is a sort of a system of switching among circuits.

This switching process is accomplished through a sequence of coded instructions that is called the program.

Now, to create a program, the problem to be resolved has to be reduced to a series of sequences or steps expressed in a language which the computer will accept.

In effect, therefore, every computer program requires an algorithm, which is a precise and complete step-by-step recipe for a computational procedure.

Because computers don't think, the algorithm has to set out very exacting and specific rules and it has to

be expressible in a programming language.

The computer then takes the expressed language which is usually in a higher language. You go through several steps from ordinary human thought to a special computer language to language that is close to what the machine actually uses and through a translator device, the computer converts the language into the machine's code.

This reduces the program to the binary number system of on and off states and then the computer can carry out the arithmetic and logic functions by which it operates.

Now, the patent application in this case discloses a computer program for an accounting system. The system permits the maintenance of individual customer accounts, say by a bank, by assigning category codes to checks and deposit slips that are marked in machine-readable magnetic ink.

The categories of transactions are computed as totals and they are reported as statements to the customer so that he can find his rent expense for a period or his repair expense or whathaveyou.

The specification which describes the steps in some detail -- it sets out flow diagrams for the programs and it gives as an example as specific program a program for use in an IBM 1400 general purpose digital computer.

The accounting aspects are shown in the Appendix

at pages 72 and 83 at least illustratively because they show a sample check with the category code and a transaction journal and a summary statement.

I think the precise way into this specification, which is long and detailed, would be to glance at page 87 of the Appendix, which states that in the system a data processor, e.g. a store program digital computer embodying this invention is employed.

The program may assume many different forms that are well-known in the art.

Now, that is essentially all that this specification deals with. When you go on through it you do not find any description of apparatus or circuitry or devices of any kind. What you find are the steps, the sequence of steps to be carried out in the computer. So in our view, this specification describes a system of records and procedures for carrying out accounting in a general purpose digital computer system.

The patent claims are very broadly worded. The accounting procedures can be carried out in existing computers long in use and no new machinery is necessary.

Now, the Patent Examiner in this case rejected the application under Section 112 on the ground that it was indefinite and didn't adequately disclose and under Section 102 on the ground that prior patents anticipated these

inventions.

The Respondent appealed to the Patent Office Board of Appeals.

Now, the Board at this time was constrained by decisions of the Court of Customs and Patent Appeals, particularly In re Bernhart and its progeny, which hold that each program for a general purpose computer makes the computer into a different machine and therefore, if it is a new program, it becomes a new machine.

The logic of this is said to be that electronically the program sets up a different set of circuits and therefore it is structurally different, at least for the few millionths of a second that the program and the circuits are in existence in the machine.

This Court's decision in Benson had not come down at this time when the matter was before the Board of Patent Appeals.

Nevertheless, the Board of Patent Appeals, for the first time in this case, held that the patent application was not patentable subject matter within section 101 of the Patent Code.

It said that the claims didn't enhance the internal functioning of the computer but were merely a process for using it -- using the computer for purposes outside the technological arts.

This was an attempt to accommodate CCPA decisions as they then stood.

It expressly held that a computer operating with any given stored program is not a different machine simply because somebody decides to assign to its memory a particular human meaning and the Board specifically found that there was no difference between the apparatus claims which were in this patent and the machine claims.

They really had to stand or fall together.

And then, finally, the Board held that the claims were obvious in the light of prior art because it said that banks have long been using magnetic ink, machine-readable category codes and also that the system fell within the disclosure of a portion of another patent previously issued, the Dirks patent.

The Respondent challenged the Board of Appeals' decision in the Court of Customs and Patent Appeals on every ground.

Now, while the appeal was pending, this Court's decision in Benson came down and then the Respondent abandoned his process claims, leaving only the machine claims.

The Commissioner argued in the Court below that Benson applied both to the machine and the patent claims and that the computer programs were unpatentable under Section

101. The Respondent argued, referring particularly to the CCPA's earlier decisions, that a computer program is a physical structure, that machine claims are patentable under Benson, that Benson hasn't affected the rule at the CCPA, that an unprogrammed general purpose computer is a different machine, and, in effect, he said that Benson was confined to process claims.

Well, the Court below held, again, that record-keeping machine systems which comprise programmed general computers, digital computers, are statutory subject matter and that they could be patented if they were not obvious in the light of the prior art.

Again, it reaffirmed its decision in the Bernhart case. It held that Benson was inapplicable because Benson dealt with a process claim and these were drafted in the form of machine claims.

And, of course, it rejected the holding of obviousness from the prior art.

Judge Markey dissented, concluding that the disclosure was obvious and then Judge Rich wrote a very interesting dissent in which he analyzed Benson and concluded that there is just no difference between machine claims and structure claims in this context; that it is simply a matter of the patent draftsman's art and that the thrust of Benson clearly indicates that computer programs are not patentable.

QUESTION: He doesn't think much of Benson, does he?

MR. SHAPIRO: No, he doesn't. He disagrees. He adheres to the CCPA analysis which is that --

QUESTION: Well, he had written the process one, had he not, Benson?

MR. SHAPIRO: He had written Benson, yes.

QUESTION: And he was reversed.

MR. SHAPIRO: He was. The --

QUESTION: Had he ever expressed how he would have held prior to Benson on a machine claim?

MR. SHAPIRO: I believe he joined the decision in Bernhart and decisions subsequent to Benson which were decided on records completed before the Benson case, which continued to adhere to the CCPA's Berhnart rule.

QUESTION: Now, there is some talk in the briefs of your colleague here that there is some issue that should not -- that Government should not be allowed to bring here.

MR. SHAPIRO: Yes, there is an argument that the Commissioner is barred jurisdictionally from contesting --

QUESTION: Because he is the Board, or the Board is -- he may not challenge a Board decision.

MR. SHAPIRO: Yes, that is correct.

QUESTION: Now, as I take it, that relates to whether or not this is a machine or a new machine.

MR. SHAPIRO: That is right. It is really whether the Bernhart rule can be challenged in this proceedings because of the way in which it came up. We think it clearly can be for the reasons I recited in listing the Board of Appeals' rejection.

The Board of Appeals, restrained by Bernhart this time -- and here is the Court to which its decisions of the Board have to --

QUESTION: But you are taking issue with the decision of the Board.

MR. SHAPIRO: In the light of what has happened in Benson, the issue came before the CCPA. The rejection was under Section 101 by the Board and the issue before the CCPA in part concerned what does Benson do to the general doctrine of Bernhart?

The CCPA held, as it had to, one way or another.

QUESTION: Well, was Benson after the Board's decision in this case?

MR. SHAPIRO: Yes. That is correct.

QUESTION: And you think Benson bore heavily on the issues in this case?

MR. SHAPIRO: Yes, your Honor.

QUESTION: And so you say that you should at least have the chance to represent your arguments to the Board, at the very least.

MR. SHAPIRO: At the very least, your Honor.

This Court's jurisdiction, after all, is under Section 1256 of the Code. It is broad certiorari jurisdiction, just as broad as if this case came up from the District Court under Section 145 and then through the Court of Appeals. This issue on this section --

QUESTION: Does anyone know, have there been any subsequent cases or other cases that know how the Board would decide this case after Benson? Since Benson?

MR. SHAPIRO: I think since Benson, the Board, I think, is taking the position that Benson is controlling, as the Commissioner argued in this case.

QUESTION: You mean that the Board has since taken a position that its decision in this case is wrong?

MR. SHAPIRO: I would have to -- well, its decision in this case was the rejection of the application under 101 basically.

QUESTION: I understand, but is --

MR. SHAPIRO: I step in its reasoning. It is no longer valid. That is right. Because of events which made clear that these computer programs are not patentable.

Well, I turn to the merits, then.

If we look at the specification we can see that what we have got here is nothing more than an accounting system carried out in a computer.

Now, as an accounting system, the disclosure is unpatentable because a method of transacting business is an abstract concept without a physical embodiment. And abstract concepts and laws of nature and mental processes are not patentable and certainly, business methods are not patentable.

When you take a business method or an accounting system and you embody it as a sequence of steps for use in a general purpose computer,it is also unpatentable subject matter.

Now, Benson clearly holds that a mathematical formula is not patented. It then goes on to hold that such an abstract concept does not become patentable when it is expressed as an algorithm for a computer program.

QUESTION: As a process pattern.

MR. SHAPIRO: As a process. But the thrust of Benson is that abstract concepts like accounting systems are also unpatentable when expressed as computer programs.

If you call it a machine you don't really change anything, as Judge Rich pointed out. All that is happening when you say it is a process or a machine is that you are taking the same sequence of steps and then saying, well, we will call it a machine because it operates in the computer.

It is the same way as if we called it a process.

The -- in fact, I think that since all computer programs are algorithms, are a series of steps, sequences

of steps, none can be patentable under Benson as either machines are processes and this is the thrust of Judge Rich's analysis.

QUESTION: Well, but certainly, Mr. Shapiro, that is far beyond the holding of Benson and it seems to me that it would require more technological ability than I possess and I would suspect perhaps than you possess to say flatly that nothing that might subsequently be done with a computer in the way of programming could ever be patented.

MR. SHAPIRO: We have tried to reserve the possibility which we have no technological foresight, as you recognize, that there may be some sort of combination or use of program and computer that operates in some synergystic way. I can't anticipate what it is. I am not the inventor.

QUESTION: No, but you probably wouldn't have anticipated the telegraph or the telephone, either, any more than I would have.

MR. SHAPIRO: Which is why -- which is precisely why, using those cases, the Court's decisions involving those inventions, the telegraph and the telephone, have always been limited in such a way that the results achieved as distinguished from the machinery themselves can't be patented and what is happening here in this case is that the simple idea of using a general purpose computer

to carry out an accounting program without being embodied or limited to any particular apparatus is getting -- is being patented and that is part of the objectionable aspect of this application.

The grant of the patent, in effect, is a grant of a monopoly on the general idea of providing individual financial record-keeping by computer. We think that at most the disclosure involves new use of an old machine and even that, I think I would have to qualify the new use but when you claim it as a machine, you run into the long-standing rule that you cannot get a machine patent on a new use of that machine and that is clear in the patent law and Congress made it doubly clear in 1952 when it added to the Patent Code the definition of process which says that a process is a new use of an old machine.

QUESTION: Well, didn't the Board say this wasn't just a new use, it is a new machine.

MR. SHAPIRO: The Board did not say it is a new machine. It simply -- in fact, it claimed to the contrary, that there was no structural change by the nature of this patent at all.

QUESTION: I thought --

MR. SHAPIRO: All they did was reject the premise that the Examiner had relied on, which was at that -- which was inconsistent with Bernhart. The Board tried to accept

Bernhard and then come back in the back door with a way around it.

QUESTION: You don't think it said it was a new machine?

MR. SHAPIRO: No.

QUESTION: But nevertheless, not patentable?

MR. SHAPIRO: They said it was not patentable because it found no structural change, no enhancement of the function of the machine. Those were its words, "enhancement of the function of the machine."

So they didn't concede that this was a new machine.

Now, we get to this question of is it a new machine or isn't it and you really have to think about what computers are and what they do, your Honor.

The Bernhart case says that every general purpose computer becomes a special purpose computer when you put in a new program and the reason for this is that the electronic circuitry changes. But this machine only exists in fractions of a second, while the program is going on. And as soon as the sequence is completed, the new machine is gone until the program is put back in again.

Now, this evanescent electronic condition just is not a new machine under Section 101. The only machine involved is the existing general purpose computer.

QUESTION: What if you had an analog computer?

MR. SHAPIRO: I think the argument would be the same, although we don't have an analog computer here and the technology is somewhat different.

QUESTION: I mean, there you don't have it just for an instant. You have it -- once acquired, I take it, it is set in place the way any other machine is.

MR. SHAPIRO: Well, with this difference. I don't fully -- this record has not told us enough about the operation of what are called "general purpose analogs" and I can't describe them for you but I think as in Benson, I would have to say that the issue of an analog computer is not before us here.

At least with the general purpose computer, about which we can talk with --

MR. SHAPIRO: Is that a digital, basically, a general purpose?

MR. SHAPIRO: This calls for a general purpose digital computer.

Now, these machines -- digital general purpose computers are frequently multi-programmed so that you have -- they can be operated on a time-sharing basis and almost simultaneously they have data from all kinds of sources and programs coming in and they are able to sort it out and operate almost instantaneously on a large number of them.

Now, to say that this single general purpose

computer is as many different machines for legal purposes as there are programs in it is really to step into the area of legal fiction which is what Judge Rich candidly recognized we were dealing with.

The various configurations of circuitry or electronic pathways are no more new machines than would be switching configurations in a railroad yard that is constantly changing or the different circuit patterns that appear in an electric sign that flashes the news. You change the circuit patterns to light up the bulb. It is all in it. But it is one machine.

When we get down to, doesn't it make a difference between process claims and machine claims, as I said, that is a matter of the draftsman's art and finally, there is an argument made that the general purpose computer will achieve the same result as the hardwire special purpose computers so it must be a new machine.

But I think the answer to that is that a special purpose machine can accomplish the same results as the programmed general purpose device but equivalence of result is not equivalence of means.

It is well-established that the results that a machine achieves, the function of the machine, to use the old language from Corning against Burton, is not patentable as a machine.

The special-purpose machine has a physical structure. The program is only a sequence of steps carried out in a machine with a different structure.

Now, this is what led to the Digitronics decision which we have described in our reply brief.

There is an argument made that the -- it would be an unconstitutional discrimination to grant a patent on a hardware machine but not on a programmed general purpose machine or tahter, to put it more truthfully, on the program itself.

I think the answer to that is that it is up to Congress, as the Court pointed out in Benson, to decide how far it will go.

In Deepsouth against Laitram the Court pointed out that the scope of the Patent Clause is for Congress to implement and that is really what takes care of the Equal Protection argument advanced.

Now, finally, there is -- I mean, really, what this sounds in, is the problem of technology overtaking the existing law. We face this in the CATV area now and the Court's decisions have reflected that and in, recently, I think, in the Radio Music case, Twentieth Century Music Corporation against Aiken where the technology just doesn't fit the existing law.

Congress was called on to do something about this

in Benson. It hasn't acted on computer programming yet and we don't know whether it will.

MR. CHIEF JUSTICE BURGER: We'll resume there at 1:00 o'clock, Mr. Shapiro.

[Whereupon, a recess was taken for luncheon from 12:00 o'clock noon to 1:02 o'clock p.m.]

AFTERNOON SESSION

MR. CHIEF JUSTICE BURGER: Mr. Shapiro, you may continue. You have six minutes left.

MR. SHAPIRO: I should like to reserve the remainder of my time, your Honor.

MR. CHIEF JUSTICE BURGER: Very well.

Mr. Jacobs.

ORAL ARGUMENT OF MORTON C. JACOBS, ESQ.

ON BEHALF OF RESPONDENT

MR. CHIEF JUSTICE BURGER: Among other things in your own time, I wish you would address yourself for my benefit to Chief Judge Markey's observation on obviousness, if you will.

MR. JACOBS: Mr. Chief Justice and may it please the Honorable Court:

Respondent's invention is concerned with the problem of meeting the needs of small businessmen, farmers and professionals to have good, accurate, reliable financial records and to have, where possible, the benefit of large-

scale data processing systems in the same way that large corporations and government make use of these facilities.

One solution to that problem of providing a computer is to do the same thing that is done in a large corporation or the Government, to have all of the departments or users conform to the single system, the single algorithmic procedure, that the computer is constructed to operate on.

In short, if all of these small users, the businessmen, the professionals, the farmers, would all keep their books in the same way, then that solution would have been available.

Respondent said instead of having all of the users adapt to the machine, let us construct a machine which will adapt to the users.

And so he provided a set of controls for the computer so that any ledger format, any method of bookkeeping could be used by a user and that ledger format and bookkeeping procedure of each user would be established in the circuits of the machine -- in the master circuits, as we call them, in the patent application and a general set of controls would adapt to those master circuits and their contents and operate so that the -- each individual's format in his own way, his own words, could be operated on by the machine.

Each individual's own method of bookkeeping could

be operated on and what is more interesting because of this adaptive procedure, each time a user wanted to change his procedure, change his data, change his records, he could do it in a simple fashion.

He wouldn't need a computer programmer or anyone else to restructure the machine. He could communicate directly with the machine by reason of these controls.

QUESTION: Wouldn't the utility of this programming be just as much available and just as useful to the ordinary taxpayer to separate his -- the checks that went out for contributions to his church, the payments to his doctor, to taxes, to other deductable expenses? Or not?

MR. JACOBS: Yes, it would, Mr. Chief Justice and that is contemplated by use of the program that this machine is implemented in that precisely those benefits would be derived.

I spoke primarily of business users or people engaged in some enterprise but it was also applied to personal financial record-keeping as well so that out of this system would be derived the possibility that people can go their own way and still get the benefits of the reliability of the digital computer, the fast speed of the digital computer to keep sound records for tax and other purposes.

And as far as these benefits are concerned, they are ones of in effect, by an adaptive machine, removing the

impediment of having to deal with a machine because the machine adapts to the user.

Now, this is not a method of bookkeeping that is inside the machine. It is not an accounting algorithm that is inside the machine. It is a machine that adapts to anybody's method of bookkeeping. It adapts to any ledger format and does whatever is required in that regard.

Besides the software programming version in the computer, in the patent application for the computer that we described, we also indicate that the control mechanisms can also be implemented by what is called hardware programming.

The description is in terms of what one skilled in the art and in the computer art who knows the circuits of the computer art would understand how to build and how to operate the circuit in accordance with the statutory requirements, Section 112.

The computer expert would know what happens in those circuits and would know how to build a machine and operate it and in both the hardware version and the software version.

If we had a demonstration of this machine and it was all inside a machine housing so we could not look in there, there would be no question. It would be a machine because it would perform automatically. It would meet all

the definitions of a machine, a device that does something reasonably complex without human intervention, automatically.

It is an automatic machine. It goes beyond the definition of machine.

QUESTION: Oh, but you can say that about a record-player, too, but that doesn't mean you can get a patent for a new record.

MR. JACOBS: That is true, Mr. Justice Rehnquist. One does not get a patent on a new record because there is no technical innovation on the contents of the record. We are not seeking a patent on a record. We are seeking a patent on a machine and on the structure of the machine.

QUESTION: But the physical machine is already well-developed, isn't it? And perhaps patented separately.

MR. JACOBS: The answer to your question is a complicated one, Mr. Justice Rehnquist and I'd like to give you an answer.

This diagram is an attempt at a lawyer's abstraction of all that we need to know of how a computer is constructed as it relates to the issues, the legal issues in this case.

In order to understand how a special purpose computer is constructed, we have to understand also how the electrical components are combined to produce that computer.

They are combined in the fashion of using

conventional computer elements -- correction, electrical components -- conventional electrical components, resistors, diodes, transistors and connecting those resistors, diodes and transistors into a circuit configuration.

The circuit configurations that we illustrate here are the basic circuit configurations used in a computer. They are and circuits, not circuits, or circuits. They are called logic circuits.

QUESTION: May I ask you, Mr. Jacobs --

MR. JACOBS: Yes.

QUESTION: -- is what appears on that chart precisely the same thing as what appears on page 30 of your brief?

MR. JACOBS: Yes, it's --

QUESTION: That is because that chart is going to be gone after this oral argument.

MR. JACOBS: Yes. It appears precisely on page 30. It is just a blow-up of what appears there.

QUESTION: The same thing. All right. Thank you.

MR. JACOBS: It permits me to point to the items so that I can communicate with you.

QUESTION: Thank you.

MR. JACOBS: Thank you,sir.

A circuit configuration is what we are asking for in the way of a patent. The configuration of the circuit

elements as defined in the brief of the Petitioner on pages 14 and 15 and on a footnote on page 15, I believe.

A configuration is the order arrangement, the physical location and arrangement for interrelationship of the parts. We take circuit components and we connect them in a configuration and that is done at the logic circuit level.

These same logic circuits are in turn connected at another level in a hierarchical structure of this complex machine. Those functional circuits, adder, compare, branch, fetch and store, the basic circuits of a general purpose computer, are configured by hardware programs using as the basic elements the and,or and not logic circuits.

At the level of the special purpose computer these same functional circuits are combined in a new circuit configuration and that circuit configuration is also a program in the same way that the programs are employed to build the functional circuits.

So to answer your question, Mr. Justice Rehnquist, we are building a circuit configuration. The claims define a circuit configuration. They define a circuit configuration whether it be built by hardware or software programming.

And as I indicated, if we saw this machine operating the question would arise from the Patent Office

not, is this machine patentable subject matter because it is a machine but, how do you construct it? With hardware programming or software programming? And that question is a simple question. It is, how do you electrically interconnect and interrelate the circuit elements?

That is the issue in this case. That is the difference between hardware programming and software programming, a mode of connection.

The Patent Office says --

QUESTION: Mr. Jacobs, just what is it that you contribute to all of this? Or is this all yours?

You talk about machine. Are you talking about the IBM machine? Are you not?

MR. JACOBS: We are talking about the IBM machine, Mr. Justice Marshall.

QUESTION: Well, what does this do to the IBM machine?

MR. JACOBS: The IBM machine consists of electrical components, logic circuits and functional circuits and it also consists of another device called a function sequencer.

QUESTION: What do you put in there in addition?

MR. JACOBS: What we put in there in addition is the software program which is the circuit configuration.

QUESTION: And where is that on that?

MR. JACOBS: Here it is the software programs which are stored in the memory states of a computer. Up to this point we have what are called unrelated circuits, the functional circuits. If we think for a moment of an adder, a compare circuit, a branch circuit, simple fetch and store circuits, simple little things like that and combine them into patterns of hundreds, thousands, even millions of such circuits, extraordinary things take place, the computer scientists have told us.

You can restructure those circuits by that combination into a musical synthesizer. You can reconstruct it into a document or character-recognition machine, into a talking computer, into a computer for reading electrical meters, a computer performing calculations on the readings that it achieves, a computer that can take us to the moon.

And all of those different things are done with these four little circuits. They are not little in concept. They are reasonably sophisticated. You know, they could fit in my hand, in modern technology -- so small we couldn't even see them -- microscopically, in the most modern technology.

But with the combination of those elementary unrelated circuits the extraordinary technology of the modern computer is achieved.

The configuration of those circuits is the same

thing that takes place at the elementary level of forming circuit configurations which have always been patentable since Sam Morse.

The same thing in the way of a circuit configuration that takes place at the functional circuit level which have always been patentable since I have been involved in this technology and that goes back some decades.

The fact that programs are used to construct these functional circuits is no detriment to patentability. The fact that programs are used to build special purpose computers is no detriment to patentability.

The only issue is, how do you connect the circuits? As my colleague indicated before lunch.

If it is done evanescently, if it is done in fractions of a second, or millionths of a second, then it is not patentable. If it is done slowly, permanently, like taking an erector set and riveting the pieces together permanently, that would be patentable.

But if we took a nut and bolt and put the pieces together and then took the pieces apart with a nut and bolt, the machine we built with that latter technique, that would be evanescent. It could not be patented, they say.

There is no basis in the law for this theory.

QUESTION: But it is one thing to say that part of the fact that you require -- rely on a program shouldn't

make it unpatentable. It is quite another to say that the program itself is patentable, which is really what you are saying here.

MR. JACOBS: Almost, Mr. Justice Rehnquist, almost. And let me clarify what the word program is.

If we look in the Encyclopedia Britannica, we will find a definition of the word program. Now, interestingly enough it does not appear in the section under computers -- the definition doesn't.

The definition appears in the section under automation in the section on automatic machines and in the Encyclopedia Britannica they say a program tells us how a machine will function. A program tells the machine what the parts will do and how they will work together to produce the desired result.

The very first program that we know of took place some hundreds of years ago in the time when the Patent system was developed, as the Encyclopedia reminds us and that is a program for operating a steam engine so that a man does not have to stand at the valves and open them and close them as he had to do in the first steam engines. Even I was surprised to learn that.

What they did with the program was to replace the human being at this tedious mental and physical labor and build a mechanism for interconnecting the parts so that as

the piston went out, one thing happened with the valves. When the piston went in, another thing happened with the valves. That is a program.

A program is when we take a manual choke and replace it with an automatic choke.

We have programmed this simple device. It is a rather elementary kind of program. It is a program nevertheless and in modern technology, where the computer is being put under the hood of our automobiles in order to solve the problems of pollutants and the like, the programmed digital computer is now being used, as we explain in our brief and as amici have explained in their briefs, to build these mechanisms under the computer, the control mechanisms, so that the engine will operate more effectively. In fact, they are -- excuse me, Mr. Justice Rehnquist.

QUESTION: Let me interrupt just a minute. In taking your example of the change from a manual choke to an automatic choke, presumably there is only one or at the most a couple of patents that are available on that kind of change but if your theory is right, there is a patent available for every conceivable configuration of this computer programming.

MR. JACOBS: I would say yes and no to the first part of your comment, your premise, but I would say yes to the last part and let me explain that.

There are not just a few patents to automatic chokes. Automatic chokes are a development that have existed for a long time and these mechanisms are always under examination and ways are being searched for to improve upon them. They still are, even in the mechanical and electromechanical sense.

In the second part of your question, let me say this. Many, many computer programs are being written. Many more will be written. Most of them use the state of the art, just as most circuits that are built are state of the art.

Perhaps one percent of the circuits that are built, that are available to us go beyond the state of the art and are patentable subject matter.

As far as computer programs are concerned, I would suspect it is far less than one percent, maybe a fraction of one percent of patentable subject matter.

Not patentable subject matter, correction, are patentable. They would all be patentable subject matter, I have to say, because they all configure a circuit. They all take electrical circuits and combine them into new sequences and combinations and relationships and that is patentable subject matter as a machine and the important part for us, the important part for us, is to understand the import of all of this and of the rule that is being requested by the Patent Office.

The Patent Office says, computers built by software programming are not patentable.

They cite a case which on the same theory holds that since the program is supposed to be a new use of this digital computer it does not infringe a patent built on the hardware, on the same type of computer but with hardware programming.

The import of that decision is that one can take any hardware patent and infringe it with impunity -- it would not be an unlawful infringement -- by programming a general purpose computer to perform the same set of functions, to create the same sequence of circuits.

That is what that decision holds and what we have as a result in the way of an absurdity? We have as a result that you can't get patents on software programming and any hardware programming patent you get can be easily infringed by software programming.

As a consequence, the patent system is not available as an incentive for operating in the computer technology.

That is the import of the rule suggested by the Patent Office.

The Board of Appeals held that we have a new machine. They held it is a different machine from the general purpose computer and they did not feel constrained

to do the bidding of the CCPA when it comes to evaluating this technology.

QUESTION: And they would hold any general purpose computer that has a new program design for it to be a new machine, I suppose. And they may not hold --

MR. JACOBS: There has been no --

QUESTION: They may not hold it patentable but they would hold it to be a new machine.

MR. JACOBS: There has been no change in the Board of Appeals' position in this regard.

There has been one case which was published -- in fact, we submitted it to the CCPA -- over opposition -- but we did submit it to the CCPA and I think it is ultimately a part of the total record, a decision of the Board of Appeals and that Board of Appeals did not change its position on new machine, different machine or new use.

[Board's]

There is not an iota of change of the Court's position in that regard.

QUESTION: Is the Board required to follow the Court in other cases?

MR. JACOBS: As a general rule it does, but we are talking basically here about what is a factual issue? What happens inside of this box with the circuits? And I think the Board would feel a large sense of independence since one of their prerequisites for holding office in 35 U.S.C.

Section 7, is that they have substantial scientific ability and I believe they would have a considerable sense of independence in this regard.

QUESTION: Did the Board say it was a new machine?

MR. JACOBS: That was their holding because the examiner below said it was not a new machine, that it was merely a new use and they were reversed on that -- that rejection was reversed and that is --

QUESTION: And they rejected it for --

MR. JACOBS: May I read --

QUESTION: They rejected it for some other reason.

MR. JACOBS: Yes. They said since -- they said that there was a premise by the examiner that an unprogrammed or a differently programmed general purpose computer is the same machine as the one that would result from Appellant's programming of the same or a similar computer.

Since neither the Court of Customs and Patent Appeals nor this Board considers this premise to be valid, each of the rejections advanced by the examiner is not sustained.

Now, there was another issue, let me speak to it at this point, about their saying later on about "different machine."

QUESTION: Your time is short, isn't it?

MR. JACOBS: It races, Mr. Justice White.

They say there, simply because one chooses to denominate a section of its memory by a term descriptive of one meaning such as a file of stock numbers, like in taking inventory, rather than the file of sums of money, that that kind of difference would not be a new machine or, as they used the phrase, different machine. And we have no disagreement with that. We are not asking for a patent because we have applied old techniques of an adaptive machine to a situation in which it is now going to be used for financial record-keeping.

As to the issues of unobviousness, Mr. Chief Justice, there is no suggestion in the Patent Office briefs that the prior art can achieve the same result,that the same mechanisms exist, the same combination of control mechanisms, what we call a master and a general control and their interrelationship as defined in the claims and as found by the CCPA.

There is not a slightest doubt that those mechanisms do not exist in the prior art.

Mr. Chief Justice Markey dealt with one issue and that is category codes. We do not seek a patent on category codes and I can say only that that is not in issue. It is referred to in the claims but that provides the context in which this kind of machine has to function and anybody can use any other machine to work with category codes, to

perform the same types of services, the same type of use of general purpose computers for record-keeping of users as long as they do not build the machine that we have, which is adaptive to the user and which has a different combination of controls.

On the issue of jurisdiction --

QUESTION: So if a holding company, if a conglomerate had lots of units around the country and it wanted to keep track of the bookkeeping and the profits of the various units, can it use this very machine to give it ready information about the operations of its various units?

Would that infringe this patent?

MR. JACOBS: Yes, it would. If they used the same configuration of controls, that would infringe this patent.

But they would have no reason to.

QUESTION: But you wouldn't say that in order to infringe they would have to have the identical configuration.

MR. JACOBS: The same same principles. No, our claims are not limited to any particular program, software or hardware and they are not limited to the various ways of --

QUESTION: So yours is a generality of this way of doing things.

MR. JACOBS: We are claiming the generality of

circuit configurations whereby this set of controls is achieved.

QUESTION: Now, you are not just claiming something like a copyright.

MR. JACOBS: No, we are not.

QUESTION: You are claiming -- there could be a lot of machines to do the same function but differently hooked up that would violate your patent.

MR. JACOBS: That is right, Mr. Justice White.

As far as the issue of new use is concerned, let me make one comment. New use means you compare the current invention with the prior machine. If the current invention is the same structure as claimed with the prior machine, then it is a new use.

If it is a different structure, then you evaluate that structure for unobviousness and we do not claim the same structure because we have a configuration inside of that machine which did not exist there before and that is the fundamental issue.

New use, when it was written into the 1952 statute, was for purposes of extending patentability because you couldn't get patents before. The Patent Office is arguing here that it ought to be used to restrict patentability, not to extend it.

A point is raised in the reply brief that I would

like to speak to just quickly and that is with regard to misuse of patents. It is a completely misleading and erroneous statement to say that the law is such that a staple article of commerce like a general purpose computer could be tied in by means of a patent.

It would be clearly in violation of the Section 271 of the statute.

Thank you.

MR. CHIEF JUSTICE BURGER: Very well.

Do you have anything further, Mr. Shapiro?

MR. SHAPIRO: Yes, your Honor, briefly.

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MR. SHAPIRO: First, I note that in Respondent's analysis he has not pointed to anything in the language of his application which expressly describes a circuit configuration. Those words don't appear. No drawing appears showing any particular circuit configuration of any kind.

What is described is a sequence of steps that can be carried out in a computer.

The reference has been made to a hardwire version and the phrase "special purpose computer" used. The Respondent himself, in his application at A-66, drew the distinction between a general purpose computer which is programmed and a hardwire version but there is nothing in this application that would tell anyone how to build a

hardwire version.

There has been a discussion of the meaning of the claims. I think if you look at the Appendix to the Petition at page 37A, one can see the way that any claim for a process involving a computer program can be simply revised by a few words to be a machine claim, it is literally a matter of substituting the word "machine" and substituting the word "means."

But that has to be backed by some sort of structure description in the specification and that just is not here.

It has been stated that the application is not limited to any particular program, so that what is claimed is the general right to use computers for this particular kind of accounting.

A word on the obviousness question which we have submitted on our briefs. Obviousness does not require the same mechanisms to be in existence.

Obviousness is the gap between what exists and what someone skilled in the art could bring into existence. The same mechanisms issue is a matter of anticipation by prior patents and that is not before the Court. That arises under Section 102, the obviousness issue under Section 103.

Judge Markey, in his dissent on obviousness, was quite specific. He said that one skilled in the art presented with a conventional machine system would have

found it obvious without knowledge of Appellant's disclosure to have modified the system as set forth in the Appeal claims.

He wasn't just confining himself to category codes.

Thank you, your Honor.

MR. CHIEF JUSTICE BURGER: Thank you, gentlemen.

The case is submitted.

[Whereupon, at 1:36 o'clock p.m., the case was submitted.]