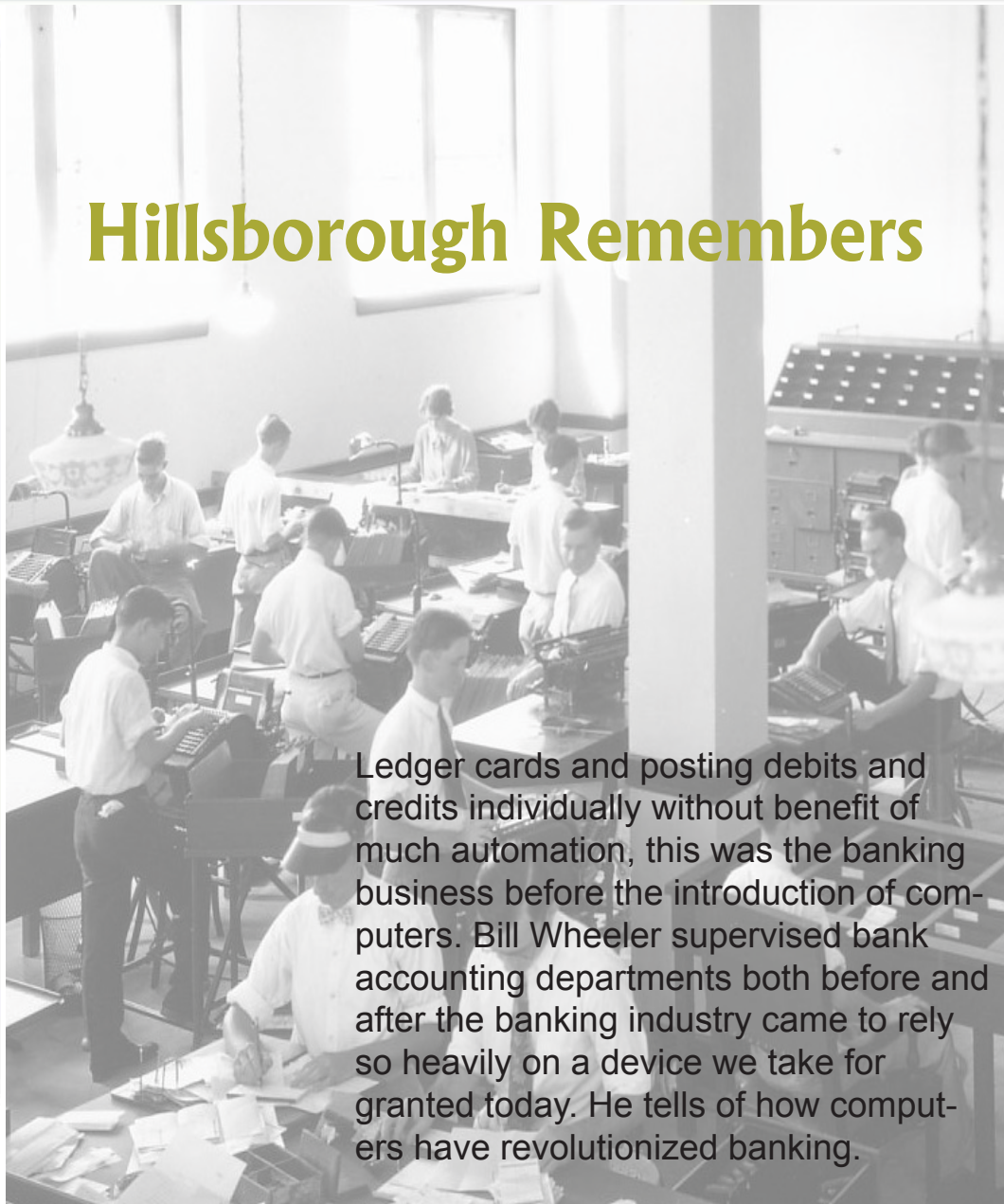


# *Bill Wheeler*

## **Hillsborough Remembers**



Ledger cards and posting debits and credits individually without benefit of much automation, this was the banking business before the introduction of computers. Bill Wheeler supervised bank accounting departments both before and after the banking industry came to rely so heavily on a device we take for granted today. He tells of how computers have revolutionized banking.

This is an interview with Bill Wheeler (**BW**) of Sun City, Florida. Mr. Wheeler was involved in the introduction of computers into the banking industry. This interview is being conducted on April 7th, 2001 at Ruskin Branch Library. The interviewer is Jenna Seibeck (**JS**).

[recorder is turned off and then back on]

**Bill Wheeler:** My main business career was in banking and primarily in bank operations, meaning the back room accounting-type of operations. Probably one of the most fascinating, interesting, frustrating adventures was the conversion from manual bookkeeping systems, using ledger cards and accounting machines and all that good stuff, to automated systems. Actually going through the conversion to a data processing system.

**Jenna Seibeck:** And about what year was that?

**BW:** We installed the, uh, the bank that I did that particular work with, we did that in 1964, so that's been almost forty years ago. See, I say that and it seems like such a long time ago [laugh]. But, so, at a bank that I had worked at previously, I was manager of the bookkeeping department and that was solely where we did it all by accounting machine and we'd even have two different types of machines that we worked with. One was the even older, totally manual bookkeeping machine and the other was the, and at that time, which was in the late '50s, ah, was the latest advancement in posting machines and that was a machine that used a ledger card, if you know what I mean by a ledger card?

**JS:** It's like ( )

**BW:** It's kinda, only it's printed.

**JS:** Oh.

**BW:** By an accounting machine. You know, ah, to where there were stripes. For example, if this piece of paper were a ledger card here, it would physically have little magnetic stripes, very similar to like a credit card stripe on the back and it would go down into the machine. The information would be read and the card would come back up to the proper posting line and it would pick up the old balance, whatever the balance on the account was. So it was really kinda neat.

**JS:** Oh [laugh]

**BW:** That occurred probably in about '58.

**JS:** And how do you think that people felt about using the computers when they first came out and thinking. Do you think they felt comfortable with it or were they a little, y'know, um...

**BW:** Umm...a lot of times there was apprehension, uh, going from the known to the unknown. Mmm hmm.

**JS:** ( )

**BW:** Ah, although there was a great deal of excitement too. One of the biggest factors that we in the data processing department had to overcome was uh, the, not continual, but the periodic problem areas, breakdown areas in a couple, in two different aspects I'll tell you about. Ah and the people would say, "Oh," you know, "If we just had our old machines back we'd be done with this." [laugh].

**JS:** Oh, yeah, that happens....

**BW:** Because, number one, you could have actual mechanical problems. The computers would simply, somethin' would break, y'know. One of, back

then, things are so, are so miniaturized now, compared to what they used to be, ah, that we would have periodic problems there or, and even more so, we would have software problems. Because we wrote basically all of our own software. Or we would take what was known as a package and then we would modify the package to our particular need. Yeah. But the people themselves, ah, they really didn't know what to expect. Yeah, the biggest thing was that from Day One, well now, you haven't got this ledger card to look at any more. Well, what am I going to look at?

**JS:** [laugh]

**BW:** Because we didn't have terminals back then. We didn't have the CRT's. Do you know what I mean by when I say CRT's? The monitors...

**JS:**  
Monitors.

*If you wanted to know anything else you had to probably run over to the files and look up the actual checks in the file.*

**BW:**...like we have here; CRT standing for Cathode Ray Tube, that's the actual tube inside the monitor, okay? We didn't have those, so we had huge volumes of printouts.

**JS:** Oh.

**BW:** Oh yeah, yeah. And we would have, in my particular bank, which was a, not a large bank at all, but we would have old printouts that would be that thick, yeah. And then the printout sheets were about this big. And we'd have several of them at phone stations. So that if you, the customer of the bank, had a question about your checking account, you would call in, so we would get your account number [hear knocking noise], Go down through. Okay. This is showing what

the balance is. And the only thing that would really show on what line of information would be like, the balance of your account, if there were any holds placed on the account, the date and amount of the last deposit and then any transactions from last night that were posted. If you wanted to know anything else you had to probably run over to the files and look up the actual checks in the file.

**JS:** And how do you feel the employees, how did they adapt to these changes?

**BW:** Umm, they adapted well. They really did, yeah.

**JS:** So it was easier for them?

**BW:** Yep, really, really. After they got over all of this initial apprehension, they adapted well, yeah.

**JS:** And in working in the banking industry, um, did you ever deal with any international commerce, like, whatever or, was it just basically local?

**BW:** Local, oh uh from our end. This was all handled, uh, where I was located was in Indiana, so we did not have any, any international connections. If we had a customer that needed some type of international connections, we would work through what was known as a correspondent bank. It was a larger bank that we worked with, either, for example, in our case, either in Indianapolis or in Chicago.

**JS:** And, um, what are the advantages to having a computer as opposed to

not to having one? Were there disadvantages also?

**BW:** Okay, we could probably talk for six hours on that topic.

**JS:** [laugh]

**BW:** I would say, one, um. as organizations grow, there could only be so many people that you could put in a particular area that can handle something manually. So, there has to be something to take that burden of work of this, what used to be, pen and ink, you know, eons ago. To take that burden of work off the employees to work that is easier for them and as, as data processing systems have been refined and advanced. Just in the last forty years, I know forty years sounds like a long time to you, but in that period of time where we now have monitors and you can access the accounts very quickly via the monitor. You could pull up a whole profile, even you could pull up a profile of all of your relationships with, with the bank.

You can see if, okay, if you have a checking account, maybe you have multiple checking accounts. Maybe you just have various savings accounts, maybe you have some certificates of deposit. You may have a mortgage loan there. You may have an installment loan to buy a car there. I mean, there can be a, your relationships with the bank can be voluminous. Holy mackerel. You're really locked into that bank, you know.

**JS:** Yeah.

**BW:** But that, then, is a benefit on your side. And as far as, "You are my bank, you know, so now, what are you going to do for me?" But what automation has done has been able to bring all of that information together, through what one might call a management information system or

central file, there's a lot of labels that you can put on a system. [laugh] But bringing together the total relationship that you, a customer, can have with the organization and that's available very quickly. Let me give you an example of what a detriment that can be, the old way, the way we did it forty years ago.

Let's say that you had a checking account with us and, for some reason, you wrote a check to buy something. And the check amount exceeded what your balance was. And let's say that you wrote a check for \$1000 to buy something, but you only had \$100 in your account. Unbeknownst to me, the manager of the bookkeeping department that took care of checking accounts, I did not know that sitting over here in a savings account for you, may have been \$5000 that you were intending to transfer \$1000 over, to cover that check. But for some reason, maybe just like my experiences with what happened to my father-in-law of my friend in the last day or two because the you're up to here with problems, you just didn't get it done.

So I, the manager of the bookkeeping department, beside, I'm just gonna return my check for non-sufficient funds. Well, you're going to be very upset with me for doing that, because sitting over here is \$5000, that you were going to take \$1000 out and put it here into your checking account. So, there's one big advantage as to how automation and how the relationships are so important to link them together.

**JS:** Okay, and of course you've heard of on-line banking.

**BW:** Oh, yeah, yep.

**JS:** Yeah, how do you feel about it, like the security and the safety of it? Do you feel that people can like, break

into it, like hackers and what not, or ( )?

**BW:** I really think it's a, I have not heard or read of any instances of hacker being able to invade a bank's security system. Not saying that it can't be done. I mean, some, a human built it, so a human can unbuild it—

**JS:** Yeah.

**BW:** If you know what I mean. I know there's been cases of where you read where they've got into some Pentagon files and stuff like that. Ah but yet, one has to be cautious and somebody says, "Well, gee wiz, I don't want to give everybody my checking account number!" Hello, when you write a check and all you gotta do is look at the thing—

**JS:** Yeah.

**BW:** and there's the checking account number there. But even if they have it, what are they going to do with it?

**JS:** That's right.

**BW:** We, myself, personally, have had two experiences of credit card fraud. Ah we had, when was it, last year, had a call one day, from Tampa Electric, TECO, and they said that, "Did you make an authorization to someone to pay an \$800 electric bill?" And I said, "No." Well, a person was claiming, and TECO had, had ah, this bill that was being paid by my credit card number. And I said, "No, that is not the case! I'd never authorize that."

And she gave me the name, y'know, I didn't recognize the name, so I called the Sheriff's Department and was put in touch with an individual who, again tried to follow through. They, I mean, how stupid can you be? All you have to do is reverse the bill, [laugh] reverse the posting on the bill. It's going to be

to the credit of somebody so that somebody's probably the one that did it.

**JS:** So they ( )?

**BW:** Or if not, they had a friend that said, "Yeah, go ahead and use this number." But that was the case. And then, just a couple weeks ago, I had a call from the company, and talk about systems... you know, their security system must be, be really um, ah, detailed because we got a call and said, this just happened to be on the Discover Card.

"Did you make, did you authorize, or did you make a charge to Sprint for \$25 in Las Vegas?" And I said, "No." "Well, we have one. We thought we would check." I said, "No, we don't do business with Sprint and whatever." So, somebody else had gotten the number. Which, if you stop and think of how many times one uses a credit card and so many places, it's so easy, that somebody can pick up a number from an old copy. Ah, so, but there are a couple of examples of, and that's not electronic invasion, that's probably manual invasion some place—

**JS:** Yeah. How was the security before you had computers in the building?

**BW:** There really wasn't very little with the exception that you trusted your employees. Ah, if I would hire you to come in and maybe your job was gonna be a poster ...

**JS:** Which is?

**BW:** And what they did was, filing, some processing in another backroom. Here would be a big tray of checks and deposits that are to be posted on your particular segment of all of the accounts that the bank had. And maybe your segment was account numbers 101 through 300. Somebody

else has 301 through whatever or maybe alphabetically. You may have been AA through AT, or something like that, depending on how the accounts were filed.

And you would then, with the check, you'd have to go through, find that ledger card, put it into the machine, picking up all the necessary information, either manually or electronically. Then say, "\$25 check, \$25 check, \$15.04 check, etc," post each one individually. Just, with, about the same way as you would do on the computer and then you have to hit the balance-type key and that transacts all of that business. You then take that card up and put it, here's the next one. It was the laborious task, let me tell you. Then you end up at the end of the day with this group of checks and deposits, would come control totals.

***You then take that card up and put it, here's the next one. It was the laborious task, let me tell you.***

**JS:** Which is?

**BW:** From this other back room operation—

**JS:** Oh, okay.

**BW:** That you may have \$2,470,000 worth of checks here and the same amount, somewhat, in deposits. After you got through posting, you hit the button on the machine and it will give you all your totals. What if it was off?

**JS:** Okay.

**BW:** Then you go through, there's papers behind this that captures all of your posting information. You gotta go through one by one and see if you could find out. And number

transpositions, if the difference was divisible by nine, you would probably have a transposition. Example, instead of posting a dollar, if you posted \$10, instead of 0,1 you posted 10, that's a difference of 9, isn't it?

**JS:** Uh huh.

**BW:** So, or, if twenty-seven and seventy-two. Take that difference, and if it's divisible by nine, that's a good transposition that you can look for.

**JS:** Okay. What was the average size of a computer when you first started in the banks?

**BW:** The physical size?

**JS:** The physical size.

**BW:** Well, our first one .... about the

size of that door. Not quite as tall, the

actual system would be about as tall as I am, about the size of the door and probably, oh, this thick.

**JS:** Was this like five by five by three, kind of?

**BW:** Oh, probably, ah, say six by four by three, yeah. And the internal storage, you're familiar with PC's and how big they are?

**JS:** Yeah.

**BW:** The internal storage was 4K.

**JS:** Okay.

**BW:** Four thousand positions a minute, that's it. We didn't have operating systems, like, like Windows'

98 was an operating system. We didn't have anything like that.

**JS:** It was strictly your...

**BW:** It was just the program. Every program that you wanted to run, you had to introduce that program into the system and then the program would look for whatever the input was going to be, if it was going to be, you know, the little characters on the bottom of the checks? Those weird little characters down there?

**JS:** Yeah.

**BW:** That, that is known as E 13 B, is the type font for that. Some things you just never forget, you know. [laugh]

**JS:** Right. [laugh]

**BW:** Maybe it would come in, which is very seldom used any more, punch cards. Why, outside of voting. Yeah, that punch card could be, could be input. Ah, the, the records could be on disk, on magnetic disk. It looked like a big phonograph record, if you know what phonograph records are—

**JS:** Uh huh.

**BW:** It was about this big around but they were all magnetic disks. Output could be printed, could be other information on the disk and whatever, so. But that was the very first one. And the size really, of the system, didn't increase that much as the core capacity, as the, as the ah, memory increased—

**JS:** The memory...

**BW:** Yeah, cause you went from four to eight to twelve, the machine didn't change, they just changed the box on the inside of the machine.

**JS:** Does the size eventually decrease, but like? About how many years was it before it was the size of the original decreased?

**BW:** Well, our first system was IBM. And it was like, it was called the 1440 and then we went to a 360 system, and then a 370 system. The actual box itself out there, probably was about the same through all of these. Um, but, internally, speed was so much faster, the memory size was so much faster, but you had to have more memory because of that operating system that was in there working for you.

**JS:** Well ( )

**BW:** Does this, does this make sense?

**JS:** Yeah, yeah.

**BW:** Okay, okay.

**JS:** Is there anything else you'd like to add about anything?

**BW:** Well, I think, I had some interesting things here. I used to go to out, and every year, and talk to every high school in our county. Back in the 60s and early 70s, the big thing that the students were interested in, was the job of the future, is being the programmer.

**JS:** Mmm hmm...

**BW:** And they all wanted to know about that and about data processing, so I used to go out and I had...This, this is interesting. In fact, if you'd like to have this. Oh, I got an extra one? No. I know if I got a copy here or not.

**JS:** Yeah, yeah.

**BW:** But here it shows the, the invention of the very first machine

here, by Pascal, a Frenchman, back in 1642 all the way up through...this would've been published in the '60s, there. The very first job that the punch card ever did, was tabulating the 1900 Census for the government. That, you might find that interesting.

**JS:** Okay.

**BW:** If you think something like that would help in your research.

**JS:** Probably.

**BW:** (papers rustle) Yeah. This was the very first terminal that we installed at our bank. This was in the mid-70s. People talk about salaries and everything, here's what, here's what salaries were in 1961. That's annual, by the way.

**JS:** So that's what, eight thousand dollars? Interesting. [laugh] ( )

**BW:** But you have to think back then. For example, in 19, my wife and I got married in 1955. We bought our first house in 1956 and our first house was \$12,500. [laugh] A new car, ah, was \$2,000. So, it was kinda all relative, y'know.

**JS:** Yeah.

**BW:** That, that is known as E 13 B, is the type font for that. Some things you just never forget, you know. [laugh]

**JS:** Right. [laugh]

**BW:** Maybe it would come in, which is very seldom used any more, punch cards. Why, outside of voting. Yeah, that punch card could be, could be input. Ah, the, the records could be on disk, on magnetic disk. It looked like a big phonograph record, if you know what phonograph records are—

**JS:** Uh huh.

**BW:** It was about this big around but they were all magnetic disks. Output could be printed, could be other information on the disk and whatever, so. But that was the very first one. And the size really, of the system, didn't increase that much as the core capacity, as the, as the ah, memory increased—

**JS:** The memory...

**BW:** Yeah, cause you went from four to eight to twelve, the machine didn't change, they just changed the box on the inside of the machine.

**JS:** Does the size eventually decrease, but like? About how many years was it before it was the size of the original decreased?

**BW:** Well, our first system was IBM. And it was like, it was called the 1440 and then we went to a 360 system, and then a 370 system. The actual box itself out there, probably was about the same through all of these. Um, but, internally, speed was so much faster, the memory size was so much faster, but you had to have more memory because of that operating system that was in there working for you.

**JS:** Well ( )

**BW:** Does this, does this make sense?

**JS:** Yeah, yeah.

**BW:** Okay, okay.

**JS:** Is there anything else you'd like to add about anything?

**BW:** Well, I think, I had some interesting things here. I used to go to out, and every year, and talk to every

high school in our county. Back in the 60s and early 70s, the big thing that the students were interested in, was the job of the future, is being the programmer.

**JS:** Mmm hmm...

**BW:** And they all wanted to know about that and about data processing, so I used to go out and I had...This, this is interesting. In fact, if you'd like to have this. Oh, I got an extra one? No. I know if I got a copy here or not.

**JS:** Yeah, yeah.

**BW:** But here it shows the, the invention of the very first machine here, by Pascal, a Frenchman, back in 1642 all the way up through...this would've been published in the '60s, there. The very first job that the punch card ever did, was tabulating the 1900 Census for the government. That, you might find that interesting.

**JS:** Okay.

**BW:** If you think something like that would help in your research.

**JS:** Probably.

**BW:** [papers rustle] Yeah. This was the very first terminal that we installed at our bank. This was in the mid-70s. People talk about salaries and everything, here's what, here's what salaries were in 1961. That's annual, by the way.

**JS:** So that's what, eight thousand dollars? Interesting. [laugh] ( )

**BW:** But you have to think back then. For example, in 19, my wife and I got married in 1955. We bought our first house in 1956 and our first house was \$12,500. [laugh] A new car, ah, was

\$2,000. So, it was kinda all relative, y'know.

**JS:** Yeah.

**BW:** This is one I always tried to, tried to um, talk to kids about, about the importance of staying in school. I don't think you really have that much of a problem with, do you with drop-outs, dropping out of school?

**JS:** Yeah, yeah, still I think.

**BW:** Do you? Well, this again, this would be '65, but read that, read that really quickly and you kinda get an idea.

[slight pause to read]

**JS:** \$36,000 dollars ( )

**BW:** Now, you gotta take that back about 35 years.

**JS:** I know.

**BW:** So you might just take that back ten, almost, you know. Here, there's a good example as to what a system looked like back then. Here, here is the actual mainframe, as we called it, here. Remember I mentioned those disks?

**JS:** Yeah.

**BW:** This is what they, the little disk drives looked like here.

**JS:** [laughs]

**BW:** And these things, these are big tape drives here. Of course, that's when reels of tape was like this big around. There's a printer, there. There's the machine that reads the characters on the bottom of the checks. There's that mainframe again, now here. There you can see, you can

see here what the disks look like, this was a door that opened up and you had a cover that went down and then like this and you pulled that disk off and you could put another one on. There was the very first terminal, what they look like. If you think this would help you, you could borrow this. I mean, that's, that's no problem. That's another copy of that.

**JS:** Do you have anything else that you wanted to add or –

**BW:** [sigh] The basis of your report that you're working on, how are you referring to what you're doing? Is it a report or is it a study or?

**JS:** It's just an interview.

**BW:** Interview?

**JS:** Yeah.

**BW:** And what are you going to do with this information?

**JS:** They're just going to process it, like, type it up and post it on the website.

**BW:** Oh, okay.

**JS:** So, they'll basically just –

**BW:** So you aren't going to prepare a piece of paper to turn in?

**JS:** No.

**BW:** Okay. Well, there are so many conveniences that we now, we now expect to work with, that I've been able to see evolve over the years, the credit card...saw the credit card come out, ya know.

**JS:** Yeah.

**BW:** That is, the Visa and Master...Mastercard, which one? Visa? I think it was Visa, used to be known as Bank Americard, was put out by Bank of America in California. That, that evolved. Ahm, ATM's, saw the first ones of those come out. Tremendously expensive, I mean, for a bank to put those in, it was a lot, and if you didn't have the cards out there, to support that machine, I mean you'd buy it, set it and nobody would use it. And even now, ah, people, people are afraid sometimes to use it. They don't really understand, you know, how it can be so accurate and work. But, through all of this, what this has been able to do is to, to make the accounting of your records accurate and to allow the bank employees to serve you better.

**JS:** Alright, I guess that that's it, then.

**BW:** Okay. It's been a pleasure.

[END OF TAPE 1, SIDE A]

[END OF INTERVIEW]