



Bob Alberti: “You Can Go Your Own Way” (Part 1 of 2) Season 4: Episode 3

Speaker 1:

Welcome to Stayin' Alive in Technology, a series of conversations with Silicon Valley veterans touching on war stories from the past and practical advice for today. And now, here's your host, Melinda Byerley, founding partner of Fiddlehead, a digital marketing consultancy.

Melinda Byerley:

Welcome back to another episode of Stayin' Alive in Tech. I'm excited to introduce our next guest to you because he's really important in the history of tech. His name is Bob Alberti. He's a security architect right now for the University of Minnesota's roughly 100,000 students, staff, and faculty. He holds the SOPs Institute's Foundation certification, and the CISSP and the ISSMP from (ISC)2. But that's not all. He is a co-author of the Internet Gopher Protocol, RFC 1436, and you're going to learn a lot more about what Gopher is and why it is so important to technology. His work creating the world's first searchable internet browser helped foster the growth of the World Wide Web, providing for the rapid distribution of new technologies and software. I know more than one person who has told me that their life has been completely saved and changed by using Gopher.

Melinda Byerley:

Mr. Alberti created GamBit Multisystems, an innovative company that pioneered commercial email, chat, and interactive games. GamBit's Scepter of Goth game is recognized by internet historian Professor Richard Bartle of Essex University as the world's first commercial massively multi-user interactive online role-playing game—also known as MMORPG.

Melinda Byerley:

So, why did I invite Bob onto the podcast? Not just to talk about Gopher, not just to talk about MMORPGs. But also because on Twitter, I heard him mention that he knew personally the mockery, that was given to Al Gore for saying that he invented the internet, was not true, that Al actually understood the internet and was part of its rise. And so I said to him, you want to talk about that? And he said, "yeah." So he came on and we talked about it.

Melinda Byerley:

The other thing I'll tell you about Bob is that he's the founder of a comedy troupe. He's a photographer. There's going to be all sorts of fun links and things we're going to talk about. But one of the main reasons I'm so happy to have Bob on this podcast is that he embodies the spirit of staying alive in tech. His whole career, including finishing his college degree in his midlife, not in his 20s, is a reminder that history, and including the history of technology, is often written by the victors. The names we read about in technology: Steve Jobs, Steve Wozniak, Bill Gates, it can make technology seem that its growth



was both inevitable, that it was linear, that it was driven by a few people. I love to remind people of the fact that there were many, many, many people involved in the growth of the web.

Melinda Byerley:

And what you'll find about this discussion with Bob is that he's able to help us pinpoint that moment in history when everything changed all at once, in a timeframe that's almost unfathomable right now—in a period of months. And he's not rich. Like me, he's not rich. And it just reminds you that the people that are the first at something in technology are not always the people that get rich. And the people that get rich are not always the smartest people or the best people in the field.

Melinda Byerley:

And one of the reasons I love talking to people like Bob: He's not Gen X or Boomer, he reminds me there's another generation called Generation Jones—which he's going to tell you about—is that most of us didn't get into this life on a linear path. We didn't go to college to study computer science. A lot of us did a lot of other things first. And some people didn't even graduate from college at all. Bob had a career and started two companies before he finally got his degree. So, people like him are interesting; they're well-rounded and took a long path to get where they are.

Melinda Byerley:

But he's still working. He's still staying alive, and that's what this podcast is really about. People like him are often forgotten by history. And, in fact, there's a picture of Bob wearing a T-shirt that his wife gave him that basically says "I invented the internet and all I got was this lousy T-shirt." And you should take a look at that photo in our show notes. And what you'll find is that guests like Bob, they're still working, they're still innovating, they're pushing. They're deeply committed to technology because it's fun. I'm one of those people. I love doing this. I love talking about it. We're just a bunch of nerds doing fun things we like. If you've come here just to get money from tech, I think you'll ultimately be disappointed, because most people are not going to get super-wealthy. But if you love what you're doing, you'll be at it for a while, and you'll have lots of fun stories to tell.

Melinda Byerley:

And that's really the difference between people who work in tech and people who are "tech people." We do this stuff even when we're not rich. There's nothing wrong with getting rich of course, but there are a lot fewer than you think. So, join me in welcoming one of the pioneers of the internet to the podcast, Bob Alberti.

Melinda Byerley:

Bob, welcome to the podcast.

Bob Alberti:

Thanks. Great to be here.

Melinda Byerley:



We'll pick off where we left off from the Twitter conversation. Before we dive into bio, you mentioned that you were very clearly part of Generation Jones, and I think it's great to talk about what that is.

Bob Alberti:

Well, you can look up the wiki, Generation Jones is basically the people who are not Boomers and not Gen Xers. Boomers are supposedly people who are the children of returning service members following World War II. That's certainly not the case for me and probably for most people called Boomers. The way I like to define Generation Jones, which is fairly blue, is we're the people who've been rolling over on the Boomers' wet spot the entire time.

Melinda Byerley:

(Laughs) I thought that was us and Gen X. But yes, that's a good point.

Bob Alberti:

Generation Jones are the ones who, like me, suffered through disco in high school while the Boomers were in the clubs snorting cocaine and going to CBGB and Studio 54. And then, boom, the year I graduate, Studio 54 is closed, the Boomers are all off having kids, and I'm going to college. That's the thing, I've been following the Boomers my entire life, and it's particularly unpleasant.

Melinda Byerley:

So we have a lot more in common, because I feel that way too as a Gen Xer. By the time I got to college, the AIDS epidemic was in full swing and it was like, what happened?

Bob Alberti:

There was no free love or sleeping around in college. It was like, you approach people with a 10-foot pole and said, "Hello, is it safe?"

Melinda Byerley:

Kind of like right now.

Bob Alberti:

Kind of like right now.

Melinda Byerley:

Okay, Bob. So we're going to talk about tech. For the audience, we're going to put up two links to some fabulous articles in the Star Tribune in Minneapolis about Bob. I think, just for the audience, tell us a little bit about where you grew up and what you wanted to be when you were a kid.

Bob Alberti:

When I was very young, it was a choice between either a microbiologist or a stuntman. I wasn't sure which one. I grew up in Queens, about a block off of the landing path for jets coming into JFK Airport.



And so, I grew up waving at the people in the plane as they went by. The jet exhaust settling over everything. We moved to New Jersey when I was still a child because our teachers at the Catholic school I went to—shoutout to Christ the King Springfield Gardens—they said they didn't have any resources for my younger brother, who's learning disabled, and for me, who was gifted. They said, "We have nothing for either of them, go to the suburbs where people have money and they'll have programs for that." And we went to the suburbs. And to my mother's credit, she found no programs there, so she forced them to make them. So, both my brother and I were in the schools there.

Bob Alberti:

But my mother was from Minnesota. And so after a few years in New Jersey, we up and went to Minnesota, and that's how I went from inner-city Queens to a lake in outstate Minnesota in five years. It was quite the tour of different cultures of United States living.

Melinda Byerley:

How old were you when you moved?

Bob Alberti:

I was eight when we left Queens and I was 13 when we left New Jersey.

Melinda Byerley:

So 13 is old enough to remember what it was like to go to the Midwest?

Bob Alberti:

Oh, yeah.

Melinda Byerley:

Was it a good transition?

Bob Alberti:

Well, When I left New Jersey in seventh grade, girls still had cooties.

Melinda Byerley:

(Laughs)

Bob Alberti:

When I got to eighth grade in Minnesota, the kids getting on the bus going home from school were behaving like soldiers heading off to war. There was so much making out next to the buses. And I was just like, "Oh my god, those guys are going to have all the cooties." It was a huge culture shock for me, it really was.

Melinda Byerley:



I love what you said in the article, you said, "I went from living in Queens, where my mother was cruel and wouldn't let me swim in the overflowed sewers in the streets, to living in a lake—and I know what I liked better."

Bob Alberti:

Yeah, yeah. In Queens, they had a project where they raised the streets during the 60s, and then they had to raise all the houses, because we have pictures of people standing on the sidewalk putting their hands on the roof of our house. And so they had to raise all the houses and they put a foundation under all the houses including ours, we got a basement out of nowhere. But that made Queens into a waffle. And so, all of the blocks had sunken backyards that would flood, and also the intersections would flood. And so, the intersections would flood, the sewers would back up, you'd get this giant brown pool and all the kids would go swimming in it.

Melinda Byerley:

Ew! God. (Laughs) Yikes. Not surprised that you might enjoy the lakes of Minnesota quite better than that.

Bob Alberti:

The lakes of Minnesota, they just had leeches. Oh, that was a discovery. Let me tell you, leeches in the water, ticks outside the water. And then mosquitoes in the air. You have all the elements except fire. Fire leeches are the only thing that were missing from my experience in outstate Minnesota.

Melinda Byerley:

Let's talk about the technology, the path. And one of the things I love about the guests that I talk to—and I'll include myself in that—is that we were of an age where it took a circuitous route. Tech wasn't just something you just did, you didn't always aspire. Most people didn't aspire to. And a lot of people came to it through a roundabout route. So, I'd just love to ask you if you remember the first time you put your hands on a computer or dabbled with technology, what your first memories were of that?

Bob Alberti:

I grew up on original broadcasts of Star Trek.

Melinda Byerley:

Nice.

Bob Alberti:

When they went into repeats for the summer, my father and I used to play the game of identifying the episode in the quickest time. Three notes in and you're like, "Aha! Gamesters of Triskelion." I was hot for science fiction. And this is something, (exaggerated old man voice) kids these days, kids these days don't get, here's something kids these days don't get: You had Star Trek until '69, then you had 2001 A Space Odyssey. And then you had nothing, no particular science fiction. Maybe Planet of the Apes if you want



to qualify that, but I didn't—there were no spaceships. You had nothing with spaceships for six, seven years.

Melinda Byerley:
Until Star Wars.

Bob Alberti:

Yeah, until Star Wars! Can you imagine going that long with no spaceship shows? You don't go 15 minutes without a new spaceship show coming out. So we were starved for science fiction. When Star Wars came out, it was like manna from heaven, except it was just a giant loaf of bread that just landed on you. So anyway, that's what I grew up on was this yearning for that kind of science fiction-y kind of fun stuff.

Bob Alberti:

I mentioned my brother was learning disabled and he had a little trouble learning to speak. And what they had in the mid-70s in New Jersey was a phonetic teletype. You would push a key and the computer would go, "F, I, N, Fine." The computer was doing the—

Melinda Byerley:

It's like speak and spell, but for a learning disability. Yeah.

Bob Alberti:

It was a speak and spell that was the size of a refrigerator, exactly. That blew my mind, that was amazing. And that was kind of where I got the first kind of, "Boy, I'd really like to deal with computers" kind of urge. And then I was lucky in Minnesota and St. Francis. Everything about my life is luck. And I was lucky because we had a teacher, Dr. Knoll Johnson, who was our physics teacher. And it was 1976, and he had brought in a computer with a terminal, for the school, in 1976.

Melinda Byerley:

Oh my gosh.

Bob Alberti:

If you weren't there, you don't understand how phenomenal this was. And the way my career started, was that I read a Larry Niven book called Ringworld. And at the back of Ringworld, Larry Niven had an appendix where he explained binary math. 1-2-3-4, that kind of thing, where you can count to 1000 on your fingers.

Bob Alberti:

I read that appendix one night before school. The next day, I went into school, and I walked up to the computer room because it was next to where my math classroom was. And there was a senior. I was a freshman, there was a senior, and he was in front of the computer and he was flipping these switches on the computer and looking at a notebook with numbers in it, in his thing. And he had a mustache. His



name was Darrell and he's now a very phenomenal part of Lawrence Livermore, I don't know where he is today, but he's gone on to a brilliant career. But he had a mustache and that was what was important at that time—because he was a senior.

Melinda Byerley:

(Laughs)

Bob Alberti:

I walk up to the senior who's flipping the switches on this refrigerator-sized computer, and I look at the notebook. And I remember what I read the night before, and I look at him and I go, "You're toggling in a binary bootloader sequence." And his jaw hit the floor. Who was this freshman, this little pipsqueak coming up to him telling him his business? And so that was where my computer career got started. Now, I was a computer genius, because I just happened to read that book the night before.

Melinda Byerley:

Luck is where preparation meets opportunity.

Bob Alberti:

That's exactly right. Yup.

Melinda Byerley:

That's a great story. So I think it's worth talking about how you ended up moving from that into the University of Minnesota.

Bob Alberti:

Yes, well, Minnesota was Silicon Valley before there was Silicon Valley, and for people who want to understand what that phrase means, I strongly urge you to watch a show, or you can watch online for free: tpt.org/solidstate. And I'm sure you can include a link to it in the notes. It's a wonderful program by Channel 2 PBS in Minnesota, explaining the history of computers in Minnesota. But in short, following World War II, Minnesota had a lot of tech companies and a lot of engineers, and not as much for those people to do as they did during World War II. And so, in Minnesota, we had Sperry, and we had UNIVAC, and we had Control Data, and we had Honeywell, and we had IBM. We had all the tech companies.

Bob Alberti:

And across the 60s and 70s, they built the infrastructure of the technology that we use today. The first hard drive was built in Minnesota on a drum, painted with the coating for magnetic tape. And you can see all this in tpt.org/solidstate. Wonderful show. I appear in it for all of about two seconds in a photo, in a magazine. But my boss is in it. Actually, two of my bosses are in it.

Bob Alberti:



So, I told you all that to tell you this: Around the mid-70s, they set up a mainframe computer for all the kids in Minnesota high schools to use. And so everyone could dial in from a local call because there was long distance back then, you could make a local call and you could get on this mainframe. And then you could do a "who" command and you could see each other.

Melinda Byerley:

Wow, this is in the 70s?

Bob Alberti:

This is '75. This is like '75, '76, it is incredible. Yeah, right. We had the internet in the 70s. And that's what people quite don't get. It was essentially the same thing. We had chats. My friend Steve Collins, who works here at the University of Minnesota, he wrote the first chat program, Captain Collins Talk. We had email, we had forums. We had trolls and what we call rugrats.

Melinda Byerley:

Flame wars. (Laughs)

Bob Alberti:

Flame wars. We had moderators, we had people moderating conferences, etc. This was all in the late 70s in Minnesota. They had a corresponding system at the University of Minnesota called Merits, ours was called MECC, and it's the same MECC that made Oregon Trail eventually and all that kind of stuff. At the University of Minnesota, they had a computer called Merits, and it was the same thing. You could log in play games. I used to play this text-based, real-time, inter-person space combat game. You could log in, and on a 110-baud terminal, you could fly your spaceship against other human people and zap them with lasers. That's where I spent a lot of my time.

Melinda Byerley:

You can only swim in the lakes for three months of the year, you've got to have something else to do.

Bob Alberti:

Right. Yeah. Eventually the blood lust of the leeches is too much. So, what you had is kids who could see each other using the "who" command, and then you could see what they were running. And so, people would start running programs called, "Hi, How Are You" and stuff to talk to each other through "who." And that's what got them to write a chat program, and then people connected. And the next thing you know, you had a community just like you've got communities on the internet now. That community still exists. All of us who haven't been so unfortunate as to pass away, still run into each other, still interact with each other now, 50 years later.

Bob Alberti:

And so, that community was integral to how I got into all the nonsense I got into across the 80s and 90s. We had a big advantage here in the Twin Cities and in Minnesota in general. We built a community of skilled IT people back before there were IT people.



Melinda Byerley:

And you mentioned in the article to the Star Tribune, you said you'd been hacking into the university's mainframe. How did that happen?

Bob Alberti:

You just got passwords. People traded in passwords there. There really wasn't guest accounts.

Melinda Byerley:

You had a dark web even back then.

Bob Alberti:

We had a dark web even back then. People would pass around passwords and things like that. That's the only way I played Combat and I spent a lot of time playing Combat—the space combat game. You could get them pretty easily.

Melinda Byerley:

I hope you're enjoying this episode of Stayin' Alive in Tech with Bob Alberti. The episode's name is "You Can Go Your Own Way," after the Fleetwood Mac song from 1977. That song and all of the songs whose titles inspire our show can be found in the Stayin' Alive in Tech playlist on Spotify. You can also listen to this podcast on Spotify and wherever you get your podcasts. While I've got your attention, please consider sharing this episode with a friend who will enjoy Bob's story, whether you do it by email or on social media. Thanks again.

Melinda Byerley:

So when you join the university, when you went to become a student the first time, what did you think you wanted to do with computers at that time?

Bob Alberti:

Well, back then they used to have these job suitability programs. You'd put in all your preferences and you'd say what you liked about the world, and it would tell you what job to be in. And if you said you like to work outdoors, you got Forest Ranger because everybody who said they liked the outdoors, they got Forest Ranger. So you never said you like to be outdoors, because that's all it would tell you. So I got, "You want to be a computer analyst." And at the time, computer analyst was like THE thing you could achieve. That was the A-Plus Ultra of computer people.

Bob Alberti:

So, that was what I went to school for. And back then it was called Computer Science. I know they still have it now but now it's been specialized out to a ridiculous degree. But back then, it was just computers. And that's what I thought I was going to school for. I thought, "Four years, computers, boom, off to the races."

Melinda Byerley:



So analyst was like architect back then?

Bob Alberti:

Yeah, yeah. It was like, you know everything about computers. Yup.

Melinda Byerley:

You didn't graduate, you started a tech company. Let's talk about what the tech company was. And as a founder who has also had a company fail, I always think there's lots of lessons in, you started something—what happened? (Laughs) I'm looking at your face because you're in video.

Bob Alberti:

Everything that could go wrong went wrong for us inside of a very short period of time, four years.

Melinda Byerley:

Wow.

Bob Alberti:

Yeah. I'll tell you. So, here's what happened. You had this community I was talking about on MECC. Well, in 1983, Apple Computers persuaded the state of Minnesota to pull the mainframe and put Apple II computers in all the schools instead. So Apple made a fortune, and we lost our infrastructure, we lost our internet. It's like somebody turned off the internet. And you can imagine how you'd feel about that today. Well, that's how we felt about it.

Bob Alberti:

And so I had this bright idea. I said, you know, people would probably pay to keep that community together. So I thought, well, I'll reach out to the guy who wrote this Milieu game, and see if he wants to put together a system where people can do email and chat and forums and games just like we used to before. So we got our IBM PC XT, and I contacted Allen Cleats, and he wrote everything. He was brilliant, beyond brilliant. His accomplishments in the computer field far eclipsed mine and are really notable. But what he did for us then is he wrote the operating system, he wrote the programs, and he wrote the games for GamBit Multisystems. I helped in it, I tried to clean up his code. He produced code in a phenomenal fashion.

Bob Alberti:

And then we ran this company, and it was great. We charged a lot of money, it was \$3 an hour, which was a ton of money. It was really expensive back then.

Melinda Byerley:

I remember \$300 a month AOL bills and thinking you guys had—that's pretty good money back then. Yeah.

Bob Alberti:



That was good money. The first year that we ran, we started with zero dollars. We went out and bought a computer with our own money and phone lines with our own money and no particular investment. And we made \$20,000 profit the first year.

Melinda Byerley:

That's crazy.

Bob Alberti:

The four of us paid ourselves 5,000 bucks and that's where I got my car. That was going great guns. Well, then we decided to bring in another programmer because I was writing the database for the game and I was also doing all the marketing and all the writing for the marketing and running the business. I was very busy. And so we thought we'd bring in another programmer. So we had a subscriber who was very convivial and helpful, and we hired him as a programmer, and he immediately copied our software and then tried to sell it to whoever he could find. And he tried to do this using our own chat room.

Bob Alberti:

So, my father basically ran a sting against him because he suspected him from the word "go," he never liked him, and caught him red-handed. So instead of doing anything about that legally, especially because there were no particular laws, we could have gotten him on copyright infringement. We were way out in front of the laws. So all of my partners opposed me in saying, "No, we're not going to do anything, we're just going to fire him and be done with it." Well, he took our copy and he ran another company charging \$10 a month instead of \$3 an hour. And so all of our subscribers in Minnesota just went over to his company. Again, my partners didn't want to take any legal action in part because there were no legal precedents for us to take action on, and in part, because they just felt like it would have been too much time and money spent.

Bob Alberti:

So we sat there with no income for a couple months and decided we would franchise. If he could make a franchise out of himself, we'd franchise. And so we put an ad in a PC Magazine, like PC User or something. And we franchised the 13 cities in the US and Canada. And the next thing you know, the money is rolling in again because now we're taking a small cut from 13 different companies who are running our software.

Bob Alberti:

One of those companies turned around and offered to buy us out. And by that time, we were actually kind of exhausted. I don't know if you've noticed this, but running your own business is very tiring.

Melinda Byerley:

(Laughs) Be careful what you wish for.

Bob Alberti:



It annihilated my educational career. I was getting nowhere in college at this point. And so, we thought, yeah, we'll sell out in exchange for a share of that company. So we merged with this company and we had a whole bunch of different things that we did, including a new Unix-based version of our game and all this exciting stuff. And then the guy who bought us was jailed on 18 counts of tax evasion, and all of his assets were seized, which were all of our assets. And so that was it. We were out of business.

Melinda Byerley:

Oh, my God. So by this point, how old are you? 22, 23?

Bob Alberti:

I'm 25, and I've got a girlfriend of three years, who I'm thinking of getting married to. So we decided to start a new company to replace GamBit. And we hire a programmer and he doesn't steal our software—he steals my girlfriend. They're still married to this day, so good for them. That was like the little cherry on top of the poop sandwich that was that entire year. And so that relationship falls apart, the business falls apart, I fall apart. 87 was almost as bad as 2020.

Melinda Byerley:

Let's back up because you pass through the games. And I think it's important to call that out because it sounds like you're talking about what looks like basically an MMORPG. Multiple people playing online at the same time.

Bob Alberti:

Right. There's a fellow who is basically the historian of online games, his name is Professor Richard Bartle. He's a professor at Essex University in England. And he's written several books about online games. And he cites Scepter of Goth, our game on GamBit Multisystems, as the world's first commercial MMORPG, back when online meant 16 modems, which is what we had. We had sixteen 300-baud modems coming into the system. With two people on the console, you could have 18 people in the game at the same time. It was what kids would call a MUD, right? Or maybe kids these days don't even know MUDs are.

Melinda Byerley:

I remember what a MUD is. Gen Z might not.

Bob Alberti:

Multi-User Dungeons is what it was called. And it's a text-based role-playing game. And so you walk into a room and it says you see a tiger—

Melinda Byerley:

That's where I join in. I remember that so clearly as a kid. You turn on the light, "the light will not turn on."



Bob Alberti:

That kind of stuff. And somebody else could come in and carry a torch and make the room light for you. And they were other people. So, you were interacting, you could both fight and kill the tiger and split the experience points and the treasure and whatever. This was all happening starting in '76 and '77. That was when Allen wrote Milieu. Then '83, we turned it into Scepter of Goth and we ran that across the 80s.

Bob Alberti:

It's hard to explain just how mind-boggling that was at the time. You had no internet. You had CompuServe. You had something called, what was it, TimeNet?

Melinda Byerley:

And DARPA was ...

Bob Alberti:

So DARPA was the internet. That was the Defense Agency. The Defense Advanced Research Project Administration was building the internet, and the idea of the internet was to build a network that, if part of the United States was nuked in a Russian attack, the packets would automatically route around the hole in the country and keep going. That was the whole point of the internet back then. That was where the internet was getting its start. Contrary to the Karl Rove mockery of Al Gore, he was there. He was across some portion of that time the chair of the Senate Technology Committee. And so he was in there helping build the internet before any of his detractors had ever heard of it.

Melinda Byerley:

And that's one of the reasons you mentioned this on Twitter. And it's one of the reasons I found you and asked you to say that Al Gore was telling the truth; he really did know what he was talking about when it came to the internet, (he) was part of it.

Bob Alberti:

One of the things to remember is that Karl Rove was a Republican strategist, his thing that he got from Sun Tzu and any other strategist is to attack people at their strengths. So he attacked John Kerry over being a decorated war veteran, because John Kerry was a decorated war veteran and somehow they made that into a bad thing. Likewise, he attacked Al Gore for Al Gore's very true statement in that he helped build the internet. The internet was built by a lot of people in a lot of places in a lot of different ways. And Al Gore built it through politics and funding and planning. And that's a perfectly legitimate way to build something. And they make a mockery of that now. And people say, (mockingly) "Oh, Al Gore invented the internet." Well, he freaking did.

Bob Alberti:

When we created Internet Gopher—I'm getting ahead of things now—but he visited us here at the University of Minnesota to see it. He was the only politician who knew what an internet browser was before anyone else had ever heard of an internet browser. So, people who try to detract from Al Gore with that mockery really, really annoy me.



Melinda Byerley:

So, did you meet AI? I think you said you did not meet him.

Bob Alberti:

I did not. I was a little pipsqueak coder and I was not politically connected. But some people who were better connected and were more senior in the administration here did in fact meet him. We had a device from Apple back then, which was a handheld computer that was wireless. And we had a Gopher browser on it. And so, you could browse the internet with a handheld device in 1991 or 1992, whenever he came to visit. And he got to see that. That's the precursor to our cell phones.

Melinda Byerley:

You're saying he knew what that was before he even showed up. It's not like you all taught him. He came and said, "I know what these things are, now I want to know more."

Bob Alberti:

Right, exactly. Gopher was arguably the first viral application because-

Melinda Byerley:

Let's talk about Gopher. Yeah, let's back up for a second. Let's talk about Gopher.

Bob Alberti:

So, the connection between GamBit and Gopher is that the girlfriend I lost at the end of GamBit, her brother worked in the place where I joined and became a Gopher programmer. In other words, because of him, I knew this place existed and I applied for a job there. And my whole point in applying for a job there at the university was to resume my education, which had been interrupted by GamBit. That was my plan, just get back to school, get a discount on my classes and finish my degree.

Bob Alberti:

And the first few months I was there, my boss came to us and he said, "We're going to write a piece of software in the next month because I'm tired of attending these campus-wide information systems meetings. And we're just going to write one and run them so I don't have to go to these anymore."

Melinda Byerley:

(Laughs) Engineers avoiding meetings for 40 years.

Bob Alberti:

The campus-wide Information Systems Committee was this group that was organized to design the perfect software to run on a mainframe to tie together things on campus. There was no internet, everyone on the campus would use this one computer. And so they met for three years writing up requirements of how it would do things.

Melinda Byerley:



Three years. (Laughs)

Bob Alberti:

Three years and they never wrote a line of code. They had a gigantic, thick dictionary of things that the software would do once they started writing it, but they never were going to actually start writing it. And so between the April and May meetings, Mackay Hill, Paul Lindner, myself, and Dave Johnson, we wrote this thing under a new architecture called Client Server, which is, of course, how everything is done on the internet today. But back then it was kind of novel. And the idea was to turn over some of the processing responsibilities to the personal computer on the other end because we had personal computers now. You used to have dumb terminals before.

Bob Alberti:

So we wrote this client server architecture and integrated it with a search engine called Veronica at the time. Lo and behold, you have a web browser that abstracts information away from its location. That was the whole goal, to abstract what something was away from where it was. Because prior to Gopher, you couldn't find anything if you didn't know where it was. If you knew someone who did some research, you could call him up and you could say, can I access your research? And he'd give you the IP address of his FTP server and you could go download it.

Melinda Byerley:

Imagine if you couldn't search and everything you had to do was call your friend up to get the URL and type it in.

Bob Alberti:

Right. And it was all IP addresses. People weren't using DNS yet. And Gopher allowed you to step back from that and say, "I want to find research about cars," and it would point you to that research that you otherwise would not have known about. And that was mind-blowing at the time.

Melinda Byerley:

Was it like a lookup or was it like a crawler? How did it function?

Bob Alberti:

It was a hierarchical, text-based menu. So it was like going in on your Windows device and using the command shell and doing a directory and then going down a directory and doing another directory.

Melinda Byerley:

Like what Yahoo did in the very early days, like the directory.

Bob Alberti:

Yeah. Early Yahoo.

Melinda Byerley:



Yeah. (Laughs) Let's not go there yet.

Bob Alberti:

The thing with Yahoo is that somebody approached me when I was with Gopher, and they said, "Hey, this company starting up, and they're based around a search engine." I'm like, "You can't make a company out of a search engine, I make search engines for a living, you can't make a company out of that, what a bunch of Yahoos." And so I didn't buy any stock. So anyway, that's why I'm not rich. Also, I had no money. I had twins and a third kid during this time. I was raising a family and trying to go to school while doing my job and doing Gopher. So, I was not making any money that I could invest in things.

Melinda Byerley:

It was both a crawler and a file directory.

Bob Alberti:

You had this directory displayed, but then one of the directory entries would have a little question mark at the end of your search tool. You click on that, and it would say, "What do you want to search for?" And you'd type in the text. And it would pop up a directory of text links that would go to the things that matched that search. And that was, again, mind-blowing. It was the first time you could find something on the internet without knowing where it was in advance. And so, it was the first internet browser.

Melinda Byerley:

Man, when I think of the first time I saw something like this, it was like FTP. Mozilla, which would probably be the mid-90s. And it was mind-blowing then. And the thought that you guys are at this 20 years before, or at least 15 years before that.

Bob Alberti:

No, no. This was 1991.

Melinda Byerley:

So it was right about the same time, yeah.

Bob Alberti:

It was just prior to it. Similar for me was the time that I went to my friend's college for a visit, and there was a computer there, and it was running something called BITNET, which was a pre-internet service. I was able to do a "who" on another computer, and I was able to exchange text messages with somebody online in Australia. And this was 1981. And the first thought that I had when I texted something to Australia and it came back is, "How come the letters aren't upside down?"

Melinda Byerley:

How does that happen?



Bob Alberti:

It orientated for me here, so how did the letters get turned right side up? And I thought that was a ridiculous thing to think, and went on from there. Yeah, it was amazing that I could just talk to somebody in Australia and they could talk back to me in real-time. That was 1981. Back to Gopher. We debuted this solution in May of '91. And the committee immediately forbade us from working on it ever again because we just... end run to them completely.

Melinda Byerley:

Politics always.

Bob Alberti:

One lady jumping up and down shouting, "You can't do that." Literally jumping up and down. But what they didn't do was forbid us from letting other people work on it. And so we sent emails to people at the University of Michigan, University of Ohio, places like that. And we say, "Hey, we got this thing, we're not allowed to work on it, we're going to work on it on weekends on our own time. If you want to work on it with us, here it is over here." They started installing Gopher servers and boom, viral. They would give it to their friends and their friends. They'd hook them all together. And suddenly you had this web of Gopher servers, which got turned into "Gopher space." You could surf the internet using Gopher, going from system to system and server to server. And there are still Gopher servers. You can go to sdf.org and they have a Gopher server, you can see what Gopher looked like.

Melinda Byerley:

And I saw on Wikipedia, which of course we know is always correct, that the number of Gopher servers is growing. Year over year, there was slightly more, I think was something like 390 some-odd Gopher servers.

Bob Alberti:

There could hardly be less so it must ...

Melinda Byerley:

(Laughs)

Melinda Byerley: And that's where we'll have to end for now. Please listen to the next episode for part two of our time with Bob Alberti, where we'll talk about the rapid evolution of early internet tech, the somewhat unforeseen consequences that have arisen since, and much, much more.

Speaker 1:

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