Category: Big Sky Telegraph Project (1980)
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Written by dave
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The Big Sky Telegraph Project and Frank Odasz

One other project issued out of my Old Colorado City Electronic Cottage one line computer Bulletin Board.

One day in 1983 a caller left an unusual message. He posted it in the 'Little Red Schoolhouse' section of the BBS. But instead of only talking tech, or education, he set out to describe the abundant wildlife around him - birds, deer, foxes - near Laramie, Wyoming. It obviously came from a man who knew his natural environment. I guessed the man behind the message would be very interesting.

He was Frank Odasz, a Cody, Wyoming native getting his Masters in Educational Technology at the University of Wyoming. He and his wife were headed for teaching positions in the North West somewhere.

I exchanged a few messages with him and then he called me voice. He picked my brains about how 'telecommunications' such as the BBS I was running could be useful for teaching in small rural and remote towns.

But let him tell, in his own words the genesis of our joint program. Its an extract from a 2004 article for Educational Technology by Frank Odasz "Online - a Rural Perspective"

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A Sense of Community

Born in 1952 in Cody, Wyoming, the close knit community ties of the 50's made a deep impression regarding my sense of belonging. Suddenly having to move away at age seven, my growing up was a long wait seeking to return to this lost sense of community. For the decade of the sixties I lived in what was to become Silicon Valley, the bay area south of San Francisco, California.

Upon graduating in 1974 from University of California, Davis, with a BA in Psychology I had the choice of becoming a computer programmer or moving back to Wyoming to work as a roughneck on oil rigs. The starting wages were the same for both jobs. My perception of computers after learning about punch cards and the Fortran programming language was that there is nothing more lifeless than sitting at a computer all day long. My choice was easy, I headed home to the Rocky Mountains, soon to be spending the nights working outdoors at 40 below zero - and I was wildly happy to be there.

A Vision for the Ultimate Freedom

When I read Alvin Toffler's book *Future Shock* it shared the vision that someday, personal computers would be small enough and cheap enough we each could afford one, and that someday, telecommunications would allow us to live and work anywhere we pleased. I immediately made the decision to watch for the emergence of these opportunities for extreme freedom! It could be a potential solution for my long-term repatriation to Cody, Wyoming. All I had to do was wait for these promises to become reality. Over much of the next decade (1974-1982) I worked as an oilfield roughneck, carpenter/painter, and enjoyed three years as a dude ranch manager - waiting.

Finally in 1982, IBM announced their first personal computer and the Apple IIe enhanced version had just come out. Modems had just been dramatically upgraded from 300 to 1200 baud. Online communications using microcomputers was opening doors to unknown possibilities. It was time to pursue Toffler's vision, urged on by the 1981 recession and being once again unemployed. In 1982, I enrolled at the University of Wyoming as one of the first four students for a new masters program in Instructional Technology.

Two years later, in 1984, with my new Master Degree in hand, I was caretaking a ranch near Walden, Colorado, teaching "Microcomputers in Agriculture" for Colorado Mountain College while looking for fulltime work to leverage my new Degree. At that time microcomputers were still so new that most people were frightened of them and there was little demand for expertise in instructional technology.

I was online via $18/hr toll lines at 2400 baud with a bulletin board system called "The Little Red Electronic Schoolhouse" run by a retired army colonel, David R. Hughes. Tentatively, I called Dave from my isolated ranch house hoping to learn more. Two hours later, I pried the phone from my ear having received my first passionate tutorial from the Cursor Cowboy. Here was a man with a vision! This would become a weekly ritual for the next ten years.

The Bull Colonel Online Mentoring Model

In addition to providing my first online learning experience, Dave provided me with an unfailing mentoring model. His bull colonel tenacity was not about to let me fail and I learned to implicitly trust in his ongoing support. Today, when I mentor educators in my online graduate courses my role is based on the mastery learning guaranteed level of support I learned from Dave Hughes. Failure is not an option!

One Up Dialogs

In person, we'd often both be talking at once, each interrupting the other frequently without either of us taking offense and I imagined we looked like two buffalos clawing the ground and huffing. Our ideas would build upon one another in rapid-fire fashion, each idea suggesting the next logical possibility. It was exciting to be inventing, discovering, and exploring all at once – the potential future of the world.

We began imagining what the high end educational applications of microcomputer telecommunications might be. We'd each try to top the other's imaginings by going one better as an exercise to develop a vision for the best possible working model to try out in an actual project. Eventually we evolved the idea of creating the Big Sky Telegraph to connect the 100 one-room schools across Montana. But it was to be four years before we'd finally win the funding.

Becoming an Assistant Professor

A one-inch ad from Western Montana College, a hundred-year-old teachers' college in Dillon, Montana was run once in the Chronicle of Higher Education. Frustrated from years of underemployment, I bought a pinstripe suit, shaved my beard and drove 1000 miles to put in a face-to-face appearance and was soon hired as their first Microcomputer Applications instructor. Upon arrival they ushered me down a narrow stairway to an unfinished basement room with cement walls and ceiling. Twenty-five boxed Apple IIes received through a grant sat unopened. The future of the world was before me.

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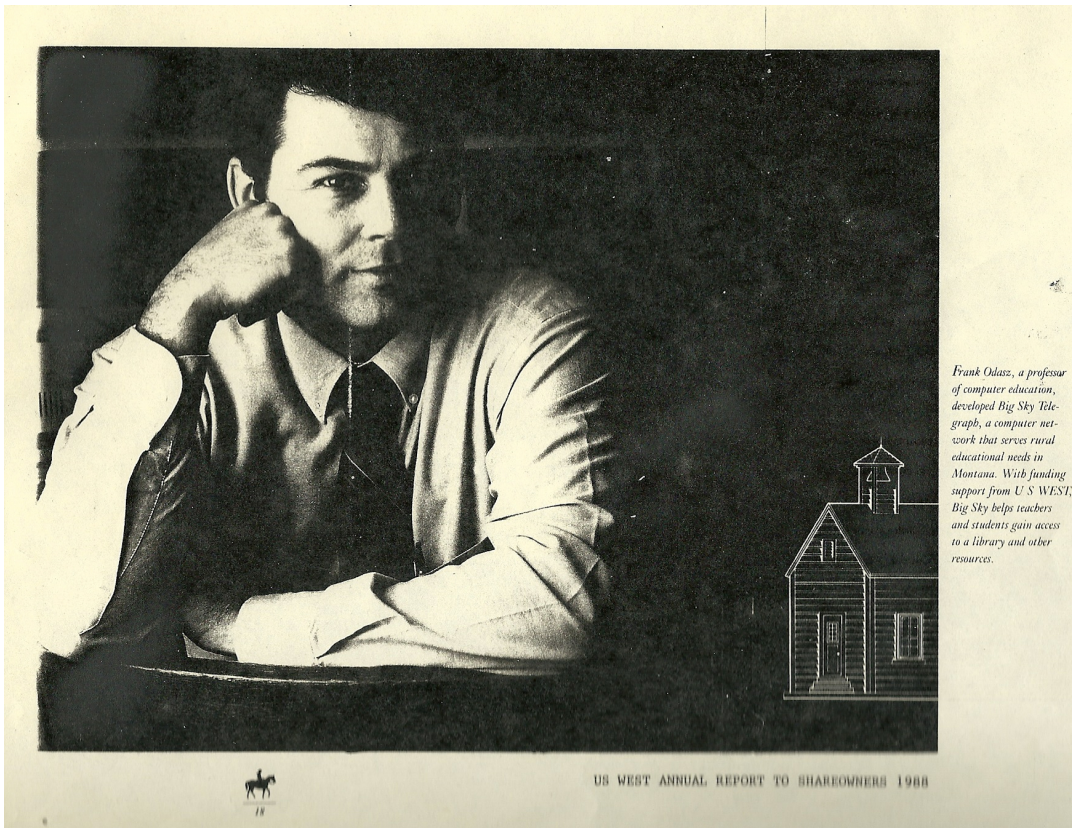

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Frank and I exchanged calls a number of times until after he got settled in at Western by 1985. He took a trip to see me in Old Colorado City where, by then I had my Old Colorado City Communications company up and running with our Unix system connected by either dial up or by UUCP. My partner Louis Jaffe decided to open a small French Deli, which, one day, Frank and I patronized, and over wine and French cuisine we hammered out an agreement about what I could do to connect up 100 Montana Rural School and at what cost. We came up with the name Big Sky Telegraph for the project.

Frank applied for and won the first of two grants. Here is how he described them:

"Big Sky Telegraph (BST)

This name was intended in invoke an image of an expansive imagination, unlimited possibilities, and of an old-timey non-threatening communications technology metaphor.

In 1987, I won a small grant for $37,000 from the M.J. Murdoch Foundation, to engage Dave Hughes' expertise in creating one of the first Internet hosts running on a microcomputer to offer online courses. The new 386 computer was just fast enough to run SCO Unix and the Big Sky Telegraph went online, January 1st, 1988. Without compensation for my time, throughout the next year the BST offered free 2400 baud modems to a pilot group of two dozen one-room school teachers along with an online course with ten one-hour mastery learning lessons titled "Microcomputer Telecommunications Basics." As most educators and rural citizens had no

idea of the “online” possibilities, our challenge was to bring to them their first experiences of online learning, one at a time."

In 1989, US West granted $280,000 for an expansion of Big Sky Telegraph to 100 one-room schools. With the additional technical expertise of David Hughes JR, (Dave’s son), we began creating the first of 29 local dial-up community bulletin boards using an elegant cost-effective Fidonet system which collected emails bound for distant systems and the Internet for automated exchange during the low-cost nightly phone rates. As a representative application Junior High School students in Montana and Wyoming rural schools used these systems to learn Chaos Theory Mathematics online - direct from Dr. George Johnston of the MIT Plasma Fusion Lab.

End of Frank's description

Now what I had accomplished to do this project was, first of all, to get a desktop SCO Xenix system - a varient of Unix to be the server in Frank's offices at Western, in Dillon, Montana. Then by using a second MSDOS computer across the room running both Tom Jenning's Fido BBS software connected to one outside phone line with a 2400 baud modem, I could link the Unix system and Fido BBSs in 29 of the 116 one-room school houses in Montana.

The key was that the Fido BBS could be called nightly at 2AM by each of the 29 Fido BBSs in the remote schools in turn. In less than 2 minutes each call, all the messages generated on the school Fido's would pour into the memory of that one Fido BBS. And IF the Fido had on its disk messages addressed to any one of the Fido's at the schools, they would be 'sent' at the same time. In less than an hour in the middle of the night, all the traffic was received at Big Sky or sent from it.

Then the Fido BBS at Big Sky would shut down automatically at 3AM and come up as a Ufgate Server, connected by serial cable across the room to a port on the SCO Unix system. So all the traffic from the Fido's in Montana went into the Unix system using UUCP protocol that was natural to the Unix machine, but matched under UFGATE on the Fido system.

THEN all the traffic from the Montana school BBS's destined to any Fido BBS in the world (I recall the kids communicated with Germans, Norweigens, and Japanese who had access to a locl Fido - each with its unique Fido Address identity, while message from a schoolboy or girl had their name as the ultimate receipient or author.) went from that SCO Unix system by telephone modem, to my Old Colorado City Communications Unix server using UUCP protocols. And my system would pass all the traffic received from Montana by UUCP hop hop through A Hewlett Packard local office's Unix system, to a Fido system in Silicon Valley, which 'knew' how to forward and route replies to other global Fido's.

So the primary heart of Big Sky Telegraph was low cost Fido BBSs linked to UUCP Unix boxes. Over which the EDUCATIONAL content - teaching and learning - flowed.

That was the greatest revolution in Rural Communications since the crank party line telephones of the 1930s.