

## TOM HERN AND HIS EXPERIENCES WITH CLIFF LONG (AUDIO INTERVIEW IN 2015-05)

0 Cliff's love of ice cream (McDonald's)

1:00 Early experiences with 3-D printing (milling machine) – Cliff would be so excited to see 3-D printing. Challenges with BGSU staff and machinery working on this. LOTS of mathematical jargon used in this discussion.

5:45 Early movies and slides of surfaces done in the 1970s – “draw a line from here to here.” Plasma panel (SIGGRAPH2) efforts. Writing basic programs with very little memory (paper tape storage). Hidden line. “This man (Cliff) was incredibly resourceful!” Tom would take photos with camera. Cliff talked Chemistry into working with them on the Super8 B&W movie efforts – Tom would do the darkroom developing efforts with the computer drawings. This was before you had computer monitors. Tom says about Cliff: “A lesser man would not have even tried.” Doing this in the classroom was the goal.

15:30 Few are still using technology effectively in the classroom

15:45 Apple computer with 25” monitor – pushing it down to the classroom (still no projector)

16:45 Tom and Cliff frustrated – folks just don't understand the value of using motion in teaching mathematics! Opportunities lost. BGSU wasn't ready to the hardware and software “What Cliff would have done with the web!”

20:00 Andy and Steve have maybe felt their dad's vision in some small/larger way?

20:30 Tom's efforts with his family histories include loads of .jpg files for future use. Make sure things translate in the future – PRINT IT so that computer file translation doesn't get in the way. Tom includes in one of the books: “Please forgive archaic web references”

23:30 Most don't have a concept of what the early days of computers was like. Tom says a good book that parallels his experience of growing up with computers is the book *The Innovators* by Walter Isaacson (managing editor of TIME.) Nephew Kevin (PhD physics). Readable by a layperson too! :-). Tom gets his ideas for books from CSPAN.

27:00 Written for those who did HEATH kits – Tom says he built a mic kit (stereo receiver). Tom was good at de-bugging displayed by efforts with Heath kit - diode was reversed in the kit directions!

30:30 Zenith kit for 1200 baud modem (with familiar tone.) Getting “nuts and bolts experience.” Didn't move back to Perrysburg – instead to Conneaut Ave. apt. (I helped move him, in fact) – because the phone call for computing was long distance! Moved back to P-burg around 2000 once that wasn't an issue anymore.

33:45 Found out about 9/11/2001 from an email – Mom Long was reading email about the attack and suggested we turn on the TV (Dad and Steve were down in the living room)

35:00 Tom was on CSNET (the internet) in 1982 while he was down at University of North Carolina. “Had internet since '82.” First experience with VAX at UNC.

36:00 BGSU got internet access around 1992 and Tom helped create the BGSU Math Dept webpage. Tom had to hand code HTML without a manual – mostly learned by “trial and error”

39:00 Webpages should be useful - Tom's frustration with finding academic calendars for various universities coming to BGSU for math meetings. Tom develops the first websites for Math Dept., MAA, First Presbyterian in BG. Looking good isn't the key. "What's the purpose?" "Content over form every time" is Steve's mantra.

43:00 Webserver efforts with BGSU Physics prof – streaming music!! Tom thinks that's an awful waste of bandwidth. "BGSU always had to have a meeting." Major concern by BGSU for the website was what font to use. Tom's point – that's not the question to be asking!!!

45:15 History of MAA website – the history files were gone again! Broken links! Turns out that BGSU re-designed their webserver and changed all the website name references. Throwing tantrums: "If you act like a 2 year-old that's a very effective way to get things done." Student decided there were no internal links to the page so Tom demanded it be reinstated. No longer trusted BGSU to keep everything – always make a copy.

49:00 History page – BGSU Math history page was written by Tom Hern

- <http://sections.maa.org/ohio/archive.html>
- <https://www.bgsu.edu/arts-and-sciences/mathematics-and-statistics/department-history.html>

54:15 Some of Steve's comments about Tom Hern & Cliff Long: very few colleagues used the technology other than the two of them. Dad Long would have loved technologies of 2015 not available in late '90s. Give me this in print! :-)

56:30 "What I've told you is basically what I would have written down!"

58:00 Kudos to Staci for asking Tom to do documentation and cataloging of slides and photos – he sent a bunch of things to Patti of her family. Slideshows are effective uses of photos

60:00 Discussing how to capture materials for the future. Do need good editors. "Just continuing to play" "Make a suitable number of mistakes" Tom uses BooksOnDemand.com.

1:04:00 Tom's efforts with civil war book summaries – Thomas Hern name history. Andersonville book published by Toledo Blade (editor was writer). Follow them from Camp Dennison to the war... Shipped out on the Little Miami Railroad