

TAPE # 4 SIDE A

<u>Counter</u>	<u>Subject discussed</u>	<u>Names</u>
007 026	Recap of why FPS ended	Lloyd Turner
028	FPS staff/management did not notice problems appearing on horizon vis-a-vis UNIX	
044	Attempts to rectify problems by developing their own UNIX compatible system	
046		George O'Leary Milt Smith
051	FPS acquired a UNIX machine for their FPS programs, but it was too late	
057	Cray Computer bought physical & intellectual assets, was probably solicited by FPS to do so	
076	Norm could not sell his shares because he was an insider	
079	O'Leary retired, associated with Portland Art Museum	George O'Leary Milt Smith
085		
085	Smith later became interim CEO of several companies, later Board member & a founder of Thrustmaster	
092	Turner dropped out of sight	Lloyd Turner
100	Emotional reaction to collapse of his creation	
107	FPS Board would not let Norm back in as CEO	
111		Earl Wantland
111	Smith & FPS board were to listen to Wantland for managerial advice concerning downsizing	
113		George O'Leary
113	Neither O'Leary or Smith listened to Norm's advice	
125	1986=a deluge of bad luck, FPS collapse, Lattice has financial troubles	
131		Raoul Saud
131	Lattice, est 1983, wants to build a fabrication plant (a FAB) to manufacture semiconductors	
145	Private sale of Lattice stock, Saud wanted \$4.50/, Norm wanted \$2.25/ Saud came down to \$2.50/	
166	Details of Lattice's financial problem	
173		Raoul Saud
173	Machinations to get rid of Saud	
216	Lattice concentrates on one product, explains financial & technical reasons for doing so PAL=acronym for competitors old products GAL=Lattice product, "Our GALs are better than your PALS"	
250	Employees receive short paychecks, much uncertainty about future	
262	Chapter 11 bankruptcy, SEIKO=manufacturer of the GALs, they shut off production in Japan	
270		Harry Merlo
270	Merlo put up \$ for the salaries, Norm got \$1.9 million investment money	

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280	Attorney for creditors was fair, laid out a plan that both sides could live with	
298	Norm to Japan, got SEIKO to resume making GALs explaining that their GAL inventory would be a total loss & promised to pay them 100% of debt. SEIKO agreed, saving Lattice	
360		Raoul Saud
360	Saud created financial problems by developing a large direct marketing force with really nothing to sell, having too many products meant nothing to the market	
375	Concentrating on GALs was good idea, they sold well, got out of bankruptcy quickly, had reasonable payables	
382	Got thru bankruptcy in 90 days	
389	Within a year Lattice was out of financial troubles & went public	

END OF TAPE 4, SIDE A

TAPE 4 SIDE B

003	Lingering death of FPS	
010	Personal debts coming due at Performing Arts Center, guaranteed loan to buy property=\$1,000,000 and \$250,000 for theater	
028	Personal philosophy in face of 1986 disasters	
060	PSU room, OSU lab paid for by NW, probably early 1980s	
075	Dolores Winningstad sponsored Sesame Street & production of play "Christmas at the Juniper Tavern" based upon Bargwong Rashneesh in Antelope, OR	
085	<i>Bequham</i>	B. Rashneesh
098	Dolores's need and dislike of asking Norm for \$, Norm gave Dolores some of his FPS stock, she had independence	
112	Dolores helped Tigard Theater, Shakespeare Theater, also Wildlife Safari (she's on the board), DW Intermediate Theater at the Performing Arts Center is Norm's gift to his wife	
119		Jim Castles
120	Flew Jim Castles of Murdock Trust to visit Wildlife Safari to get \$ for interior of building	
146	Started Thrustmaster in 1990-1 with Bob Carter to develop a thrustlever for computer game about flying because the palm stick in general use was unreasonable	
146		Bob Carter
177		Frank Bouten
		Milt Smith
184	Bring your checkbook	Jerry Pratt

<u>Counter</u>	<u>Subject discussed</u>	<u>Names</u>
199	First product developed in Carter's garage in Lake Oswego, out on the lawn, Town said "move operation elsewhere"	
212	Rented space in part of a building, soon took over that building, then another. this is an assembly plant	
219	Bob Carter is good at coming up with new ideas, hired	
221	a former F16 pilot who used Internet to spread word of Thrustmaster products	Buzz Hoffman
237	Need for a real joy stick, first ones made of metal are machined instead of cast, profit margin is low	
260	Retooled in plastic where set-up cost is high but profit margin is good, metal ones cost \$145	
278	Next product is plastic replica of F16 cockpit	
280	Norm wants to expand horizontally beyond aviation orientation	
292	Race car simulation=second marketing niche	
304	Next was golf game simulation with a real ball & club which measured angle of trajectory & calculated velocity	
323	Next was pin ball simulation with gizmos on the side of the key board	
333	Chairman of Board at Thrustmaster	
340		Cyrus Choy
340	CEO of Lattice in 1996	
345	Writing a book, has roughed out some chapters, a book proposal (similar to a business plan) must be submitted	

END OF TAPE 4, SIDE B

## HISTORY OF THE INTERVIEW

C. Norman Winningstad, 1996

There was a genuine interest on part of the staff at the Historical Society to revive the Oral History Program that had been so successful during 1978. Barbara Doyle met Norm Winningstad at an Oregon Pilot's Association dinner on 2 February 1996. A brief discussion about the Historical Society, our interest in oral history interviews and a priority interest in obtaining information about the hi-tech industries led to an exchange of business cards and an agreement by Norm to be interviewed by B. Doyle. Norm was very receptive, tried to fax (on Sunday, 4 February) info about time and place for the meeting. Within a week, time and place for the interview were determined.

Instead of one session, there were five one-hour sessions spread over approximately eleven weeks, all held at the Winningstad's condo in the Sylvan area. Norm was sent (via fax) a list of topics prior to the sessions. He followed the list quite well, provided extremely good explanations of technical topics, showed himself to be a "tech-weenie" (his words) with a wide range of intellectual, business and scientific interests. Norm is very articulate, has good concentration skills and is able to return to his statement at precisely the point where he left off (there were only a few interruptions). The interview topics generally follow the actual sequence of events. The collapse of Floating Point Systems and Norm's minor business interests are the major digressions from a straight chronology.

He understands his position as both a minor venture capitalist and a community philanthropist - there is a need to put up some of his own money if he wants to draw other people into a project. His interests have varied from hi-tech to brand new products, to academic support, to major support of the arts. While not really a life interview, this series certainly goes beyond just Norm Winningstad's place in the development of the hi-tech industries of Washington County.

All duplication and indexing of the tapes was done by Barbara Doyle. Index was proof-read by Norm Winningstad.

Some specifics concerning Norm Winningstad interviews

Time period covered:	overall;	1925 - 1996
	hi-tech in Oregon;	1957-1996

Names mentioned:

A. <u>Businesses/Schools</u>	B. <u>Last names</u>
Control Data Corp.	Anderson
Cray Computer	Auel
Dean Witter	Bouton
Digital Equipment	Carter
Floating Point Systems	Castles
General Electric	Culler
Goldman Sachs	Fryer
Hewlett-Packard	Hatfield
Hughes	Hoffman
Hydro Catalysis Power	Johnson
Lattice Semiconductor	Lawrence
Lawrence Berkeley Labs	McCutcheon
Mentor Graphics	Merlo
Optical Data Inc.	Mills
OR Coast Aquarium	Moriyasu
OR Episcopal School (OES)	O'Leary
OR Graduate Institute (OGI)	Oliver
OR Museum Science/Industry	Pratt
OR State Univ. (OSU)	Prince
Performing Arts Center (PAC)	Rahsneesh
Portland Art Museum	Ropiquet
Portland State Univ. (PSU)	Salquist
Seiko	Saud
Spectronics	Segrey
Star Technologies	Smith
Tektronix	Tsui
Thrustmaster	Turner
Tyres Heart Theatre	Vollum
Univ. Cal.- Berkeley	Wantland
Wildlife Safari	
Zeeland	