#170

This is Technology Update.

John Joss reporting from Silicon Valley, world headquarters of the 21st century.

Can technology help human life? For those who see high technology as a destroyer, here's an unusual story from KPEN listener Dennis Starkovich of Palo Alto. Dennis uses the so-called PERT/CPM or "critical path" method of planning, to do all sorts of problem solving. He's a management consultant, but a very hip one.

Dennis' network analyses have been applied to all the traditional businesses for scientific and management problem solving. Also, happily, to schoolroom learning, to help teachers and students tackle short and long-term problems in – would you believe, kindergarten. The resulting network is one of the most charming and provocative documents I've seen in ages. It's identical in concept to approaches used by high-technology companies to build new plants, launch new products, put men on the moon. But perhaps the most interesting and personal example that Dennis sent me is a network of the movements used in Tai-Chi, the well known Oriental exercise, meditation and dance concept.

If you'd like to learn more about these analytical methods, call Dennis at his Palo Alto office. He's a professional and technologist, but one with a lot of heart. I thank him for giving me the word to pass on to you. I'm John Joss.

RADIO STATION KPEN LOS ALTOS, CA 1979

MANAGEMENT CONSULTANT

OBJECTIVE

Provide PERT/CPM methods of network analysis for planning, developing and implementing projects of all types, sizes and complexity.

PROFESSIONAL EXPERIENCE

Management Consultant, 1974 to present.

Provide PERT/CPM management planning and network analysis for a wide variety of design, development and construction projects.

Early clients and projects included:

Container Corporation of America; General Electric; Lockheed; University of California at San Francisco; C. Norman Peterson Contractors, A Dillingham Company; Hodgson Construction; Portola Valley Ranch Subdivision; University of Oregon Health Services Center; Santa Barbara Sewage Treatment Plant; Rock Creek, Oregon Sewage Plant; Aptos Transmission Facilities; Kaiser Hospital, Antioch; Moffitt Hospital, San Francisco; Municipal Railway and Cable Car Interim Safety Improvements, San Francisco

Construction Analyst, 1973 to 1974.

Cal West Communities, Inc.

Initial function was to stabilize the transition of accounting system from manual to Electronic data processing. Work participation included all phases of accounting from accounts payable and cost accounting through financial statements and cash flow analyses for annual project sales in excess of \$5 million (Sunset Oaks and Sunset Park of Sunnyvale; Millwood Subdivision, Fremont; Shelter Ridge, Marin; Sandpiper, Vallejo).

Final position was assistant project manager for planned 525 unit condominium development. Project assistance included project estimating, contract negotiation, finance and construction planning, and computerized scheduling.

Carpenter – Commercial & Residential, 1968 to 1972.

Howard White Construction Company; Harold & Williams Construction Company; Real Property Consultants, Palo Alto; Capp Homes, A division of Evans Products.

Welch Road Office Building, Palo Alto Menlo Park Civic Center Commercial Remodeling Custom Houses in Portola Valley and Los Altos

EDUCATION

B.A. Stanford University

PROGRAM DEVELOPMENT PLANNING

Santa Clara County, Special Schools Division

Facility Acquisition and Improvement Program

Habitec, Architecture and Planning

Analysis of Typical Design Program

Working Drawings for Decathlon Club, Santa Clara

Construction Progress Analysis and Monthly Reports, Decathlon Club

Executives' Outlet, Inc.

Decathlon Club Facility Start-up Plan

Facility/Security Analysis

Kitchen/Restaurant Operations

Gelco Corporation

Fresh Intermodal Transport

Computer Modeling for Business Start-up

Physical Trailer Movement

License Registration and Renewal Process

Fresno Operation

Executive Planning Session, Decathlon Club

Executive Schedule Re-Cap

Helm Corporation

Registration of Railroad Equipment

Fairchild Semiconductor

Fairchild Management Information Systems (FMIS) Conversion

Union Bank, San Francisco

MVS Conversion Project

William Simpson Co. – A Dillingham Company

Architectural/Engineering Schedule for O'Connor Hospital

Mount Zion Hospital

Program Analysis of Geriatric Facility Re-Location

City of San Francisco

Analysis of Environmental Impact Planning Process

Relocation of Morgan Equipment Company Facility for Accelerated

Start of Southeast Water Pollution Control Plant

Implementation of Computer System for Wastewater Program

Chin and Hensolt, San Francisco

General Motors, Bid Schedule for Air Quality Compliance Project

General Motors, Bid Schedule for Basic Paint Clean Room

SAN FRANCISCO MUNICIPAL RAILWAY

Cable Car Renovations

Schedule for System Interim Safety Improvements, Winter, 1979

Muni Metro

Critical Path Schedule for Muni Metro Start-up

Monthly Updates

Fare Collection Problem Analysis

Simulated Service Planning

Communication Contract Interface Analysis

Central Control Relocation

Ways & Structures Operation Station Agent Training Operator Training Central Control Dispatchers

Ph II Operation

Completion on Contract MR-672, Data Transmission

1981 Operations

INTERNATIONAL

Lyon Engineering

Royal Malaysian Air Force, Subang AFB

Optec, N.V.

Analysis of International Projects: Saudi Arabia, Egypt, Morocco, London

Hayford Project Management, Pte, Ltd.

Lexmark Electronics Facility, Cebu, Phillippines

MKE - Quantum Expansion, Batam, Indonesia

CDC Digital Management

Analysis of Building Control System Projects

London, U.K.

Turkey

SEMINAR / EDUCATION

San Francisco Municipal Railway

PERT/CPM Project Management

PSL/Pacific

Pacific Construction, Hawaii

Analysis of Superintendent Training Seminar

ENERGY DEVELOPMENT

Aydin Energy Division

Modulator/Regulator for Princeton, New Jersey Plasma Fusion Experiment

HEAVY INDUSTRIAL

General Motors

1982 'A' Model Change, Fremont

E.H. Morrill Co.

Launch Complex Facilities, Vandenberg AFB

Moffitt Hospital Boiler Plant Expansion, San Francisco

Molybdenum Mine, Tonopah, Nevada

Northwest LCW Station Expansion, Livermore

Swinerton-Walberg

Power Plant Foundations, Rock Springs, Wyoming

Ralph Larsen & Son

Stanford Linear Accelerator Extension - Phase I

C. Norman Peterson Company – A Dillingham Company

Container Corporation of America - Wet End Project

Crown Zellerbach Plant Renovations

Aptos Pumping Stations

Kaiser-Fontana Steel Plant

Sohio Fuel Module - North Slope, Alaska

Rock Creek Sewage Plant - Oregon

Solids Processing and Storage Facilities, Sacramento Wastewater Plant

Underground Construction Co.

Outfall Sewer C-3, San Francisco

Livermore Pipeline

Amador Valley Pipeline

Albay Construction

Crown Zellerbach Plant Renovations

Exxon Refinery T-102

Carl W. Olson & Sons

San Carlos Pump Stations

W. R. Thomason, Inc.

Norris Reservoir

ATA Project, Phase I, Livermore

Treatment Plant Additions and Modifications, South Tahoe

Idaho Mechanical Installation - Catalytic

Moseman Construction Co.

Westside Transport W-3, San Francisco

COMMERCIAL/INDUSTRIAL

C. Norman Peterson Co. – A Dillingham Company

Cushman Electronics Building

General Electric High-Flow Hydraulic Facility

EIP Building, San Jose

Ralph Larsen & Son

SFIA National Airlines, Tenant Improvements

SFIA Contract 650D, Interior Completion

San Francisco Water Department, Millbrae Suburban Facility

Vanderson Construction

Johns-Manville Insulation Plant Expansion, Willows

Warehouse and Manufacturing Facility, Celotex, Fremont

Carl W. Olson & Sons

Warehouse, Crown Zellerbach, San Francisco

Winzler & Kelly, Engineers

River Inn Casino/Restaurant, Reno, Nevada

Cunningham Construction

Racal-Vadic, Fairfield

Main Post Office, Fremont

Kacor Realty, Building A, Mountain View

Mai Industries

Memorex, R & D Project Analysis

Memorex Building 023 Addition

Nibbi Brothers, San Francisco

Barrett Hotel Renovations, San Francisco

On-Lok House, San Francisco

San Francisco Metro Fare Collection Installation

Carl Holvick, Palo Alto

Legaspi Towers, Marriott

COMMERCIAL/INDUSTRIAL

Hodgson Construction, Inc.

San Jose Civic Auditorium Renovations

Lacey Building

General Electric High Flow Hydraulic

Facility (Maint Bldg)

Bank of America, San Mateo

Satellite Communications Ground

Terminal, Sunnyvale Squash Club, San Francisco

IBM Tank Farm Demolition NASA Computer Renovations

Mowry East Phase III

Gold Circle Shopping Center Lockheed High Bay Building Host International SFIA

American Savings & Loan, Mountain View

NASA Building N-213

Temple Beth Jacobs, Redwood City

Veterans Hospital A.R.F. Building, Palo Alto

IBM Building 044

Accinelli & Mauser Office Building, Millbrae Hewlitt-Packard Neely Sales Building, Brisbane

J.M. McDonald Department Store

HOSPITALS

Ralph Larsen & Son

Moffitt Hospital, UCSF Phase I

Kaiser-Fremont Medical Offices

Kaiser-Santa Teresa Medical Offices

Kaiser-Redwood City Medical Offices

Woodland Hospital Additions and Renovations

Nibbi Brothers

U.C. Clinic Fire Rehabilitation

Hodgson Construction, Inc

Peninsula Blood Bank, Burlingame

Rudolf and Sletten, Inc.

Mary's Help Hospital, Daly City

William Simpson Construction Co. – A Dillingham Company

O'Connor Hospital, San Jose

John F. Otto Construction, Inc.

Community Hospital of the Monterey Peninsula

SCHOOLS

Hodgson Construction, Inc. - Redwood City

Sutro School – San Francisco

McCoppin School – San Francisco

Granada High School – Livermore

Memorial High School - Newark

North County Development Center - Oakland

St. Peter's Multi-Purpose Room, Pacifica

Castilleja School, Palo Alto

Biltwell Development Co.

Roosevelt School, San Francisco

Nibbi Brothers, San Francisco

Guadalupe School, San Francisco

Barnhart Construction Co.

Logan High School, Fremont Piedmont High School, Piedmont Ralph Larsen & Son

Stanford University, Building I-120 Renovation

RESIDENTIAL

CNA Development Company

Flynn Avenue Subdivision Development Plan

Flynn Avenue Duplexes

County Village Condominiums Miramonte Avenue Duplexes

Park Village Condominiums

The Shire Condominiums

Portola Valley Associates

Portola Valley Ranch Subdivision

Barnhart Construction, Santa Clara

Pacific Terrace Condominiums, Santa Cruz

Gilbert Homes

St Andrew Court

Rainbow Designs

Renovation for Steve Jobs, Apple Computer, Inc.

Trammell Crow Residential

Stanford West Apartments River Terrace, Milpitas

ADDITIONAL PROJECTS OF SPECIAL INTEREST

Community Hospital of the Monterey Peninsula

South and Forest Pavilions

Interim Cath Lab and Nutritional Services

Monterey, CA

John F. Otto Construction, Inc.

Initial Schedules, Weekly Monitoring, Monthly Updating

(Contracted to Contractor)

Sand Hill Road Corridor Projects

Stanford Management Company

Palo Alto, CA

(Contracted to Owner for Architectural / Engineering Design Schedules, Preparation and

Monitoring of Construction Schedules)

Palo Alto Hotel (Westin)

Clement Chen and Associates

Palo Alto, CA

(Contracted to Owner for Monitoring and Updating of Construction Schedules; Preparation and Updating of Fixtures, Furniture and Equipment Procurement and Installation)

Hawthorne Suites

W.L Butler Construction, Inc.

Newark, CA

Initial Schedule, Weekly Monitoring, Monthly Updating)

(Contracted to Contractor)

Lexmark Electronics Facility

Hayford Project Management, Pte, Ltd. Cebu, Phillippines Initial Schedule, Periodic Updating (Contracted to Contractor)

MKE – Quantum Expansion

Hayford Project Management, Pte, Ltd. Batam, Indonesia Initial Schedule, Periodic Updating (Contracted to Contractor)

NUMMI Truck Project (New Facility and Expansion)

New United Motor Manufacturing, Inc.

Fremont, CA

(Contracted to Owner for Architectural Design Schedule, Planning Construction Schedules, Monitoring Facility Schedule, and Preparation and Monitoring of Process Equipment Installation Schedule)

Maguire Correctional Facility Addition

Redwood City, CA
HOK Architects
Sumitomo Construction America, Inc.
Initial Schedule, Weekly Monitoring, Monthly Updating
(Contracted to Contractor)

Raychem/Shanghai Cableworks, Ltd.

Shanghai, China New Facility, Phase I Initial Planning/Design Schedule, Monthly Updating (Contracted to Owner)

U.S. Custom House

San Francisco, CA Seismic Renovation and Electrical Upgrade Morse Diesel, International Initial Schedule, Monthly Updating (Contracted to Owner)

Building 5 Seismic Renovations Veterans Administration Medical Center

Palo Alto, CA Nibbi Brothers, Inc. Monthly Updating (Contracted to Contractor)

Mervyn's Data Center Relocation

Plano, Texas Leo A. Daly, Architects Lee Lewis Construction, Inc. Initial Schedule, Weekly Monitoring, Monthly Updating (Contracted to Owner; Schedule Preparation with Contractor)

Building H Renovations and Activation

Raychem Corporation

Menlo, Ca

Ehrlich-Romminger Architects

Relocation and Activation Schedule Preparation, Weekly Monitoring, Monthly Updating (Contracted to Owner)

Theater and Building Renovation

Alice Arts Center

Oakland, CA

TLC/Fields, A Joint Venture (Contractor)

Initial Schedule, Periodic Updating

(Contracted to Contractor)

Palo Alto Civic Center

Seismic Renovations

(Prepared Initial Schedule for Planning, Bidding and Construction. Monitored construction progress through duration of project.)

Rotunda Office Buildings

Santa Clara, CA

Sobrato Development Companies

Initial Schedule, Weekly Monitoring, Monthly Updating

(Contracted to Owner / Builder)

Manufacturing Facility

Komag Corporation

San Jose, CA

Sobrato Development Companies

Initial Schedule, Weekly Monitoring, Monthly Updating

(Contracted to Owner / Builder)

Yerba Buena Gardens

Theater and Visual Arts Center

San Francisco, CA

Sumitomo Construction America, Inc

Revise initial schedule, Weekly Monitoring, Monthly Updating

(Contracted to Contractor)

Building Renovation

Raynet Corporation

Menlo Park, CA

W.L. Butler, Inc.

Initial Schedule, Periodic Updating

(Contracted to Contractor)

Campton Place Hotel

Seismic Upgrade and Renovations

San Francisco, CA

Ralph Larsen and Son, Inc.

(Contracted to Contractor)

Condominium Development 1240 Clay St.

San Francisco, CA Armax Development ZCON/Stolte Initial Schedule, Periodic Updating (Contracted to Owner)

Building I-120 Renovation Media Facility Installation

Stanford University Ralph Larsen and Son, Inc. Initial Schedule, Periodic Updating (Contracted to Contractor)

Theater Renovation

Palo Alto, CA Hodgson Construction, Inc. Initial Schedule, Periodic Updating (Contracted to Contractor)

Mervyn's Department Stores

Hayward, CA Analysis of Functional Department Organization

Building Addition and Renovations

Stanford Auxiliary Library II
Stanford, CA
Stanford University
Brero Construction, Inc. (Construction Manager)
Initial Schedule for Planning and Bid Documents
(Contracted to Owner)
Review and Revisions to Initial Schedule, Bi-weekly Updating
(Contracted to Construction Manager)

Infill Apartments

U.C. Santa Cruz

Santa Cruz, CA

Devcon Construction, Inc. Initial Schedule, Bi-Weekly Monitoring, Monthly Updating (Contracted to Contractor)

Humanities Building

U.C. Santa Cruz

Santa Cruz, CA

Devcon Construction, Inc. Initial Schedule, Bi-Weekly Monitoring, Monthly Updating (Contracted to Contractor)

The Shops at Tanforan

South San Francisco, CA

The Whiting-Turner Contracting Co.

Initial Schedule, Bi-Weekly Monitoring, Monthly Updating (Contracted to Contractor)

Pacific Commons

Infrastructure and Shopping Center Shell Construction Catellus Development

Fremont, CA

The Whiting-Turner Contracting Co. Initial Schedule, Bi-Weekly Monitoring, Monthly Updating (Contracted to Contractor)

Essex at Lake Merritt

Oakland, CA

Zakskorn Construction (Owner Representative) Swinerton-Walberg (Contractor) Schedule Review Services (Completion Schedule, Updates, Revisions) (Contracted to Owner)

Lorry I. Lokey Chem-Bio Building

Stanford, CA

Rudolph and Sletten, Inc.

Initial Schedule, Weekly Monitoring, Monthly Updating (Contracted to Owner and Contractor)

Sisters of Notre Dame Residential Housing

Belmont, CA

Marchetti Construction, Inc. Initial Schedule, Monthly Updating

(Contracted to Contractor)

Federal Office Building

San Francisco, CA Hunt Corporation / GSA Schedule Review Services (Initial Schedule, Updates, Revisions) (Joint Venture with Gabriel-Roche, Inc.)

Stanford West Apartments

Stanford, CA

Trammel Crow Residential

Initial Schedule, Weekly Monitoring, Monthly Updating (Contracted to Contractor)

River Terrace Apartments

Milpitas, CA

Trammel Crow Residential

Initial Schedule, Weekly Monitoring, Monthly Updating

(Contracted to Owner and Contractor)

Building 110 - Office Building

Sacramento, CA

John F. Otto, Inc. Initial Schedules, Monthly Updating (Contracted to Contractor)

Equinix NY-4

Data Center

Secaucas, New Jersey Nova Corporation, Construction Manager Initial Schedules, Weekly Monitoring, Monthly Updating (Contracted to Contractor)

Equinix CH-3

Data Center

Chicago, Illinois Nova Corporation, Construction Manager Completion Schedule, Weekly Monitoring, Monthly Updating (Contracted to Contractor)

Equinix LA-4

Data Center

Los Angeles, California Nova Corporation, Construction Manager Initial Schedules, Weekly Monitoring, Monthly Updating (Contracted to Contractor)

Apple Computer

Data Center

Newark, California Nova Corporation, Construction Manager Initial Schedules, Weekly Monitoring, Monthly Updating (Contracted to Contractor)

LKC Building / Connective Elements

Medical School

Stanford University

The Whiting Turner Construction Company Initial Schedules, Monthly Updating (Contracted to Contractor)

Wildcat Activity Center

California State University - Chico

John F. Otto, Inc.

Initial Schedules, Monthly Updating (Contracted to Contractor)

McHenry Library Addition

U.C. Santa Cruz

Devcon Construction, Inc. Initial Schedule, Monthly Updating (Contracted to Contractor)

Bio-E * Chem-E

Stanford University

The Whiting Turner Construction Company Initial Schedule (Contracted to Contractor)

Bio-Medical Building

U.C. Santa Cruz

Santa Cruz, CA
Devcon Construction, Inc.
Completion Schedule, Monthly Updating
(Contracted to Contractor)

Lorry I. Lokey SIM1 Building

Medical School

Stanford University

The Whiting Turner Construction Company Initial Schedules, Monthly Updating (Contracted to Contractor)

Ferrara Apartments

North Hollywood, CA Alliance Residential Contractors Initial Schedule, Weekly Monitoring, Monthly Updating (Contracted to Owner / Builder)

Central Energy Plant Optimization Project Stanford University

The Whiting Turner Construction Company Initial Schedule, Monthly Updating (Contracted to Contractor)

Broadstone Hancock Park Apartments

Hollywood, CA Alliance Residential Contractors Initial Schedule, Weekly Monitoring, Monthly Updating (Contracted to Owner / Builder)

Samsung Research Center

Mountain View, CA Devcon Construction, Inc. Shell and Tenant Improvement Schedules, Monthly Updating (Contracted to Contractor)

1701 Page Mill Road Office Building

Palo Alto, CA Stanford University Devcon Construction, Inc. Initial Schedule, Monthly Updating (Contracted to Owner)

Broadstone Kearny Mesa Apartments

San Diego, CA Alliance Residential Contractors

Initial Schedule, Weekly Monitoring, Monthly Updating

(Contracted to Owner / Builder)

101 Lytton Ave. Office Building

Palo Alto, CA

W.L. Butler Construction, Inc.

Initial Schedule

(Contracted to General Contractor)

Broadstone Balboa Apartments

San Diego, CA

Alliance Residential Contractors

Initial Schedule, Weekly Monitoring, Monthly Updating

(Contracted to Owner / Builder)

ServiceNow Buildings A & B

Santa Clara, CA

Permian Builders, Inc.

Initial Schedules, Monthly Updating

(Contracted to Contractor)

NVIDIA Corporate Headquarters

Santa Clara, CA

Devcon Construction, Inc.

Shell and Tenant Improvement Schedules, Monthly Updating

(Contracted to Contractor)

JDS Building 430

Santa Clara, CA

Permian Builders, Inc.

Initial Schedules, Monthly Updating

(Contracted to Contractor)

Monterey Convention Center Design and Pre-Construction Planning

Monterey, CA

Ausonio, Inc.

Initial Schedule, Monthly Updating

(Contracted to Construction Manager)

1450 Page Mill Road Office Building

Palo Alto, CA

Stanford University

Devcon Construction, Inc.

Initial Schedule, Monthly Updating

(Contracted to Owner and Contractor)

Commonwealth Club Renovation

San Francisco, CA Oliver Construction, Inc. Initial Schedule (Contracted to Contractor)

Netflix Building A

Los Gatos, CA
Devcon Construction, Inc.
Tenant Improvement Completion Schedule, Monthly Updating
(Contracted to Contractor)

Stanford In Redwood City Design and Development Planning

Redwood City, CA Stanford University Initial Schedule, Monthly Updating (Contracted to Owner)

The Weddington Multi-family Apartments

North Hollywood, CA Greystar LLP Initial Schedule, Monthly Updating (Contracted to Owner / Builder)

3170 Porter Office Building

Palo Alto, CA Stanford University Devcon Construction, Inc. Initial Schedule, Monthly Updating (Contracted to Owner)

AMP Lofts Multi-family Apartments

Los Angeles, CA Greystar LLP Initial Schedule, Monthly Updating (Contracted to Owner / Builder)

Delay Impact Claim Analysis Experience (Available Upon Request)

(Please be advised: All construction projects have the potential for delay impact analysis requirements. When properly performed, PERT/CPM methods of project planning, scheduling and updating significantly reduce the potential for litigation requirements after project completion.)





ROBERT C. REIDY Vice Provost for Land and Buildings

April 7, 2006

To Whom It May Concern:

Reference:

PERT/CPM Management Planning

Dennis Starkovich

Gentlemen:

I would like to take this opportunity to share with you my observations and thoughts regarding PERT/CPM Management Planning and Mr. Dennis Starkovich.

It is fair to claim that my organization, Stanford University, and I personally have greatly benefited from the services of PERT/CPM Management Planning. I have contracted services with PERT/CPM for twenty years, planning and developing over four million square feet of space with a construction value exceeding one billion dollars.

The scope and scale of the projects has varied from roads, apartments, manufacturing, retail and academic facilities, all using the management techniques founded on advanced planning and risk management offered by PERT/CPM. Many in the industry understand the importance of forward thinking and planning, yet few grasp how to accomplish these disciplines and ultimately mitigate risks.

In my experience, PERT/CPM has been one of the important contributors to success in delivering projects based on informed decisions, appropriate accountabilities for all and systematic management. Mr. Starkovich's expertise transcends the application of the network analysis techniques from management of construction projects to include the planning and management of the design process, enabling superior planning and coordination of projects from concept to completion.

If you should have further questions regarding PERT/CPM, please feel free to contact me.

Sincerely.

Robert Reidy