

PROCEEDINGS OF THE INTERNATIONAL MOUNTAIN LOGGING AND 11TH PACIFIC NORTHWEST SKYLINE SYMPOSIUM



2001 - A Forest Engineering Odyssey

College of Forest Resources, University of Washington
and
International Union of Forestry Research Organizations

Edited by
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Mountain forests are valuable resources providing wood, water, wildlife habitat and scenic quality. Maintaining those scenic, protective and productive values requires skillful application of forest engineering knowledge in order to sustain and enhance those resources. One of the goals of professional forest engineers is to provide the appropriate designs and engineering solution that bridge the natural resources environment with society's needs and requirements. The theme for the symposium " 2001 - a Forest Engineering Odyssey" reflects the origins of, and changes, forest engineering as a profession has undergone through time from its beginning in the late 19th and beginning 20th century to today. The changes from a purely extractive activity and profession towards one that recognizes the value and critical contribution forested ecosystems make to the quality of life is nothing short of a true odyssey. Those issues are exemplified in three statements over the decades that still hold true today and have not lost any significance. Forest Engineering, then and now, deals with:

- **Public issues & concerns:**

"Which product of the same weight has a lower value, and at the same time, creates more emotions during its harvest than, say, coal or wheat?"

Wessley, 1853, an Austrian forestry official, exasperated about the public's involvement in management decisions relating to forest operations

- **Engineering & operational issues:**

"Harvesting the woods requires more capital and labor than any other phase of forest work, and is therefore the principal business of the woods."

N.C. Brown, 1934. Forest operations are capital intensive and with the on-going mechanization are even more so than in the past. We see a replacement of the human work force with "smart technology" that shift the human input towards higher and higher levels of technical knowledge and skills, operating ever-more complex and expensive equipment with less and less manpower.

- **Environmental & ecological issues:**

"Most of the problems, environmental and otherwise, of timber production forestry are directly or indirectly associated with logging."

D.M. Smith, in Seaton et al., 1973, Presidential Report on the environmental impact of forest management activities.

Forest operations in the past were strictly extractive with no regards to other resource issues since resources were perceived as limitless and abundant with little value. There has been nothing less than a dramatic shift from those views toward one of multiple resource management and land stewardship. Operations today have to meet ecological and economical goals in order to be sustainable. It is in this area that forest engineers have to find the designs and processes which fulfill the multifaceted desires and needs of society

ACKNOWLEDGEMENT

Periodically, the accumulated technology gained by experience and research of various organizations, public and private, is disseminated at the Pacific Northwest Skyline Logging Symposium. Traditionally, the event has been hosted by one of three Pacific Northwest Universities, University of British Columbia, Oregon State University and the University of Washington. This time the symposium was hosted by the University of Washington. As in the past, the Mountain Logging Section of the International Union of Forest Research Organizations (IUFRO) participated as a cosponsor, with the objective of helping to coordinate mountain logging research activities throughout the world.

The symposium was also supported by the Forest Engineering Research Institute of Canada (FERIC); Washington State Department of Natural Resources (WA DNR), the USDA Forest Service, the Pacific Northwest Agricultural Safety and Health Center (PNASH) and the the Northwest Center for Occupational Health & Safety Continuing Education (NWCOHS-CE).

A key element of the symposia series over time has been the mix of industrial people, practicing loggers, resource agency people and academics. For a program to be relevant in such an applied arena as forest engineering, it is crucial that future symposia do not lose touch with reality. Ultimately, the relevance of institutions of research and education depend on direct communications with practicing professionals. The professional environment likewise needs to adapt its practices based on new information and technology that may come on line through research and development. It is this interaction and mix of attendees that have made this symposium series so successful over the years.

To insure the success and timeliness of topics for this symposium an organizing committee has been established. Its members are drawn from each of the participating universities and sponsoring institutions. The chair resides with the hosting university. The members of the organizing committee and session moderators of the International Mountain Logging and eleventh Pacific Northwest Skyline Symposium were:

Peter Schiess, Program Chair, Forest Engineering, University of Washington

Marv Clark, Research Director, Forest Engineering Research Institute of Canada (FERIC), Western Division

Dennis Dykstra, International Forestry Consultant, BLUE OX FORESTRY and Coordinator, IUFRO, Division 3, "Forest Operations"

William Elliot, PE, PhD, Project Leader, USFS Rocky Mountain Research Station, Moscow, ID

Richard Fenske, Director, Pacific Northwest Agricultural Safety and Health Center, University of Washington,

Robert Rummer, Project Leader, Forest Operations Research Unit, USFS Southern Research Station, Auburn, AL

John Sessions, Professor, Forest Engineering Department, Oregon State University

Bryce Stokes, Forest Operations Res. Nat'l Prog. Leader, National Headquarters, USFS Washington Office

A successful symposium is the end product of good organization, an interesting and timely program and an interested audience. We thank our keynote speakers, Jack Zaccardo, Doug Sutherland, Commissioner of Public Lands, State of Washington, E. Vaughn Stokes, Director of Engineering, USDA Forest Service, Washington D.C. and the authors and session moderators that made this meeting so successful.

The USDA Forest Service, through its Rocky Mountain Research Station, Moscow, ID and Forest Operations Research Unit, Southern Research Station, Auburn, AL, provided financial support which is gratefully acknowledged.

A handwritten signature in black ink, appearing to read 'P. Schiess', written in a cursive style.

Peter Schiess

Editor

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