Shock-Free Acceleration of Laser Driven Targets

Naval Research Laboratory;
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Memorandum Report; Interim Report; Optical Disk
NRL-MR-7170; NRL/MR/6440-92-7171. 14 Pages

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adiabatic compression

The ability of recently developed laser smoothing techniques to produce uniform ablative pressures is strongly contingent on the degree of thermal smoothing. Thermal smoothing is not effective at reducing residual laser nonuniformities during the startup phase of a shaped, reactor-like laser pulse. The impact of the first shock can be diminished by adiabatically compressing the target with a temporally long, slowly rising laser pulse. This Memorandum Report discusses an elastic-plastic laser-matter-interaction model and shows that a shock-free, induced spatial incoherence-smoothed laser pulse can accelerate a target to

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Figure 4. (a) Intensity profile for the temporally long, slowly rising laser pulse. (b) x-t-p plot for the 60 μm thick plastic target (in the center-of-mass frame) for the slowly rising laser pulse.
Viewing or Printing Images

- Images Are Decompressed at Workstation
- Images Can Be Enlarged, Rotated, Reversed
- Images Can Be Read at Workstation
- Pages Can Be Printed at 17 Pages/Minute
Options for Indexing Images

- Index Terms Recorded on Disk During Scanning Process
- Full Text Recorded on Disk (OCR Document or Image)
- Images Linked to Separate Index - NRL Approach
National Performance Review

A> Introduction
B> Chapter 1
C> Chapter 2
D> Chapter 3
E> Chapter 4
F> Conclusion
G> Appendix A
H> Appendices B & C
I> Remarks by the President & Vice-President
J> Press Briefing on Reinventing Govt.
K> Background Briefing

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September 7, 1993

Vice President Al Gore

The National Performance Review

Costs Less
Works Better
That
Creating a Government

From Red Tape to Results
Library Systems: Summary

The InfoNet
- Provides Information to Researchers where and when they want it.
- Currently Limited to ASCII Text

Optical Disk Imaging System
- Provides the Full Text, Equations, Graphs and Charts
- Currently Limited to the Library

Wanted
- Desktop Access to All the Information Contained in a Document
World-Wide Web (W3)

What is World-Wide Web?

It is a global hypermedia information retrieval initiative aimed at providing universal access to a large universe of multimedia documents.

Research in W3 began at CERN in Switzerland but interest has spread across the globe.

• NCSA Mosaic Client Software

  From the National Center for Supercomputing Applications (NCSA)

  Software for X-Windows Systems, Macintosh and MS Windows

  Host HTTP (HyperText Transport Protocol) Server Software Available for Multiple UNIX Platforms

  Source and executable binary available; anonymous FTP: FTP.NCSA.UIUC.EDU.

  Software is copyrighted but free for academic and research use
NCSA Mosaic Home Page for Macintosh

Welcome to the NCSA Mosaic Home Page for Macintosh. The current version of NCSA Mosaic for Macintosh is B2 (Beta 2).

NCSA Mosaic is copyrighted by the University of Illinois.

This page contains Macintosh specific links. These documents are intended to showcase the features of Mosaic for Macintosh. Those features which can be played only on the Macintosh will be followed by an **ONLY**.

A new feature for Beta 1 is "Mail to Developers". For us to be able to respond to your mail, **PLEASE set your name and email address** in the preferences under the options menu.

For new users.... In order for NCSA Mosaic for Macintosh to function properly you will need a series of "External Viewers". These viewers allow Mosaic to display file types which are not built into Mosaic itself. References to what viewers and where to find them can be found on the Setup-Mac Document. Simply click on the link (below) for more information.

Software Specs

- Setting Up Mosaic
- Features
- Mosaic Documentation
- Recommended Document Format Specs
- Upgrade Announcements
- Other Useful Applications
- Known Bugs

Cool Macintosh Features

NCSA Mosaic for Macintosh is designed to support many Apple
From Red Tape to Results
Creating a Government That Works Better
& Costs Less

Report of the National Performance Review
Vice President Al Gore, September 7, 1993

Statement by the President (audio)

Statement by the Vice-President (audio)

The National Performance Review

Supporting Materials to the Review

Remarks by the President and Vice-President in presenting the
National Performance review
Initial Announcement of the organization of the NPR
Background Briefing by Senior Administration Officials
Remarks by the President and Vice-President at the GSA Warehouse

Press Briefing on Reinventing Government with David Osborne and
John Sharp
Ash Receivers, Tobacco (Desk type)
Letter to the president
Conclusion

The Virtual Library

- Easy Identification of Appropriate Information Sources

- Access to Information in all Formats: Text, Graphics, Charts...

- Availability Whenever and Wherever the User needs it
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CLASSIFICATION STANDARDS
FOR LIBRARIANS AND LIBRARY TECHNICIANS

Raymond Crosby, Consultant
University of Florida

Workshop/Presentation Outline

- General Introduction Questions:
  - How many of you are familiar with the Federal Position Classification System?
  - How many of you are familiar with the Factor Evaluation System?
  - How many of you are supervisors of other professionals?
  - How many of you supervise library technicians?

SECTION 1, OVERVIEW OF THE GRADE DETERMINING PROCESS

(Approx. 1 hour) (0830-0930 hours)

- Introductory Remarks:
  - New OPM standards for Technicians have been issued. Other standards for Librarians and Technical Information Specialists have been developed but publication of these standards has been delayed due to a total review of the occupational standards program. [Discussions continue with OPM officials and will until standards are published.]

  - The new document for Library Technicians attempts to describe functions and operations of such work as it exists in the 1990s, a far different picture than the 1960s.

  - The Standards describe, albeit briefly, the impact of automation on Library and Information Center functions which has occurred over the last 27 years.
OPM Personnel Terms and Concepts Described:

- Classification Standards -
  CONTROLLING GUIDES USED TO GRADE POSITIONS (OH)

- Qualification Standards -
  CONTROLLING GUIDES USED TO ASSURE THAT CANDIDATES MEET THE APPROPRIATE EDUCATION, TRAINING, AND EXPERIENCE FOR FEDERAL POSITIONS

- Legal basis for standards 1923/1949 -
  "CLASSIFICATION ACTS" - NOW PART OF TITLE 5, U.S. CODE (OH x 4)

- Occupational Groups (e.g., Library and Archives Group, GS-1400)

- Occupational Series (e.g., Librarian Series, GS-1410)

- Occupational Standards

- Broad-based classification guides

- The establishment of the Factor Evaluation System and the Primary Standard (1977) - as a result of a Congressional Commission - Congress ordered the OPM to revise the format of classification standards to assure consistency and equity across occupational lines

- The position description - ALLOCATES GRADES FOR POSITIONS, NOT NECESSARILY THE PERSON OCCUPYING THE POSITION (OH x 2)

**Duties**

- Major Duties

  - OCCUPIES A SIGNIFICANT AMOUNT OF THE TIME OF THE INCUMBENT (10% OR MORE) (OH)
OR

- GOVERNS THE QUALIFICATION REQUIREMENTS OF THE POSITION

• Minor Duties

INCIDENTAL OR MISCELLANEOUS DUTY OR RESPONSIBILITY DOES NOT AFFECT QUALIFICATION REQUIREMENTS AND DOES NOT OCCUPY A SIGNIFICANT AMOUNT OF WORK TIME (OH)

Q & A regarding overview, general OPM terms regarding position classification and classification standards

THE FACTOR EVALUATION SYSTEM

• THE NINE FES FACTORS: (OH)

Knowledge - REQUIRED TO BE UTILIZED

Supervisory Controls -

    HOW WORK IS ASSIGNED
    THE EMPLOYEES RESPONSIBILITY
    REVIEW OF THE WORK

Guidelines -

    NATURE OF GUIDES
    JUDGMENT NEEDED TO APPLY GUIDES

Complexity -

    NATURE OF ASSIGNMENT
    DIFFICULTY IDENTIFYING NEEDS
    ORIGINALITY INVOLVED

Scope and Effect -

    PURPOSE OF THE WORK
    IMPACT OF THE PRODUCT OR SERVICE
Personal Contacts -

PEOPLE CONTACTED

Purpose of Contacts -

REASONS FOR CONTACTS

Physical Demands -

NATURE, INTENSITY OF PHYSICAL ACTIVITY

Work Environment -

RISKS AND DISCOMFORTS IMPOSED

Q & A, Discussion of the FES Factors

• STATUS OF PROPOSED STANDARDS

- FLICC Personnel Working Group (RC to discuss workings of the PWG, with audience input) - Comments were sent to OPM in April 1993 for all three standards, as well as other material regarding qualification requirements for Professional Librarian positions

- Agency Personnel Offices

- Comments from other interested parties sent to OPM in April 1993

- Final action has been obtained on the technician standard. Work has been delayed on 1410 and 1412 standards

- Discussion held at OPM by FLICC/PWG and top OPM career officials on November 10, 1993

- Once published, agencies normally have 6 months to implement new standards

- FLICC/PWG continues to monitor OPM progress and discuss issues directly with OPM officials
THE CLASSIFICATION PROCESS (Assuming FES [or a modified FES] will be used for all positions)

- Steps to be utilized to classify Librarian, Library Technician, and Technical Information Specialist positions using the Factor Evaluation System

(NEED FOR LIBRARIANS TO TAKE AN ACTIVE ROLE IN THE PROCESS)

- Describe major duties
- Describe the nine factors - BE SURE TO INCLUDE INFORMATION REGARDING THE SUB-FACTORS!
- Relate factors to factor level descriptions in the OPM standard
- Obtain a point total and a grade related to that total

HANDOUTS -- BRIEF DISCUSSION

#1 - OPM INSTRUCTION FOR THE FES (PRIMARY STANDARD; TS - 27)

#2 - OPM PUBLICATION - HOW TO WRITE POSITION DESCRIPTIONS UNDER THE FES (PS-27)

#3 a. Tools of the system
   b. Typical Factor-level relationships GS-4 - GS-8
   c. Typical factor-level relationships GS-9 - GS-14
   d. FES numerical values

BREAK

SECTION II, WORKSHOP ACTIVITIES (Re GS-1411; APPROX. 30 MINUTES)

- HANDOUTS: GS-1411 Standard (August 1993)
  Position Descriptions "A" "B" "C"

- Discussion using the Factor Evaluation System for:
  Library Technician, GS-1411
HAVE PARTICIPANTS LOOK AT THE NEW TECHNICIAN STANDARD, GS-1411

USING THE DOCUMENT, CONDUCT A BRIEF DISCUSSION OF THE SERIES
DEFINITION, EXCLUSIONS, OCCUPATIONAL INFORMATION, GRADING

FACTOR LEVELS:

1-2  AID TYPE POSITIONS THRU GS-3
1-3  GS-4/5
1-4  GS-5/6
1-5  GS-7/8

2-1  AIDS AT GS-2/3
2-2  GS-3/4
2-3  FULL PERFORMANCE, GENERALLY GS-5/ABOVE

3-1  TRAINEE
3-2  INTERMEDIATE - MOST FALL IN THIS CATEGORY
3-3  SENIOR - MOST AT GS-7/ABOVE

4-2  TRAINEES AND LADDER JOBS UP TO GS-4
4-3  GS-5/ABOVE

5-1  UP TO GS-3
5-2  GS-4/5/6
5-3  SENIOR TECHNICIANS

6-1  TRAINEE
6-2  FULL PERFORMANCE FOR MOST TECHNICIANS
6-3  IF WORKING OUTSIDE THE UNIT WITH VENDORS, THIS LEVEL SHOULD BE CONSIDERED

7-A  TO EXCHANGE INFO ONLY
7-B  TO PLAN AND COORDINATE WITH COOPERATIVE PERSONS

8-1  LIBRARY/OFFICE - SEDENTARY WORK
8-2  SOME PHYSICAL EXERTION

9-1  LIBRARY/OFFICE SETTING, SOME TRAVEL
9-2  SPECIAL SAFETY PRECAUTIONS (HOSPITALS, PRISONS)

- Discussion/audience participation in evaluating positions "A", "B", "C".

- HANDOUTS - EVALUATION REPORTS FOR A, B, C
30 PLUS MINUTES

SECTION II (continued), WORKSHOP ACTIVITIES (re GS-1410; TIME REMAINING)

- Discussion using the Factor Evaluation System as it relates to Librarian Positions

USE HANDOUT - INSTRUCTIONS FOR THE FACTOR EVALUATION SYSTEM
TS - 27, MAY 1977

REMEMBER - THIS IS NON-SUPERVISORY VALUATIVE CRITERIA BUT IS ALSO USED FOR EVALUATION OF MIXED POSITIONS

Factor 1 - Knowledge Required

1-6 MLS (GS-9 IN MOST CASES)
1-7 MLS/PhD or EXPERIENCE (GS-11/12)
1-8 RECOGNIZED EXPERT (GS-13/14)
1-9 NATIONAL/INTERNATIONAL EXPERT (RARE)

Factor 2 - Supervisory Controls

2-2 INTERN
2-3 FULL PERFORMANCE
2-4 SENIOR
2-5 EXPERT/LIBRARIAN IN CHARGE (NON-SUPVY)

Factor 3 - Guidelines

3-2 INTERN
3-3 FULL PERFORMANCE
3-4 SENIOR, CONSIDERABLE JUDGMENT RENDERED
3-5 EXPERT/DEVELOPER OF GUIDES TO BE USED SYSTEM-WIDE

Factor 4 - Complexity

4-3 INTERN
4-4 FULL PERFORMANCE
4-5 SENIOR/EXPERT - NORMALLY GS-13 OR ABOVE
4-6 NATIONAL/INTERNATIONAL ACTIVITIES
Factor 5 - Scope and Effect

5-2 INTERN
5-3 FULL PERFORMANCE
5-4 SENIOR, WIDE RANGE OF AGENCY ACTIVITIES
5-5 NATIONAL/INTERNATIONAL ACTIVITIES

Factor 6 and Factor 7 - Personal Contacts and Purpose of Contacts

6-2 INTERN/SMALL BRANCH FUNCTIONS
6-3 FULL PERFORMANCE IN MOST INSTANCES
6-4 VERY SENIOR LIBRARIANS

7-A EXCHANGE INFORMATION
7-B PLAN AND COORDINATE WORK WITH FULLY COOPERATIVE PERSONS
7-C INFLUENCE, MOTIVATE, NEGOTIATE
7-D JUSTIFY, DEFEND SIGNIFICANT, LONG-RANGE, CONTROVERSIAL ISSUES

Factor 8 - Physical Demands

8-1 LIBRARY/OFFICE WORK
8-2 SOME INCREASED PHYSICAL EFFORT

Factor 9 - Work Environment

9-1 LIBRARY/OFFICE SETTING
9-2 SPECIAL SAFETY PRECAUTIONS

SECTION III, WRAP-UP (Time remaining)

- Reintroduce the classification system and the Factor Evaluation System
- Q & A
- Close-out
HANDOUTS ACCOMPANYING CLASSIFICATION STANDARDS FOR LIBRARIANS AND LIBRARY TECHNICIANS