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ABSTRACT and CONTENTS

This document is intended to act as a guide for supervisors and to aid them in dealing with both BCC personnel and with the public. It is not intended that it should cover every possible situation; it should, however, for most situations, indicate to whom questions can be directed.

This document supercedes GID/A1, CPP/A-5 and A-5.1, CPP/A-4, CPP/A-6, PCP/A-9, and, in addition, incorporates a number of memos, pamphlets, etc.

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PUBLIC ANNOUNCEMENTS

For obvious reasons, employees of BCC should not discuss BCC business plans, products, or services with possible business contacts or competition (in general, not with anyone who can understand you). This information must be considered "confidential" until further notice. Sometime soon we expect to make a standard public disclosure through trade publications and newspapers. The disclosure will be carefully worded at that time.

Until then, our official party line will be that which appears on the following pages. It has been prepared to serve specific purposes. If you must discuss BCC, please confine yourself rigidly to the official disclosure.

THE PARTY LINE

BCC is developing a large-scale time-sharing computer system. This system will be general-purpose in nature; i.e., it will accommodate a wide variety of applications and will feature a large number of programming languages including assemblers.

The general characteristics of the system are as follows:

- 1) The system will accommodate 500 simultaneous users of BASIC and similar languages.
- 2) Although programs will be typically limited to 256K bytes, larger programs can be accepted.
- 3) Virtually unlimited file sizes will be offered.
- 4) With fewer conversational users, the system will support economical remote entry batch-processing.
- 5) Floating-point formats of both 48 and 96 bits will be available.

A small number of these systems will be produced beginning early next year. It is not planned at this time to market these systems outright. Rather, special BCC concentrators connected to the systems by means of high speed, multiplexed data lines, will be used to offer service to time-sharing service bureaus. Beginning in 1971, the company plans to manufacture and market a larger and more economical system, the specifications of which are not available at present.

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SERVICES

Programming and engineering services are offered by Berkeley Computer Corporation on a contractual basis. Further information can be obtained by telephone (Area Code 415, 549-3630) or by mail addressed to:

Contracts Administrator
Berkeley Computer Corporation
2398 Fourth Street
Berkeley, California 94710

WHAT AND WHO ARE WE?

The following is a brief description of Berkeley Computer Corporation, its capabilities, and its technical personnel.

The Corporation

The Berkeley Computer Corporation was founded December 19, 1968 for the purpose of manufacturing and marketing large-scale time-sharing computer systems and related equipment, and for offering time-sharing services on BCC-owned systems. The original staff of the corporation was taken primarily from the faculty, staff, and student body of the University of California at Berkeley (specifically, from Project GENIE where the SDS 940 time-sharing system was originally developed). Two other key personnel came from Carnegie-Mellon University. Most others came from the computer industry in general. The original staff (four of whom hold the Ph.D. degree) numbered fourteen senior level programmers and eight senior level engineers, along with supporting technicians, draftsmen, and programmers.

The company is currently in contact with a number of senior technical professionals from the computer industry. During the first year of operation, the staff will be supplemented at the top level by five or six of these professionals as the schedule requires. The support level technical staff and the non-technical staff will significantly increase during the first year. Products and services will be announced in the fall of 1969.

Contracts

The technical staff of BCC represents an expertise in the broad areas of system programming and computer engineering. In particular, all aspects of time-sharing systems are covered by the collective experience of both the technical and non-technical staffs. This expertise will be made available for selected projects, external to BCC, on a contractual basis. Contracts will be considered for the specification, design, writing or maintenance of the following types of programs:

- 1) Compilers
- 2) Compiler-compilers
- 3) Command languages
- 4) Time-sharing operating systems
- 5) Multi-programming systems
- 6) Simulations
- 7) Simulators
- 8) Specific task-oriented languages
- 9) Real-time process control programs
- 10) Loaders and software diagnostics
- 11) Text editors and report generators
- 12) File management and information retrieval
- 13) System recovery procedures
- 14) Diagnostic and maintenance programs, and
- 15) Scientific applications programs

Contracts will be considered for the specification or engineering of:

- 1) Interfacing devices and couplers
- 2) Sequential control logic
- 3) Arithmetic logic, and
- 4) Controllers and subsystems

Also, contracts will be considered which require combined software and hardware design, such as system architecture.

Personnel

The following resumes are representative of all technical levels at BCC.

PRESIDENT: DR. MELVIN W. PIRTLE, Ph.D., Department of Electrical Engineering and Computer Sciences, University of California at Berkeley: previously Principal Investigator at Project GENIE and Associate Professor of EE and CS at the University of California at Berkeley. In this capacity he organized and directed the 40-man project which investigated and developed time-shared computer systems, notably the "Berkeley Time-Sharing System," which was manufactured by Scientific Data Systems as the SDS 940. Dr. Pirtle was personally responsible for the engineering development of the system. Other members of the Berkeley Computer Corporation were personally responsible for the system programming and language of the system. Project expenditures under Dr. Pirtle's direction were in the neighborhood of three million dollars.

Dr. Pirtle has published in the areas of system organization and system design. He has served as consultant to the U.S. Navy, SDS, White, Weld & Co., and many others.

VICE PRESIDENT: DR. JESSE T. QUATSE, Ph.D., Department of Electrical Engineering and program of Systems and Communications Sciences, Carnegie-Mellon University, previously Assistant Director for Design at the Computation Center of the university. At Carnegie-Mellon he organized and directed the staff which developed the main computer facility of the university -- the CDC/C-MU G-21 multi-processor system providing remote job entry, limited conversational mode, RCA RACE file storage, and graphic display capabilities. He was personally responsible for the engineering development of the multi-processor, expanded memory, the three-console graphic subsystem (in cooperation with Philco), and other projects. His industrial experience includes positions as engineer for Control Data Corporation and Bendix Computer Division, where he designed portions of central processor units and had managerial responsibilities for various design and construction phases. In addition, he served as President of a Pennsylvania corporation which he founded for the purpose of manufacturing the DATAPORT acoustically coupled portable computer terminal designed by him in 1965. He subsequently sold the corporation and patent rights to Vernitron Corp. (A.S.E.).

Dr. Quatse's publications and patents are in the areas of subsystem design and system maintenance. He has served as consultant to IBM, CDC, Vernitron, and many others.

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SECRETARY-TREASURER: DR. W. WAYNE LICHTENBERGER, Ph.D., Department of Electrical Engineering, University of Illinois: previously faculty investigator at Project GENIE and Associate Professor of EE and CS at the University of California at Berkeley. Dr. Lichtenberger participated in both the programming and engineering for and in the direction of Project GENIE (from the time of its inception in 1963). He designed and wrote the ARPAS macro-assembler (machine language for the Berkeley Time-Sharing System adopted by SDS). His personal engineering responsibility included the circuits and controllers for the drum and core memories. He was personally responsible for a substantial part of the engineering and all of the programming of the first computer-controlled educational system of the University of Illinois. He has taught courses at the university in logic design, computer engineering, and system organization.

Dr. Lichtenberger's publications are in the areas of system design, system organization, and statistical communication theory. He served as consultant for SDS and others.

SYSTEM DESIGNER: DR. BUTLER W. LAMPSON, Ph.D., Department of Electrical Engineering and Computer Sciences, University of California at Berkeley: formerly faculty investigator for Project GENIE and Assistant Professor of CS, EE and CS at the University of California, Berkeley. In this capacity he designed the executive system for the Berkeley Time-Sharing System. He also designed and wrote CAL (a language similar to Rand's JOSS and similar to, but more powerful than, GE's BASIC), and wrote a version of SNOBOL (a language originally designed at Bell Telephone Labs.). He and Mr. Deutsch (whose resume follows) collaborated in the design of QED (a text manipulation language) and QSPL (a language of the PL-1 variety). Both CAL and QED were adopted by SDS for their marketing of the SDS 940 system.

Dr. Lampson's publications are in the areas of system programming and language design. He has served as consultant to SDS, the U.S. Navy, Tymshare, White, Weld & Co., Bolt Beranek & Newman, Lawrence Radiation Laboratory at Livermore, the Computer Science and Engineering Board of the National Academy of Sciences, and others.

SYSTEM DESIGNER: PETER DEUTSCH, B.S. in mathematics, University of California, Berkeley: previously one of the system architects at Project GENIE. In this capacity he led the monitor design and implementation for the Berkeley Time-Sharing System. The monitor was then adopted by Scientific Data Systems for the SDS 940. Mr. Deutsch collaborated with Dr. Lampson in the design of QED (a text manipulation language) and QSPL (a language of the PL-1 variety). He wrote DDT (a loader and debugging language) and LISP (a symbol manipulation language originally designed at MIT). Both QED and DDT were adopted by SDS for their marketing of the SDS 940 system.

Mr. Deutsch has written many other compilers and systems, including a 940 BASIC, a version of FORTRAN for the GE-Olivetti CINAC computer, several implementations of TRAC, and a time-shared system for the PDP-1 at MIT. He has published in the areas of programming languages and compilers. He has served as consultant for Raytheon, the U.S. Navy, Dial Data Corporation, Systems Concepts Corp., Bolt, Beranek & Newman, Stanford Research Institute, Rockford Research Institute, Information Internation, and INAC in Rome, Italy.

PROJECT LEADER, PROGRAMMING: RAINER SCHULZ, B.S. in mathematics and engineering, San Jose State College: previously with Scientific Control Corporation assisting in the system design of the SCC 6700 time-shared system and assigned to Project GENIE. Before SCC, Mr. Schulz designed and wrote several multi-programmed operating systems and associated subsystems for the SDS SIGMA line of computers. Additionally, he consulted in the design of SIGMA line peripheral equipment and designed and wrote I/O channel and peripheral device diagnostics. He was responsible for the SDS system engineering work on the SDS 940.

While at IBM in San Jose, Calif., Mr. Schulz shared the responsibilities for debugging the prototype IBM 1800. His other work with the IBM 1800 included consultation in the design of a process control system, participation in the writing of functional specifications for real-time process control equipment and peripheral equipment, and the writing of an assembler and loader.

PROGRAMMER: JACK FREEMAN, B.S. in philosophy, M.S. in mathematics at Florida State University: previously system programmer for Project GENIE. While with the project, Mr. Freeman wrote an extremely detailed simulator of the CPU and memory for the new Berkeley Time-Sharing System which he then used to ascertain critical system parameters such as memory size, CPU level of parallel processing, and various channel capacities. He also programmed in the area of graphic display and did considerable informal study of aspects of user communication with a computer system.

Before joining the project, Mr. Freeman spent four years with Douglas Aerophysics Laboratory in the areas of scientific programming, numerical analysis, graphical display, and data storage retrieval.

PROGRAMMER: PAUL HECKEL, S.B. in Electrical Engineering, MIT: previously with Scientific Control Corporation assisting in the system design of the SCC 6700 time-sharing system and assigned to Project GENIE. Prior to joining SCC, he worked one and one-half years at G.E. MEDINET on the design of an interface between time-sharing system monitor and user programs for addressing space and secondary storage manipulation. He designed and wrote a macro meta-assembler for the MEDINET Time-Sharing System. He conceived and specified a system for combining debugging, editing, and a language into a single integrated package which was to a degree both machine and language independent.

In addition, he spent two and one-half years at MITRE, where he debugged and enlarged a LISP system for the IBM 7030 (STRETCH); designed and wrote a monitor system to run compile-and-go jobs for the Phoenix computer on the 7030; worked on a complex assembler which assembles code for several machines; and worked on a number of other language processors.

PROGRAMMER: RICK DOVE, B.S. in Electrical Engineering at Carnegie-Mellon University: previously programmer at the Computation Center of C-MU. In this capacity Mr. Dove has been Project Leader and designer of CABAL (a compiler-compiler). Under Professor Allen Newell, he has been Project Leader and designer of BIP (Basic Interface Package for compiler-compilers). Also, he worked on the C-MU version of IBM's TSS.

Before joining the staff at C-MU, Mr. Dove worked for Westinghouse Electric where he wrote many small systems and scientific application programs. He designed and wrote most of a desk calculator program and wrote and debugged portions of FORTRAN for the PRODAC 580. He wrote and debugged portions of a steel mill simulation in SIMSCRIPT for an IBM 7094. He designed and wrote WASP (Westinghouse ALGOL Simulation Package, based upon SIMSCRIPT and ALGOL) for the Burroughs B5500, and then designed and wrote a large steel mill simulation in WASP. And, additionally, he designed and wrote one-third of a large power dispatch algorithm, in ALGOL, for the B5500.

Mr. Dove worked for Burroughs Corporation for one and one-half years maintaining the Burroughs 205. He also designed and

wrote a machine language interpreter for off-line debugging, on the B205, and wrote hardware diagnostic and maintenance programs.

Mr. Dove's publications are in the areas of simulation languages and compiler-compilers.

PROGRAMMER: LARRY BARNES, three years at the University of Oklahoma, and one year at the University of California, Berkeley: previously Systems Programmer for Project GENIE. In this capacity, Mr. Barnes wrote and debugged substantial portions of the time-sharing monitor and executive for the Berkeley Time-Sharing System. He also designed and wrote the system recovery procedures currently in use. He participated in the design and writing of a FORTRAN used at the project and of service routines such as a digital logic simulator in LISP. He wrote a sophisticated report generator having elaborate test manipulation and formatting features.

Before joining the project, Mr. Barnes worked on a batch-processing monitor for an IBM 1410 with disk and he developed several versions of a structural analysis program for studying jet engine vibrations.

PROGRAMMER: CHARLES SIMONYI, part-time student with two years in electrical engineering at the University of California at Berkeley: previously system programmer at Zeta Research. In this capacity, Mr. Simonyi developed a new data reduction technique for communication with remote digital plotters, and

designed and wrote a version of SNOBOL for the CDC 6400. Additionally, he made modifications to ALGOL to provide a new and improved set of I/O procedures.

Before coming to the USA, Mr. Simonyi wrote an ALGOL compiler and an editor for the GIER second-generation system. On the RC4000 third-generation system, he was one of three who developed a real-time multi-programming system for process control applications. He also worked on a time-shared system scheduler for the RC4000. He also designed and wrote a FORTRAN-like compiler for a first-generation system.

PROJECT LEADER, ENGINEERING: CHARLES P. (CHUCK) THACKER, B.A.
Physics, University of California at Berkeley: previously engineer for Project GENIE. In this capacity, Mr. Thacker designed interfaces for the Berkeley Time-Sharing System including those for the Potter printer, the Cal-comp Plotter, and a second set of 16 teletypes. He designed an acoustic coupler for remote teletypes. His major work related directly to the design of the new Berkeley Time-Sharing System which was intended to replace the original system at Project GENIE. He designed the micro-coded peripheral processors of the system. Also, he was responsible for compliance with the specifications of the core memory, specially designed for the project by Ampex Corp., and of the disk and drum subsystems, specially designed for the project by Bryant Computer Products.

During the five-year period preceding his joining the project, Mr. Thacker held the positions of Engineer and Development Engineer for various companies, alternating with time out for study. His work includes the design and construction supervision of a group of readers for nuclear track film studies. He was responsible for the design of control circuitry for a film measurement system, for high-precision digital servo systems, for interferometric measurement techniques, and for electro-optical interfacing for image recognition. He was responsible for all circuitry design for a company's line of meteorological data gathering systems designed for outdoor environments; hence a heavy emphasis on high reliability and severe environment conditions. In addition he was responsible

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for electronic and electromechanical design for biological and medical instrumentation.

PROJECT LEADER, ENGINEERING: STANLEY H. DINSMORE, B.S. Chemistry, M.S. Engineering Science, University of California: previously Cognizant Engineer with Jet Propulsion Laboratories. During the past two years, Mr. Dinsmore supervised the project to design and construct a system for photographic processing, storage, and retrieval of space craft generated pictures. This system was used to record all pictures resulting from the Surveyor Project, including the live broadcasts during the first Surveyor mission. Recently he has been associated with the Image Processing Laboratory at JPL where he has written image processing programs and has contributed to the design of future improvements to the facility.

While at JPL, Mr. Dinsmore also participated in the writing of functional specifications for a Spacecraft Television Ground Data Handling System. He was Cognizant Engineer for the design and construction of the Media Conversion portion of this system, which included a precision film recorder, scan converters, a DDP-24 computer, Telemetry and RF equipment, and a rotary head and longitudinal analog recorder.

Before joining JPL, Mr. Dinsmore was an engineer for Bendix Computer Division. He participated in the design of most of the circuits for the G-20. He was personally responsible for the design of the clock generator and the clock distribution circuitry; the digital communications drivers, receivers, and related circuits; the printer core buffer circuits; the power regulation circuits, and various logic and miscellaneous circuits. He wrote circuit design programs and added an alpha-

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numeric message handling facility to the G-15 ALGO language.

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ENGINEER: STEVE TULLOH, two years of college and one and one-half years with IBM as a customer engineer: previously Principal Electronics Technician with Project GENIE. While with the project, he designed, implemented, and checked out a disk controller channel for the Berkeley Time-Sharing System which has been the basic model for a commercial version made by Bryant for the SDS 940 computer system. He worked on the development of programs for automated design and other projects which called upon his programming as well as engineering competence. Before joining the project, Mr. Tulloh gained experience ranging from customer engineer for IBM to drafting and boat building.

DOCUMENTATION AND DISTRIBUTION

The following pages describe the general documentation and distribution system for internal write-ups. It does not define specialized systems such as the engineering parts and assembly documentation system (schematics, assembly drawings, etc.) or the parallel system which will handle program listings, tapes of the listings, proprietary programs, etc. Another independent system will deal with "serial number" objects such as finished products, capital equipment, and instruments. Another specific example is our internal memo system. One other broad but independent area not covered by this system is the external documentation control which includes, among others, technical user's manuals, field engineering documents, marketing brochures, and public relations blurbs.

Eleonore Pirtle is in charge of the General Internal Documentation system. Any questions regarding it may be directed to her.

Most official documents which are internal to BCC must conform to the broad format and title page specifications of the system. The exceptions to these specifications are all documents which cannot be classified by the class codes outlined in the following pages. An example is the BCC "Assembly and Part Numbering System" which is given elsewhere.

The page format is exemplified by this manual. Page numbering is neither above nor below the bottom margin. Therefore the entire area within the lines may be used. This leaves a top margin of 1", a bottom margin of 1/2", a right margin of 3/4" and a left margin of 1-1/4". The latter two margins are adequate as only one side of the page is printed. All other page format information can be deduced from the format of this document. In general, approved internal documents must be typed on the standard forms used by this document. The title page gives the following information:

The title is at the discretion of the authors. At least 100 characters squeeze comfortably on three lines within the title box.

The document number consists of four entities with the format "p/c-n.r."

p (prefix): six or less alphanumeric characters (capital letters) specified by the authors. The prefix is a personal code which the authors consider helpful to themselves and to the expected readers of the document. In a sense, it serves as a personalized and more meaningful substitute for the globally sequenced (and personally random) number which follows.

c (classification): all documents are classified according to the class names given below. One capital letter uniquely specifies each class.

S - specification
M - manual
A - administrative (policy or procedure)
T - technical (standard or method)
R - report
W - working paper

n (number): a number, from 1 to infinity, which is assigned by someone who maintains the document list (Eleonore as of this writing). The number is unique within the class of the document. It retires when the document is no longer officially maintained by BCC. These numbers are assigned sequentially in each class as documents are approved. Within each class, they are dependent only upon the order in which the documents are approved.

r (revision): a number which does not appear on any document, initially; and then appears with the value "1" on the first revision of a document; and then is incremented by one on each successive revision.

The two checked spaces are for the signatures of one or two people who are not authors of the document and whose technical check, on the contents of the document, is acceptable to the "approver" of the document. For example, Jack Freeman may write something that he would like Butler Lampson and Peter Deutsch to check. (Presumably, the typist will automatically check spelling.) He first asks the "approver" if his choice is acceptable. If so, he hands them the final document,

which they have been in touch with during its writing, probably; and then each signs it.

The approved space makes it all official. For the present, the three corporate officers are authorized to approve documents.

The approval date is self-explanatory. It stands as the "original" date of the document.

The revision date is the date of the most recent revision.

The classification spells out the classification code given above.

The distribution names one of the following controls on privacy. The control will be everyone's job. It should be treated as serious (possibly as a breach of the confidential statement you signed) to disregard the control.

CONFIDENTIAL (confined to some sub-group within the company. If you don't know you are in the sub-group for a given document, don't read it.)

COMPANY PRIVATE (confined to company employees only. If possible, it shouldn't leave the building. If it does, it should be returned as soon as possible. A document of this type (or the previous type) can be released to someone else only by permission of the "approver": this includes consultants.)

UNRESTRICTED (anyone can read it, but it still shouldn't be treated like a newspaper.)

The page box shows the total number of pages in the document.

The ABSTRACT AND CONTENTS part of the title page is the only text which appears on the title page. The abstract should be short. Its purpose is to expand on the title so that the reader knows whether he has the right document. The contents should show major headings and page numbers and should be the first page following the title page. A document entitled "The CHIO" could have been written either by Chuck Thacker or Rainer Schulz. The abstract and contents should suggest which of the two.

More than one page can be used for this information. Even so, the second page and all subsequent pages are always typed on the second form illustrated by this document (and specifically, by this page).

Distribution List

O	(Officers)	-	Lichtenberger Pirtle, Mel Quatse	
A	(Administration)	-	O (Officers) Harrison McGuinness Pirtle, Eleonore Wolf	
P	(Programming)	-	O (Officers) Anderson Barnes Deutsch Dove Freeman Heckel Lampson Lewendal Schulz Simonyi Sturgeon Thompson Van Tuyl	
E	(Engineering)	-	O (Officers) Clark Cohler Dinsmore Dodge Korhonen Lawson Marutani Saunders Spannagel Sweeney Thacker Tulloh	
ESup-	(Engineering Support)	-	Quatse Lawson Alvarado Bantowsky Brown Cucinitti Goodrich Hansen Hung Hwong	Juarez Korhonen Kunich Lowe Moore Murphy Otte Siporen Washington

ESer(Engineering
Services)

- Quatse
Clark
Azzalina
Derrick
McCabe
Moreno
Mujahed
Murdock
Philpot
Robbins

B (Bulletin Boards)

G (General)

- A (Administration)
P (Programming)
E (Engineering)
ESup (Engineering Support)
ESer (Engineering Services)
B (Bulletin Boards)
Ferguson, C.
Ferguson, R.
Larkin
McCormick
Osterhout
Sylvia

HIRING AND FIRING

This section outlines generally the company's personnel policy. Included is a definition of categories by which employees are classified for the purposes of administering the fringe benefit package, determining eligibility for overtime pay, determining coverage by the major medical insurance plan and the termination policy.

Employee Classification Categories

Several classification systems are necessary if we are to be able to determine the particular status of each employee with regard to the payroll, the fringe benefit package (except medical insurance) and medical insurance itself. At this point in time, the necessary categories are:

Exempt	Non-exempt
Permanent	Non-permanent
Full time	Part time
Insured	Non-insured

All non-exempt employees will be hired on a probationary basis and will be classified as probationary for a period not to exceed 90 days. Probationary employees will not be eligible for vacation, personal leave and sick leave.

Exempt vs. Non-exempt

This differentiation is necessary for payroll purposes and for judging compliance with the Fair Labor Standards Act. The criteria for determining which employees are exempt are established by the Federal Government as specified in their regulations Title 29 Part 541. The classification is important in that it distinguishes between those employees who are exempt from overtime pay and those who are eligible for (non-exempt) overtime pay.

Permanent vs. Non-permanent

These categories are useful in determining which employees are eligible for the fringe benefit package and which are not. Some fringe benefits are available only to permanent employees. Employees are classified as permanent or non-permanent by the officers of the corporation along these general guidelines:

- a) Permanent employees must have the intent of long-range employment with the company.
- b) Permanent employees must be available for greater than half time employment.
- c) The long-range plan of the company must include the probable employment of someone in the employee's particular skill area.

Other matters might also contribute to the permanent vs. non-permanent determination at the discretion of the officers of the company.

Full time vs. Part time

This category is self-explanatory. Full time employees are those scheduled to work 40 or more hours per week. Part time employees work less than 40.

Insured vs. Non-insured

This category has meaning only with relation to the major medical group life insurance policies and coverage. The criteria for determining the employee's classification within this category are established by the insurance company.

Termination Policy

The company reserves the right to terminate employees at any time. Employees terminated at the company's discretion will receive severance pay according to the following schedule:

- 1) Less than 90 days employment - none
- 2) More than 90 days but less than one year - 1 week's pay
- 3) More than one year - two weeks' pay

Employee Termination Form

The following checklist is designed to help you, as a supervisor, to take care of the necessary details associated with an employee's termination. Properly and conscientiously done, it will save us all a great deal of time and grief later on. This checklist should become a part of every terminated employee's file.

TERMINATION CHECKLIST

Employee Name: _____

Supervisor: _____

Termination Date (last day worked): _____

Nature of Termination: _____

Notice Given: _____

Eligible for Rehire: Yes _____ No _____

Arrangements made with Jim Wolf for final check: _____

Company property (e.g. keys) returned: _____

Nature of Recommendation to be given: _____

Originator

Personnel

Please feel free to use a second sheet if necessary.

Requesting New Personnel

In order to efficiently service personnel requests, we would prefer to have your requests formalized according to the following form. The more information provided on the form, the more efficient will be the search (and conversely . . .).

A file of these requisitions will be maintained as they are generated. After the first time around on each job a requisition may be completed by merely updating the previous one.

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PEOPLE ORDER FORM

Date _____

Berkeley Computer Corporation
2398 Fourth Street
Berkeley, California 94710

Job Title: _____

Job Description: _____

Work Experience Required: _____

Educational Experience Required: _____

Salary Range: _____

Supervisor Will Be: _____

Position Filled:

Date: _____

Name: _____

Originator

Company Officer

Personnel

WORK RULES

The following policies regarding work rules are being set down in order to simplify our operation as a company as much as possible. Obviously, no language, however complex, can cover every situation which will come about. Nor should these policies be regarded as written on tablets of stone. They will be changed whenever it is reasonable to do so.

Working Hours

It is recognized that there are circumstances in which individuals must work at odd hours. This will certainly be the case for programmers when using the Shell machine or for hardware people when conducting a hardware test or doing maintenance. For all personnel, however, not involved in such activities, the BCC working day will begin no later than 8:30 a.m. Monday through Friday and extend for eight hours, excepting a lunch period. Persons finding it necessary to work at other times should make every effort to be present during some portion of the regular working day. The problems of communication between individuals become impossible unless they are present at known, predictable, hours.

Time Reporting

The BCC work week begins at midnight on Sunday and ends just before midnight the following Saturday.

Employees are asked to fill out a time reporting form at the end of each work week. The form will be as simple as possible so that it requires a minimum of time and effort. There will be provisions on the form to report the approximate amount of time worked on various projects. This information is required as we are embarking on a cost accounting scheme and need to know the costs of our various activities for planning and re-

porting purposes. The same form will have spaces to report absences, personal or vacation time taken, etc., over the week ending as of that date. These time report forms are to be delivered to Accounting early on Monday morning of each week.

Pay Dates

All employees will be paid bi-weekly on a Friday for the two-week period ending the next day, Saturday. The report forms mentioned above will provide the necessary information for the payroll. Adjustments to employee's pay made necessary through overtime work (or work performed at less than the scheduled load) will be delayed two weeks and will be contained in the next pay check.

On-the-Job Accidents

Please report all on-the-job accidents to your supervisor immediately, however slight the accident may be. (We must conform with the terms of our workman's compensation insurance.) Medical treatment, if required, can be obtained through the Industrial Medical Group, 1803 6th Street, Berkeley. Supervisors should send note describing injury, date, etc. to Personnel.

Project Names

So that we can understand each other, projects and gadgets will be given temporary, internal, names. Current examples of such names are the "Model I" and "Model II" systems (not the S940 or 6700) and the TP-1 and TP-2 (not the pseudo-930, etc.). Please try to use these names; and, in particular, strike out all references in our documentation to other names. We might be subject to legal action for using other names sloppily.

Use of the Telephone

Report all toll calls, including message-unit calls on the report forms which will be provided. This information will be used by Accounting for checking our telephone bills. In addition, it will be used to compile a directory of frequently called telephone numbers. For this reason it would be desirable to also note down local calls on the report forms.

As we have no pay phones on the premises, it is perfectly proper to make personal calls using company telephones. For those personal calls involving charges of any kind other than message-unit calls to your own home (if you live out of the toll-free area), we expect each employee to reimburse the company. The report form facilitates the recording of this information.

When calling, use the highest-numbered line available, so that incoming calls will tend to appear on the lower lines. Also, please defer making a call if only one line is available, i.e., wait until more than one line is free before calling out. We would like to avoid giving busy signals for people calling in.

As we only have one inter-office communication line, it is important that all calls on that line be as brief as possible. Please confine yourself to business matters and take care of them as expeditiously as possible.

Keys and Use of the Buildings After Hours

In general building keys will be issued to supervisors and those other employees who regularly require access to the buildings at other than normal hours. Loaner keys are available for those people who require access for a particular period of time, e.g. when a technician or draftsman is scheduled to work over a weekend when his supervisor cannot be present. Employees working after hours should take every precaution to insure that the Building is secure and that the street doors are locked at all times. New keys are issued through Jim McGuinness.

Questions and Suggestions

We welcome and value your suggestions and/or questions about Company operation and policies.

- a) General administrative questions and comments should be directed to Jim McGuinness, who will also supervise secretarial services.
- b) Questions concerning employment matters (other than job activities) and Company regulations should be directed to Jim McGuinness.
- c) Questions about payroll should be directed to Jim Wolf.
- d) Questions regarding job activities and scheduling should be directed to your supervisor.
- e) Suggestions regarding general corporation business such as prospective customers, investors, personnel prospects, etc., should be directed to Mel Pirtle,

Emergency Access Keys

An emergency set of keys to the following doors is available in the upper left hand drawer of the Director of Administration's desk on the first floor of building #1.

Building #2	Master
Building #2	Gate
Building #1	Master
Building #3	Master

Employees are free to borrow them as needed; please return them.

Jesse Quatse, or Wayne Lichtenberger.

Many suggestions or questions can be made simply verbally. More serious matters are better handled in memo form. The idea of this is not to saddle all of us with extra paperwork or to reduce griping by forcing it to be put in writing, but to facilitate Company operation. Matters written down are seldom forgotten and are usually the ones settled first. Each employee should use his own judgment in this matter.

Absences from the Building during Work Hours

Except for absences during the normal lunch time period, all employees should see to it that if they must leave the premises for any reason, someone nearby knows they are absent and preferably where they may be reached. The logical person for many to inform is the receptionist. For those on the second floor, it should be the secretary or someone near their own telephone. In addition, those persons who normally receive several calls during the day (or who expect a particular call) should inform the receptionist of at least the time they are expected back. The aim is to relieve the receptionist, or others, from having to hunt all over the place for someone who may not even be in the building.

Moonlighting

In general, the company insists that its employees refrain from any other employment during the time they are employed by BCC. Any outside employment must receive the prior approval of the officers of the company.

Mail System

The following mail system is, at this time, a proposal. When implemented, if it does not prove efficient, other means of pick-up and distribution will have to be devised. Suggestions should be directed to Jim McGuinness.

- 1) People with desks and clearly marked in/out baskets will have mail pickup and delivery.
- 2) Mail will be collected and sorted at a central point, probably in the Supply Room (third floor) behind Eleonore's desk.
- 3) Mail will be picked up (and/or delivered) at 9:30 a.m., 11:30 a.m., and 2:30 p.m.
- 4) Mail picked up on any given mail run will be sorted and left in the central mail box until the next scheduled delivery.
- 5) People may put mail to be delivered into the central mail box at any time and it will be delivered at the next scheduled mail run.
- 6) Mail boxes at the central mail point will be identified by name and suitable distribution list keys.
- 7) People wanting better service may pick up their mail at the central mail point. They may, of course, also hand-carry anything really urgent.

Request for Leave Form

- _____ (1) Initiated by employee who must certify such leave is earned.
- _____ (2) Approved by employee's supervisor who must give consideration to schedule.
- _____ (3) Checked and recorded by the personnel group.
- _____ (4) Forwarded to the accounting group for payroll purposes.

Date _____

Employee _____

Time requested: _____ days _____ hours

Scheduled from: _____ to _____
date & time date & time

Type of Leave

- Vacation
- Personal
- Sick
- Other _____

With Pay Without Pay

Employee Signature

Supervisor's Approval

Personnel Accounting

bcc

p/c-n.r
SM/A-~~5~~ ||

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Weekly Time Cards

For purposes of cost accounting, time cards will be completed by all employees on a weekly basis. For this purpose the week will commence on Sunday and end on Saturday at midnight.

It is requested that these time cards will be given to each project leader on Monday mornings, so that he in turn can deliver them to accounting. A new time card should be obtained from him at that time.

An example of a completed time card is illustrated below. (The areas which have been shaded do not need to be completed.)

ILLUSTRATION

WEEKLY TIME CARD

EMPLOYEE'S NAME		NO.	WEEK ENDING							19		
Whatever, Chas			9-20							69		
JOB NAME OR NO.	KIND OF WORK DONE	S	M	T	W	T	F	S	HRS.	RATE	AMOUNT	
CH101-CC-VT			6	2								
TP1-ME-MA				6	7	2	4					
XO	washing windows		2									
MP1-MR-BB					1	6	5					
TOTAL REGULAR			8	8	8	8	8		40			
TOTAL OVERTIME							1		1			
APPROVED		TOTAL EARNINGS										
		DEDUCTIONS					TOTAL DEDUCTIONS					
		F.I.C.A.		INC. TAX								
		NET PAY										

So that we can accurately determine our production and/or development costs we have devised a system whereby work done on any particular phase of software work is reported through the use of a two-part number. XX - XX

SYSTEM	CODE	SYSTEM	CODE
Basic Central Processing Unit, Phase 1 Central Processing Unit, Phase 2 Character Input/Output, Phase 1 Character Input/Output, Phase 2 CPU Executed Memory Management DDT for TPI Dump and Recover Logic Engineering Support Enter/Logout Monitor, Resource Control Fortran Code Generator Fortran Preprocessor, Parser GE-Command Processor GE System Interrupt & Wakeup System Micro-code Simulator Miscellaneous System Commands Miscellaneous Utility Procedures Model 30 Programs, M1 Tape System Monitor File System Monitor Interface with CHIO Monitor Process Creation Navy Contract 940 Emulator Routines 940 System Overhead Paper Tape Punching for diode Boards Remote Concentrator, Phase 2 Research Scheduler, μscheduler Snobol Software for Hardware Checkout SPL Code Generator, Storage Manager SPL Debugger, Simulator SPL Editor SPL Parser SPL Pre-Processor SPL Run Time Sub-Process Commands (Utility)	BAS CPU1 CPU2 CHIO1 CHIO2 CPUEMM DDT1 DPRC ENGS MEL FCG FPP GPCP GES IWS MCS MSC MUP M30 MFS MCHIO MPRCR USN 940ER 940S OVH PTES RC2 RES SCH SNB HC SPLCG SPLD SPLE SPLP SPLPP SPLRT USPC	Sub-Process Management (Monitor) Swapper for AMC1 Swapper for AMC2 System Startup Text Editor Utility Accounting Utility Command Processor Utility File System GE Compiler System GE Editor	MSPM SAMC1 SAMC2 SMR TED UTAC UCMP UFS GECS GEED
		WORK DONE	CODE
		Coding Debug Design Documentation Maintenance Operation Research	COD DB DS DOC M O RES

FRINGE BENEFITS

The fringe benefit package consists of vacation, sick leave, personal leave, medical insurance, group life insurance, accidental death and dismemberment insurance, and stock options.

These benefits are available to permanent employees.

Vacation

Employees are granted two (2) weeks of paid vacation time per year. Vacation need not be taken within the year earned but may be accumulated to a maximum of four (4) weeks. Vacation must be taken in at least full-week increments and is to be scheduled at a time mutually convenient to the employee and the company.

Less than full time employees will earn vacation at a reduced rate commensurate with their percent time employed. Vacation is not earned by temporary or probationary employees.

Vacation time accumulated in excess of four weeks will be forfeited. No provisions will be made for employees to work their vacation period in order to earn a regular salary and vacation salary for the same period. On the other hand, earned vacation not taken at the time of an employee's termination will be paid him at his salary or hourly rate as of the date of termination.

Vacation is earned according to the following schedule:

Months of Employment	1	2	3	4	5	6	7	8	9	10	11	12
<hr/>												
Days of Vacation Earned	1	2	3	3	4	5	6	7	8	8	9	10

Sick Leave

Each full time, permanent, employee is permitted six (6) days of sick leave per year which may be accumulated to a maximum of twelve (12) days. Days of absence which are to be paid as sick leave are to be identified as such on the weekly time cards. Sick leave is earned at the rate of one-half day per month of employment.

Personal Leave

Each full time, permanent, employee is granted a total of six (6) days per year of paid leave designated as "personal time." This category does not accumulate to more than six (6) days and it may be taken as little as a half-day at a time. It is anticipated that insofar as possible, personal time leave will be taken at times convenient to the Company. Days of absence which are to be paid as personal time should be identified as such on the weekly time cards. Personal leave is earned at the rate of one day for every two months of employment.

Insurance

Initially, major medical, accidental death and dismemberment insurance will be provided by the Company to all permanent employees at no cost to the employees. The same major

medical coverage will be available to all dependents of an employee at his option for an additional charge to him. As the Company undergoes its initial, rapid growth, the group insurance will be audited frequently with a view toward reducing rates and further increasing benefits, as well as making a wider variety of insurance available.

Stock Options

At the discretion of the Company, key employees will from time to time be granted options to buy stock in BCC. Details concerning such option will be determined by the Board of Directors.

Holidays

The Company will observe the following holidays with pay:

New Years Day

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Friday after Thanksgiving

Christmas Day

If a holiday falls on Saturday, it will be observed on Friday; a Sunday holiday will be observed on Monday.

Employees (permanent or non-permanent) will be paid holiday pay if and only if they have (1) worked full time the week of the holiday and (2) worked the normal work day immediately

preceding and immediately following the holiday. This means Friday and Tuesday for a Monday holiday; and Thursday and Monday for a Friday holiday.

Employment Agency Fees

The Company will pursue a policy with regard to the payment of employment agency fees which is in tune with the competitive situation in the employment market. In general, the Company will pay in full the fees associated with the hiring of exempt personnel.

Non-exempt personnel will be expected to pay one-half of their fee at the time of their employment, and the other one-half of the fee will be paid by the Company. The employee will then be reimbursed for his half of the fee when he satisfactorily completes the probationary period. It is not expected that there will be any exceptions to this policy.

Medical Insurance

Our major medical insurance coverage is briefly described in the three following pages. These pages are intended to be descriptive in nature and should provide an essentially adequate description until you receive your detailed brochure.

As your medical bills accumulate to more than \$100 for any individual member of your family (or \$300 total for the family) you will want to consider filing a claim with the insurance company. In most cases the convenient thing to do would be to accumulate your medical bills until the end of the calendar year and then file one claim for the entire year.

Please make sure that all your medical expenses are documented, including the \$100 (or \$300) deductible. In general, receipts for medical treatment or drugs should show the date, name of family member treated, treatment and doctor's name. Receipts for prescription number.

Questions regarding the medical insurance should be directed to Bill Harrison.

PURCHASING PROCEDURES

The purpose of this section is to outline the functions and the areas of responsibility of the purchasing agent and to provide a basis for the coordination of all activities relating to the purchase of goods and services.

In general, the function of the purchasing agent will be to procure goods and services from outside vendors at the best possible price consistent with dependable delivery, adequate service and satisfactory quality. BCC personnel are asked to provide the purchasing agent with sufficient data to specify accurately the goods or services to be purchased with a list of the known constraints (e.g. delivery). Operating within these constraints the purchasing agent will have full authority to place orders with suppliers at his discretion.

BCC personnel wishing to participate in the selection of vendors may do so by indicating the following:

- 1) Suggested vendor(s) - written on the requisition to help the buyer locate a source of supply
- 2) Recommended vendor(s) - written on the requisition to indicate a preference for a particular supplier. The reason for the preferential status must also be supplied.
- 3) Required vendor - written on the requisition to indicate that no other supplier would be satisfactory. A reasonable explanation justifying

the unique status of the supplier is required.

BCC personnel are encouraged to engage in technical discussions with vendors and their representatives concerning data, performance, price range, etc. The purchasing agent will be available to participate in these discussions if it is advantageous for him to do so. Indeed, if a firm order is likely to be placed as a result of such a discussion, the purchasing agent should be asked to participate. The purchasing agent and the officers of the company are the only ones who can commit the company to purchase goods and services. All other employees are required to effect purchases through the purchasing agent.

USE OF BCC CAR (MERCURY STATION WAGON)

Use of the company car and driver will be coordinated and scheduled by the Administration Manager through the receptionist during the normal working hours, and the programming secretary during the evening hours.

Requests for use of the car, which must be authorized by department managers or delegated members of their staff, should be directed to the receptionist/programming secretary as much in advance of the needed time as possible.

A copy of this memorandum reiterating the following points will be retained in the glove compartment. Every authorized company employee must read these instructions before driving the car.

- 1) Only BCC employees with valid California State driver licenses are permitted to drive this vehicle.
- 2) Compliance with all state and local motor vehicle laws and ordinances must be adhered to, and safe driving practices, i.e., use of seat belts, no unauthorized passengers (hitch-hikers), doors completely closed, allowance for car load, traffic and road conditions, etc, exercised at all times.
- 3) Before starting out, the driver should check the tires and gas gauge. A company credit card will be found in the glove compartment, and service receipts

should be left in the glove compartment.

- 4) The car must be kept locked at all times while parked at BCC or elsewhere, regardless of the length of time the driver is away from the vehicle.
- 5) BCC's car insurance is covered by St. Paul Fire and Marine Insurance Co., Policy No. 504 JC 2531.
- 6) In the event of an accident or trouble with the car, call in to BCC (549-3630) as soon as possible.