

IBM

MISCELLANEOUS CODES

A-TIPS (OTHER THAN MEAL & TAXI) C-TOLLS & PARKING FEES
B-TELEPHONE & TELEGRAPH D-PERSONAL SERVICE

PARKING FEES **E-CAR RENTALS**
SERVICE **H-OTHER (EXPLA)**

Travel Expense Account

REASON: TASK FORCE FOR PHIL LA VEAU
(GSD HQ - ATLANTA)

PAID

JAN 23 1973

~~12613~~ S & ID 819 ~~956~~
R/R V#

M02-6414-14  ATTACH RECEIPTS TO ORIGINAL COPY ONLY

Date: February 12, 1973
From (location or U.S. mail address): GSD HQ
Dept. & Bldg: Atlanta, Georgia
876/4G-2
Telline & Tel. Ext.: 8-939-5263 1973

IBM

Subject: SCAMP

IBM CONFIDENTIAL

Reference:

Ralph Tidwell has agreed to send you the programs you requested. Ralph does not want to make any changes in the programs that he supplies. I hope this arrangement will be satisfactory.

If there are any questions, or if any problems arise, please contact Art McCarthy immediately on extension 5253.

I have arranged for the delivery of the items you requested for project SCAMP except for the memory unit. In order to minimize any confusion, I will state the arrangements made.

First of all, the Palm Processor is to be delivered by Roger Abernathy, in Boca Raton, to Joe George in Los Gatos. One unit is to be delivered in April, around the 15th of the month. A firm date for delivery will be established as Palm units become available late in March. The second unit will be made available to Joe George sometime in June. Its delivery will be coordinated with the delivery of a "B" test model of Bahia.

The first Bahia unit will be an "A" test model. Its delivery will coincide with the delivery of the first Palm unit. Don Rex will also make available to us a second Bahia sometime in June. This one will be a "B" test model. The actual delivery date will be set by Don Rex depending upon his availability schedule.

The Calico keyboards will be shipped from Raleigh, one to reach Los Gatos by April 15th and the second one by mid-June. Lon Powell in Raleigh will handle the transaction for us.

For all of the above items, IPT's or IPR's will be issued by GSD Headquarters. It is also my understanding that Joe George will coordinate the schedules for the above items.

The memory units requested were unavailable to us on the schedule you wanted. Therefore, as we agreed, I will leave the selection and procurement of the memory units up to Joe George. When he has found what he needs he should call me, and I'll take care of the necessary funding and paper work.

Dr. Paul Friedl
Page 2
February 12, 1973

IBM CONFIDENTIAL

Ralph Tidwell has agreed to send you the programs you requested. Ralph does not intend to provide updates or changes to the programs that he supplies. I hope that this arrangement will be satisfactory.

If there are any questions, or if any problems arise, please contact Art McCarthy immediately on extension 5263.

In order to support the GSD API prototype, the following resources are needed:

- 1) *PJL* needs to be installed here as soon as possible for the P. J. LaVeau project.
- 2) PJL/msd programmers on temporary assignment to the Palo Alto Scientific Center for the duration of the project. These people should have experience in assembly language programming on 1130 or 1800 with Fortran being preferred. They would report to me and would work in the following areas:
- cc: Mr. R. Abernathy
Mr. J. George
Mr. D. Rex
Mr. R. Tidwell support for Bobis printer, tape cassette, calico keyboard, video display, and IP adapter.
- 3) API software system retrofit.
- 4) Hardware diagnosis.

It would be ideal if the programmers were from the GSD Sensor-Based Measurement group in Menlo Park (Dr. M. Abernathy), because of their close association with the equipment, their experience with 1800 type machines, and their knowledge of data.

The personnel required would be the equivalent of \$10,000 to cover our two days per week cost. Please have your appropriate department contact me for further details.

Paul J. LaVeau
PJL/MSD

File # - 1946

February 16, 1973
Scientific Center
2670 Hanover Street
Palo Alto, CA 94304
8/624-3165

Resource Requirements for SCAMPI Project

IBM CONFIDENTIAL

Mr. P. LaVeau Roche
GSDHQ - Atlanta

The New Business Programs Department is sponsoring a development project called SCAMPI. This development effort will involve the design and implementation of a new and interface capability for the SCAMPI processor. This will also be used to debug the SCAMPI processor.

In order to complete the SCAMPI prototype, the following resources are needed:

- 1) 1130-2D System to be installed here as soon as possible for the duration of the project.
- 2) Three programmers on temporary assignment to the Palo Alto Scientific Center for the duration of the project. These people should have experience in assembly language programming on 1130 or 1800 with experience in I/O coding being preferred. They would report to me during this project and would work in the following areas:
 - a) I/O device support for Bahia printer, tape cassette, calico keyboard, video display, and TP adapter.
 - b) APL software system retrofit.
 - c) Hardware diagnostics.

It would be ideal if the programmers were from the GSD Sensor-Based Development group in Menlo Park (Dr. M. Silberberg), because of their close geographic location, their experience with 1130 style machines, and their affiliation with GSD.

- 3) An inter-plant transfer (IPT) in the amount of \$30,000 to cover our two people for six months. Please have your accounting department contact me to set this up.

Paul J. Friedl

Paul J. Friedl
PJF/tl

cc: H.P. Flatt - PASC

March 1, 1973
GSD HQ
Atlanta
876
263

1130 System Project SCAMP

IBM CONFIDENTIAL

Mr. C. A. Roche
660, GSD HQ

The New Business Programs Department is sponsoring a development project called "SCAMP." This development effort is underway in the Palo Alto Scientific Center. The project needs an 1130 system to provide power and interface capability for the SCAMP processor. It will also be used to debug the SCAMP processor's support programs.

The 1130 system required is as follows:

1131 02D or 03D
#7490 Storage Access Channel
#4454 1442 Attachment Feature
1442 007 Card Reader/Punch
1403 006 Printer
1133 001 Multiplex Control Enclosure
#1865 Channel Multiplex Feature
#4424 1403 Attachment Feature

2315 011 Disk Cartridge - 2 each

Substitutions can be made for the printer.

The funds necessary to support this system are available within the New Business Program Department's budget. We need the system as soon as possible, no later than mid-April, to support our current product development schedule.

Please expedite the handling of this request.

A. McCarthy

A. McCarthy

AMcC/cjr

cc: Mr. P. J. Friedl, 63G/2670, Menlo Park
Mr. A. S. Greenberg, 559, Atlanta
Mr. P. J. LaVeau, 631, Atlanta
Mr. J. G. Schleier, 606, Atlanta

ASDD Los Gatos Laboratory
1250 Bascom Street
Los Gatos, CA 95030
9165

ASDD Los Gatos Laboratory
March 15, 1973

SCAMPI PROJECT

Re: P. In Your Mail, Post dated April 16, 1973

MEMO TO: Mr. R. C. Johnson
D50, Raleigh

SUBJECT: ANR Typewriter Keyboard Requirements and Delivery

On March 1, 1973, Date for SCAMPI Project initiated in the Palo Alto Scientific Center. This project followed the recommendations of a task force led by Paul Friedl on development of a portable AFL

One (1) ANR 78 key typewriter keyboard, part number 1858507 is needed by April 15, 1973 for the SCAMPI Project. An additional 66 key ANR typewriter keyboard, part number 1858506, will be required June 15, 1973.

Monetary billings of \$5,000 are to be sent to A. T. & T. Inc., GPO R.O. Atlanta SCAMPI is a study vehicle. As such, I am not prepared to project future usage of the above items.

within the Scientific Center, all SCAMPI work will be charged to Project 8132. A separate order has been placed for the blank key tops we discussed last week. Thanks for the specs and ordering package.

J. D. George

cc: P. Friedl, 63G, Palo Alto
L. Harper, A42, Los Gatos

Paul: I didn't correct the project name - it is SCAMPI
Jdf

Scientific Center
2670 Hanover
Palo Alto, Calif.

IBM CONFIDENTIAL

IBM

April 16, 1973

8-939-5551

631

1973

GSD HQ

Atlanta Financial Analysis
TO: Westlake Operations
SCAMP and Oaks, California

Subject: GSD Program Support

Reference: Your memo dated April 25, 1973

Total estimated cost to support GSD I/O micro-programming is \$30,000. This amount is to be used by SCAMP. As we discussed, I am allocating \$30,000 of my budget for your use in support of the I/O micro-programming necessary to implement SCAMP.

Please send all expense vouchers to Mr. A. T. Reid, Jr., at GSD HQ, who will handle the necessary accounting work.

ORIGINAL SIGNED BY

K. V. Chawla

P. J. LaVeau

RVC:ja

PJL/ja

Attachment:

CC: Dr. P. J. Friedl, Dept. 63G, Palo Alto ✓
CC: Mr. A. T. Reid, Dept. 659, Atlanta

H. L. McMurtry
A. McCarthy, GSDHQ
A. T. Reid, Dept. 659, GSDHQ
A. D. Johnson
F. E. Papen

April 25, 1973
Scientific Center
2670 Hanover St.
Palo Alto, CA 94304
8-624-3165

GSD Programming Project

F. Papin
FSD, Westlake

STATEMENT OF WORK

1. Project Description
Provide I/O programming support for small experimental device.
2. Skills - Two (2) People
a. Must have experience with basic assembly programming.
b. Should have basic physical I/O programming experience.
c. Programming of mini computers is desirable but not essential.
3. Time Period
Sixteen (16) weeks beginning week of April 29, 1973.
4. Location
a. Must spend five (5) days per week in Palo Alto - Los Gatos (PA/LG) for the first two (2) weeks.
b. Must spend at least three (3) days per week in PA/LG during next fourteen (14) weeks.

Please call Art McCarthy (tie line 8/939/5263) to expedite the financial arrangements required in order to have those people up here by May 1.

Please confirm all costs and arrangements in writing to me, Art McCarthy, and Phil La Veau (both from GSDHQ - Atlanta).

Paul J. Friedl
Paul J. Friedl

PJF:ckd

cc: P. La Veau - GSDHQ
A. McCarthy - GSDHQ

Internal Zip

City & State

Riedl

Scientific Center
2670 Hanover
Palo Alto, Calif.

IBM

Date: April 30, 1973
 Name & Title/Ext.: K. V. Chawla/8-272-5411
 Title/Dept. Name: Pricing & Financial Analysis
 Internal Zip/City, State: TB-4, Westlake Operations
 or U.S. mail address: Thousand Oaks, California
 Subject: GSD Program Support

Reference: Your memo dated April 25, 1973

16 Hours x \$12.11

\$ 194

872 Hours x \$12.00

\$ 10,444

672 Hours x \$10.25

\$ 6,888

Total estimated cost to support GSD Program is \$32,000. This includes labor, burden and travel expenses in Los Gatos. The details of this cost are provided in attached schedule.

Per Art McCarthy, the monthly billings will be sent to Mr. A. T. Reid, Jr., GSD Headquarters Accounting, Atlanta and will be charged to Dept. 876, Account 36-842-8603.

1,360 Hours x \$8.75

8/939/5497

SCAMP

KVChawla

K. V. Chawla

KVC:ehp

Attachment

cc:	L. A. Griffis	1 People - 2 Trips - 3 Days	\$ 682
	H. L. Montgomery	1 People - 14 Trips - 3 Days	<u>6,242</u>
	A. McCarthy, GSDHQ		\$ 5,124
	A.T. Reid, Jr., GSDHQ		
	R. D. Rose		
	F. E. Papin		\$ 469

TOTAL:

\$32,000

PA-04/30/73

IBM
PARC

Date: June 14, 1974
Name & Title/Ext.: 8-332-2156
Title/Dept. Name: 876
Internal Zip/City, State: GSD HQ
or U.S. mail address: Atlanta

Subject: MERCURY Programming

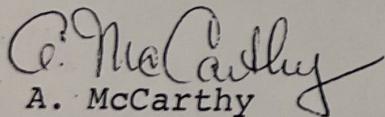
Reference: Your letter, same subject, dated 29 May

We are interested in developing several subroutine packages in support of the MERCURY project. These packages will contain either single solutions or grouped solutions to problems normally found in the mathematical, statistical or financial disciplines. All of the solutions must be easily understood by the casual user of such problem-solving techniques. The man machine interface will have to be superior to any product now used or delivered by IBM.

As we have discussed, the first package that we want your group to complete is a STATPAK type package written in both APL and BASIC. It is anticipated that you will be able to complete this package by the end of September. Your package will then undergo a complete product test for release to customers.

You will be supplied with a complete list of the items that must be available to product test at test time. Whether or not we continue our joint effort will in large part be determined by how well your work does in product test.

We have reviewed the financial aspects of the services you are able to provide and agree to pay for your services from 17 June to 30 September an amount not to exceed \$40,000.00. In addition to that amount, we also agree to pay for the 3270 display equipment for as long as the project continues. If the project is extended beyond the September 30th date, we will negotiate those costs with you at that time.


A. McCarthy

AM/imk

cc: Mr. A. J. Davies
Mr. G. Pavloff
Mr. P. L. Rickard
Mr. R. H. Spencer

June 20, 1973
Scientific Center
2670 Hanover Street
Palo Alto, CA 94304
3165

IBM Confidential

SCAMP PROJECT

Service contract number by TSD-Westlake

Memo P. LaVeau to H. Flatt dated April 16, 1973

Miss Bette Jones D-Westlake
Mr. A. McCarty - GSDHQ - Atlanta
Mr. A. Reid, Jr. - GSDHQ - Atlanta

On March 1, 1973, the SCAMP project was initiated in the Palo Alto Scientific Center. This project followed the recommendations of a task force led by Paul Friedl on development of a portable APL super calculator.

GSD (Mr. Phil LaVeau) funded the Scientific Center for two people for six months, March through August 1973, in the amount of \$30,000. Monthly billings of \$5,000 are to be sent to A. T. Reid, Jr. (GSD HQ, Atlanta) and will be charged to Dept 876, Account 36-842-8603.

Within the Scientific Center, all SCAMP work will be charged to Project 8133 (Systems Design).

✓Paul Friedl

jd
cc: Dr. H. P. Flatt

P
July 12, 1973
Palo Alto Scientific Center
2670 Hanover Street
Palo Alto, CA 94304
8-624-3165

ASD/SC for Gaths Laboratory
March 15, 1973

Services on SCAMP project by FSD-Westlake

Phone conversation (Friedl to Papin - 7/12/73)

Mr. F. Papin - FSD-Westlake
Mr. A. McCarthy - GSDHQ - Atlanta
Mr. A. Reid, Jr. - GSDHQ - Atlanta

This is to confirm the above conversation which concerned the remaining project activity for Messrs. Gerry Serling and John Kneemeyer of your group as follows:

- 1) John will be available only through August 24, 1973.
- 2) Gerry will complete his present SCAMP assignments by August 1, 1973. No project billing for Gerry should be processed after that date.

A memo has been placed for the blank key sets we discussed last week. Thanks for the specs and ordering package.

P. J. Friedl

J. D. George

cc: B. Jones, PASC
P. Smith, PASC
L. Harper, AMZ, Los Gatos
PJF/go

Public Center
1000 Market Street
San Francisco, CA 94104
8-624-3165

Billing for Ms. Pat Lang on SCAMP project

Ms. M. Varner, GSD - Menlo Park
Mr. A. Salaby, GSD - Menlo Park
Mr. A. McCarthy, GSDHQ - Atlanta
Mr. A. Reid, Jr., GSDHQ - Atlanta

This is to inform you that Friday, July 13, 1973 is the last day of work for Ms. Pat Lang on SCAMP and that no charges for her services should be made to the SCAMP account after that date.

Paul Friedl
word used by the author.

CC: B. Jones

PF/go

I. 1130 APL

A. Floating point arithmetic package

The arithmetic package consists of a set of subroutines which support standard precision floating point arithmetic. These are derived from modules in the 1130 Standard Library and modified with respect to the most assumptions and use of 'Real'

September 27, 1973
Palo Alto Scientific Center
2670 Hanover Street
Palo Alto, CA 94304
8/624-3165

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SCAMP I Development - Critical Requirements

Two key people from the SCAMP program development team must come to Palo Alto for at least 4 weeks to complete the APL/1130 programming technology from Kitty Price and myself.

Dell Hollenback needs to be informed about: 1) how to go about extending GSDHQ - Atlanta the system to 1130; 2) how to maximize the use of RDS in the system without serious performance degradation; 3) how to maximize or change the APL program (without loss of storage capacity).

Following the events of the past few weeks, it is mandatory that documentation of the SCAMP I system be generated in order to move the project into a product development/release phase in a timely and orderly fashion. To this end, we are preparing documentation having the following structure:

1. System Architecture
2. Hardware Components
3. Emulator
4. APL/SCAMP System Program
5. Future Requirements
6. Development Tools and Aids

Under each of the first four items, the following subheadings will probably be presented:

Paul J. Friedl

- .1 Introduction/Overview
- .2 Design Considerations
 - .2.1 Requirements
 - .2.2 Tradeoffs/Alternatives
 - .2.3 Implementation
- .3 Flowcharts
- .3.2 Formats
- .3.3 Narrative description (where necessary for clarity)
- .3.4 Listings

Besides the documentation described above, other critical requirements need immediate attention.

- A) The only person having knowledge of the internals of the SCAMP APL/1130 software (Kitty Price) is to go on maternity leave of absence any time after 12/1/73. She does not plan to work full time if she returns to work at all.

September 27, 1973
Page 2
Dell Hollenback

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IBM

ACTION NEEDED:

Two key people from the GSD program development team must come to Palo Alto for at least 4 weeks to assimilate the APL/1130 programming technology from Kitty before she leaves!

Prime questions to be investigated include: 1) how to go about extending arithmetic precision to 11 digits; 2) how to maximize the use of ROS in the system without serious performance degradation; 3) how to maximize or change the APL program (workspace) storage capacity.

SCAMP I Reference Your memo of 9-27-73

B) An excellent SCAMP microprogrammer from FSD (Dick Flagg) is now returning to Gaithersberg with his family. Dick would be a good addition to the development programming group and is also interested in the possibility of moving to Boca Raton.

ACTION NEEDED: It would be helpful if your people reviewed section C-4 and document on the various subjects contained in this. Dick should be "hired" before he becomes a critical skill in whatever competitive FSDs project he will be joining. Trade considerations may not be firm today, but their recommendations on how these items should be handled would be very beneficial.

Please let me know of your intentions on these matters as soon as possible.

With respect to Kitty leaving on 12/1, we will plan to have two programming people out there starting 10/29.

By Paul J. Friedl, requirements will be defined and at that time we should be in a position to discuss the possibility of Mr. Slattery joining the SCAMP project.

cc: D. Slattery GSDHQ
P. LaVeau GSDHQ
I plan to be in Los Angeles the week of 10/15 and would like to discuss all of these projects with you in more detail at that time.
H. Flatt PASC
P. Smith PASC

B. D. Hollenbach

B. D. Hollenbach

RDR/gs

Mr. D. Slattery GSD HQ
Mr. P. LaVeau GSD HQ
Mr. H. Flatt PASC
Mr. P. Smith PASC

SCAMP

Name

Internal Zip

City & State

To: Dr. P. J. Friedl

IBM

From Date:

Name & Title/Ext.: October 9, 1973

Title/Dept. Name: 8-939-5231

Internal Zip/City, State:

876

or U.S. mail address: Atlanta
GSD HQ

Subject:

SCAMP I Development - Critical Requirements

IBM CONFIDENTIAL

Reference:

Your memo of 9-27-73

Documentation of SCAMP I programming is a critical requirement. The structure you presented in your letter is comprehensive. Eventually we will be writing final specifications and will probably follow section C-4 of the SDD Development Guide. It would be helpful if your people reviewed section C-4 and documented their thoughts on the various subjects contained in this section. Some of the items, such as RAS characteristics, competitive analysis and World Trade considerations may not be firm today, but their recommendations on how these items should be handled would be very beneficial.

With respect to Kitty leaving on 12/1, we will plan to have two programming people out there starting 10/29.

By 10/15 our manpower requirements will be defined and at that time we should be in a position to discuss the possibilities of Mr. Flagg joining the SCAMP project.

I plan to be in Los Gatos the week of 10/15 and would like to discuss all of these subjects with you in more detail at that time.

B.D. Hollenbach

B. D. Hollenbach

BDH/gs

cc: Mr. D. Slattery GSD HQ
Mr. P. LaVeau GSD HQ
Mr. H. Flatt PASC
Mr. P. Smith PASC

November 21, 1973
Scientific Center
2670 Hanover Street
Palo Alto, CA 94304
8/624-3165

IBM CONFIDENTIAL
IBM CONFIDENTIAL

4) HIGH PERFORMANCE SCAMP ENGINE

- Advanced Technology Activity for SCAMP in SCAMP prototype.
- Write C/L programs to simulate 1130 (including disk file and graphics support).
 - Evaluate performance.

RECOMMENDATIONS

Mr. Pat Rickert

GSDHQ-Atlanta

To accomplish all or any of the above activities, it is recommended that a small group of 2-4 college student programmers be hired on a part-time basis. These people would report to the Scientific Center in the usual manner, and would work with Roy Harper's role in the development of SCAMP. We foresee the need of various project activity which is highly desirable but which may not comfortably fit into your present SCAMP development plans because of time or headcount constraints. This ad. tech. activity would be aimed at producing and evaluating various new programs and hardware modules for use in the SCAMP program. Specifically, the following activities are suggested:

10 hrs./mo. 145 time x \$600/mo. = \$1,890/month salaries, plus \$600/month computing

- 1) SCAMP DISK
- | | |
|---|---------------|
| TOTAL | \$1,890/month |
| - Install a mini disk on SCAMP prototype in Los Gatos. | |
| - Prepare programs to support disk I/O (preferably as an extension to the present SCAMP 1130 emulator). | |

Note: I/O and CPU hardware. Their cost was not added into the above cost estimate.

2) SCAMP GRAPHICS

Please let me know when you will be available to do this work.

3) SCAMP APL INTERPRETER

- Modify the APL/1130 Program Product to run on SCAMP (with disk).
 - Evaluate performance and function
- (Note 1: this could be an extremely important activity which develops a backup or alternative approach to the SCAMP 1 or 2 APL interpreter.)
(Note 2: this 1130 APL system offers larger workspace, full APL operator set, no restriction on vector size, and increased precision of 9 digits).

4) SCAMP-ORIENTED LANGUAGE PROCESSING ARCHITECTURE

- Develop and test an intermediate meta machine architecture for supporting language processors. Specifically supported would be APL and BASIC, although other languages such as RPG or COBOL should be also supportable.

This meta machine (M-Machine) approach will be designed in such a way as to minimize the effort needed to translate from one machine environment to another. One way to consider writing one - which

... use the
ing advantages:

- (a) virtual workspaces
- (b) full APL operator set
- (c) no practical restriction on vector and array rank and size
- (d) 9 digit precision (instead of 6) (and with a more straight-forward approach for extension to 11+ digits)
- (e) this APL software is extremely well documented
- (f) reduces read/write memory requirement (possibly by 50%).

III. HOW TACTICS FIT WITHIN LONGER TERM STRATEGIES

1. The development of the GEM engine by Roy Harper's group is beautifully placed to play a major role in the above strategic plan. This is so because the GEM engine is far superior to PALM as an engine to emulate 1130 and S/3. When ready, GEM could be installed in SCAMP with only the relatively minor effort of producing the two emulators in GEM code. Note that it should not be necessary to modify APL or BASIC software at all when GEM is introduced!
2. The addition of the flexidisk makes possible the advantages of running major portions of present 1130 and S/3 program libraries as proposed originally for SCAMP 2. These huge libraries could be run if the 1130 and S/3 "GENULATORS" were to be fully extended to include the handling of logical card I/O, printer, and console operations.

The thought of being able to run CSMP, RPG, COGO, ECAP, etc. etc. fairly makes my mouth water, and I think our customers will agree. One can visualize CSMP or COGO or ECAP being operated interactively using the SCAMP display - WOW!

IV. SUMMARY

Obviously the above proposal is predicated on the viable and timely product development of the flexidisk. The possibility of this development should be assessed immediately in order to determine the total optimal product development strategy.

Paul J. Friedl

cc: P. LaVeau - GSD, Atlanta
R. Harper - Los Gatos

bcc: D. Hollenback - GSD, Atlanta
H. Flatt - PASC
J. George - Los Gatos