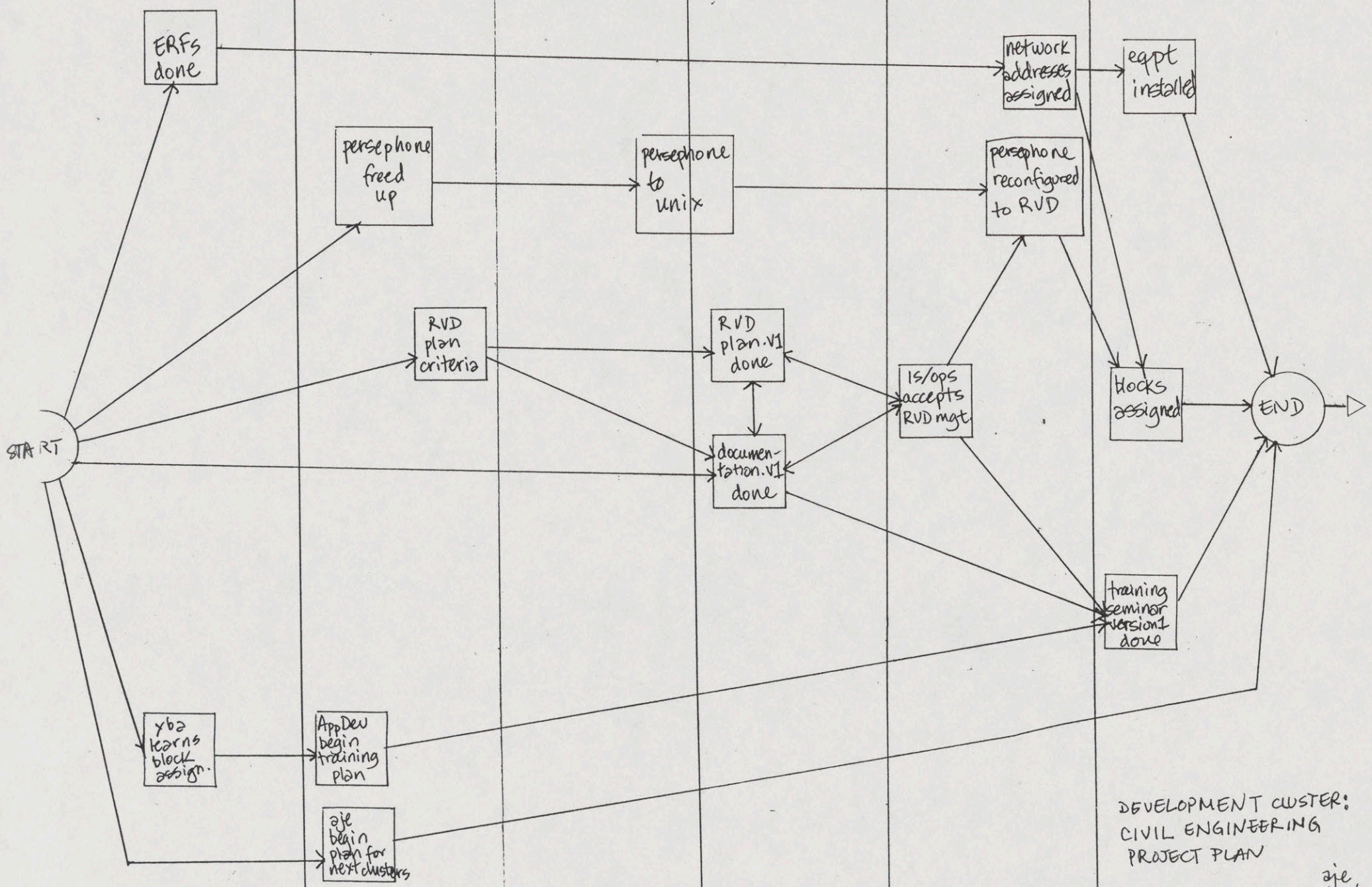


MGR / PLANNING



3/3 - 3/7	3/10 - 14	3/17 - 21	3/24 - 28	3/31 - 4/4	4/7 - 11/86
WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6



DEVELOPMENT CLUSTER:  
CIVIL ENGINEERING  
PROJECT PLAN

aje  
3/11/86



## Project Athena Operations

topic	contact login
-----	
/usr/lib/aliases.....	.melissa,beth
accounting procedures.....	.mary
acrb.....	.geer
air conditioning.....	.et,hotline
assistance (to projects).....	.appdev
(to courses).....	.melissa
allocations.....	.ajericks
backup problems.....	.bertha,op_staff,alix
backups.....	.cc
beta software.....	.yba,dgg
bills (telephone, Faculty Club).....	.mary
blox.....	.viola,ellis
bug reports (software).....	.droogprojects
cable problems.....	.hotline
calendars (Bill Hogue's).....	.charla
(Steve Lerman's).....	.charla
(Jerry Saltzer's).....	.leah
(Eva Tervo's).....	.mary
clu.....	.tony
cluster maintenance.....	.op_staff,et,cc
coffee service.....	.mary
consultant schedules.....	.beth,cadmin
course accounts.....	.melissa
courses (procedures for).....	.melissa
(operations support).....	.et
database development.....	.ostlund
database for property.....	.et
database for registration.....	.ostlund,melissa
databases for users.....	.ostlund,melissa
Dec-specific issues.....	.spm,jg,tony
developmental tasks.....	.Saltzer
dialups.....	.alix
disk crashes.....	.hotline
disk quotas.....	.melissa
development clusters.....	.ajericks
documentation (user).....	.lbn,meadow
(operations).....	.alix
dorm clusters.....	.ajericks
dos.....	.arnie,mjohnson,meadow,saps
educational evaluation.....	.kccohen
emacs.....	.watchprojects
emergencies.....	.hotline
equipment requests from projects.....	.lerman,et,ajericks
equipment storage.....	.et,rip
Federal expressing.....	.mary
field service (DEC).....	.gary,mdmorse
(IBM).....	.hotline
fortran.....	.appdev
gremlin (op_staff) schedules.....	.cc
Grub Administrator program (gadm).....	.melissa



hardware problems.....hotline  
hydrovax.....gary,jdb  
hotline.....cc,joshua  
IBM-specific issues.....rip,mtc,arnie,mjohnson,mike  
IBM-terminal emulators.....mtc  
IBM-PC (staff) questions.....arnie,mtc,mjohnson  
imagen.....tony,mike,hotline  
Ingres (university).....ostlund,melissa  
    (rti).....ostlund,melissa  
IVIS.....gant  
Kermit.....mtc  
keys.....mary  
library.....connie  
lisp.....yba  
lock resetting or problems.....hotline,et  
Macsyma.....vis  
MH.....tony  
mail sorting and distributing.....jhickey  
mail software.....dgg  
mailing out Athena publications.....jhickey  
man pages (on line).....dgg,watchprojects  
    (hard copy).....billb,red  
meetings.....jhickey  
modems info.....et  
motds.....bertha  
movers.....mary  
nameservers.....jis,dgg  
network down.....hotline (referral only)  
network issues.....jis,dennis,jdb,dgg  
network news.....alix  
new accounts (policy).....lerman  
    (setting up).....melissa  
new clusters (plans).....et,ajericks  
    (in progress).....et,ajericks  
new proposals for Athena.....lerman,connie  
news clippings.....connie  
office supplies.....mary  
on-line consulting.....beth,treese,consultants  
paperwork and filing for operations.....mary  
parking (stickers).....connie  
    (reimbursement).....mary  
payroll (non-student).....connie  
    (student).....mary  
PC network package (PCIP).....  
penplot.....appdev  
personnel.....connie  
passwd (root).....ostlund  
petty cash.....mary  
physical plant and Fixit interface.....et,connie  
policy changes.....lerman,jis,jdb,rip  
preventive maintenance.....gary,hotline  
printer (hardware and maintenance).....hotline,op\_staff,gary  
    (software).....philipp  
printer paper & supplies.....hotline,et  
Project Athena Newsletter.....lbn,aogura  
property office tagging.....et,tmd



publicity.....lerman  
 purchasing.....mary  
 QA/testing.....watchprojects  
 quotations from vendors.....et,mary  
 random xeroxing, typing, or errand-running...connie  
 registration program.....ostlund  
 release engineering.....alix  
 remote virtual disk.....dgg,jis  
 repair requests.....hotline  
 resource allocation.....et,ajericks  
 restoring files.....bertha,droogprojects  
 rsl.....appdev  
 scribe database.....lbn  
 security (physical).....ljryan,ajericks  
     (software).....Saltzer  
 seminar series.....connie  
 scheme.....yba  
 sipb software.....wcs  
 software development.....Saltzer  
 software distribution (external).....  
 software installation (plans).....Saltzer  
 source control.....dgg,geer  
 space (mit).....jdb,et,ajericks  
     (office).....wfhogue  
 special-case accounts.....melissa  
 student consultants.....beth,cadmin  
 system management.....alix  
 telecommunications.....dennis,jis,dgg  
 telephones.....connie  
 terminal lines.....et,op\_staff  
 tools.....et,op\_staff  
 transportation of equipment.....et,cc  
 travel.....mary  
 truck shipments.....et,tmd  
 20/20.....  
 ultrix.....jg,mike,dgg  
 unix (kernel/system issues).....hackers  
     (user issues).....beth,consultants,jstewart  
     (software problems).....hotline  
 unsupported software.....dgg,watchprojects  
 user accounts.....melissa  
 user assistance.....beth,consultants,yba,jstewart  
 user minicourses.....beth  
 user policy.....lerman,jstewart  
 van.....tmd,et  
 visitors (outside, tours).....charla,lerman  
 vs100 software development.....jg,tony,newman  
 who-does-what.....cc  
 window systems.....jg,tony,arnie,newman



Return-Path: wfhogue@JASON  
Received: by JASON (5.15/4.7)  
id AA03403; Wed, 19 Feb 86 07:57:27 EST  
Received: by ATHENA (5.15/4.7)  
id AA10911; Wed, 19 Feb 86 07:57:21 EST  
Received: by JASON (5.15/4.7)  
id AA03395; Wed, 19 Feb 86 07:57:15 EST  
Message-Id: <8602191257.AA03395@JASON>  
To: lerman@JASON  
Cc: wfhogue@JASON  
Subject: Directors Agena Item  
Date: Wed, 19 Feb 86 07:57:13 -0500  
From: wfhogue@JASON

I believe we may be in danger of losing the confidence of a large portion of the staff if we (the directors) don't produce a written strategic plan. I don't think I am overstating the case.

I would like to make sure we discuss this at tomorrow's directors' meeting. In the aftermath of today's managers' planning retreat, I can provide the directors with a list of specific issues on which the managers are seeking a directorial initiative. This should help focus the discussion.

It is probably the case that we have spent too much time and energy over the past few months worrying about pressing operational issues. Now that we have a strong managerial team, we need to change the focus of our efforts.

Bill



Date: February 11, 1986  
To: Managers  
From: Steve Lerman SRL  
Re: Attached Strawman Plan for the Next 18 Months

---

The attached timeline is meant to serve as a framework within which we can begin to plan at least the next 18 months of Project Athena and assess the obstacles facing us as we do so. It is in no way meant to be "the definitive plan"; it is something against which you can bounce your ideas. The ultimate goal is for us all to create a Project-wide, coherent plan.

Some notes to the timeline:

1. This is an internal document and should remain confidential to this group.
2. Amounts of equipment: The total amount is between 628-678 workstations, more or less evenly divided between DEC and IBM. These amounts are broken down below.

For development clusters, we are hoping to install 60-75 workstations.

For new clusters, we hope to install over 90 workstations. In living groups, we hope to do a pilot group, involving 4-6 living groups for a total of approximately 40-50 workstations. We would also like to see if it would be possible to do an intensive experiment (i.e. one workstation in every room, or every suite) in a dorm and ILG. That would take another 65-70 machines. And if we could squeeze in, say, one more dorm and 5 or more ILGs, that could take another 60 or so workstations.

We hope to install workstations in one or two of the libraries, with 20 workstations in each one.

Cluster conversion: we were thinking of doing a 1 to 4 ratio of timesharing to workstations as a first step. One 11/750 would remain a timesharing machine.

Our figures were as follows:

1-142	26 ws, 4 ts
11-113	22 ws, 4 ts
W20	60 ws (30 DEC, 30 IBM)
38-344	10 ws, 4 ts
66-080	25 ws, 4 ts
2,4,6	36 ws, 12 ts
16	22 ws, 4 ts
E51	11 ws, 4 ts
9-550	20 ws, 10 ts

total DEC in clusters: 114 ws, 16 ts  
total IBM in clusters: 119 ws, 30 ts



Department clusters are a new idea, which we have to pitch to the faculty. Some departments are already interested or already informally started, like Mech. E. and Ocean E. We hope to be able to do 10 such clusters with 10-15 workstations each.

3. Gating factors: A list of the ones that come immediately to mind is attached. Several more are:

RVD is coming along, but we've decided not to distribute it at all to the outside world until we can do so in an organized manner. Preparation for an orderly distribution involves quite a few groups, so will take some time. Dan Geer is coordinating this.

The Institute is now involved with the living group planning, and it needs to make a decision on finances. How long this will take is not clear; hopefully it will not delay our prototype groups too much.

Athena's expansion is closely linked to the rewiring of the campus phone system, so its progress will gate ours in some ways.

Please feel free to hack at this timeline and to add your own favorite gating factors, problems, improbabilities and impossibilities. We will schedule a meeting to discuss all of this.



Gating factors:

\* 4 Fraternities Done

- ILG server strategy (printers, RVD etc)
- telephone co. 10Kb line
- gateway for 10Kb line
- legal/liabilities issues
- service/operations strategy
- training/documentation strategy
- public workstation software/documentation (inc. authentication, mail, validity of disk contents, etc.)
- physical improvements (esp. electric)

\* 1 Dormitory Done

- server/network problem
- physical plant work - space, power, cabling for internal network
- coalition-building
- most of fraternity problems

\* 6-10 Development Clusters

- high degree of contact time (with whom?)
- network connection
- server strategy
- service strategy
- space prep (department)
- private workstation software/documentation
- RVD availability

\* Departmental Cluster (3-462)

- networking
- air conditioning/physical
- RVD service
- develop strategy for handling new dept. clusters
- all public cluster problems

\* Public Clusters (37-312, 4-035)

- network
- RVD service
- public workstation software/documentation

\* Library

- printer strategy
- network
- public workstation software/documentation
- operations service

\* Cluster Conversion

- course computing schedule
- applications software conversion
- public workstation software/documentation



PROPOSED ACCOMPLISHMENTS TIMELINE

February

VS100 installation in clusters complete  
LN03 installation in clusters complete  
1-245,272 installed

March

demo center done  
38-600 has 2 VS2's

April

15 fraternity proposals due 4/1  
wiring for 4-035, 37-312 done

May

4 development clusters done

June

department cluster proposals in  
rvd plan done (for first 6-10 development clusters)  
Libraries proposal in  
3-462 with all of first 10 VS2's installed

---

BY September 1986

15 new fraternity plans  
4 fraternities done  
1 dormitory done  
9 fraternities underway  
1 or 2 dormitories underway  
6-10 development clusters finished  
3-462 done  
37-312 done  
4-035 done  
2 and 4 converted  
rvd plan done (for workstation clusters)  
initial department cluster plans done  
16 and 9-550 converted



FEBRUARY 1986 MARCH 1986 APRIL 1986 MAY 1986 JUNE 1986 SUMMER 1986 FALL 1986

IAP 1987 SPRING 1987 SUMMER 1987 FALL 1987 IAP 1988

Development Clusters (depends on RVD)  
(13 proposed)

1 or 2 done-----4 done altogether-----6-10 done altogether

New Clusters

2,4,6,16 & E51) 2 or 4 conversion-----)-----]  
up & running ) 37-312-----)-----]  
on network ) 4-035-----)-----]  
(no RVD) ) 3-462-----)-----]  
20C-1xx-----)  
VS100 Hydrovax (RVD)??????------(end construction?)------(software?)----]??????  
LN03

Living Groups

2/10 - ask for proposals from-----4/1 deadline-----planning-----  
last LCG's  
start construction for first 116's (pilot)-----start install-----  
start construction for first dorms-----installation

Libraries

start discussions-----have proposal done-----start install---

Cluster Conversion

RVD plan-----intensive planning-----ethernet wiring in-----  
\*2 or 4 conversion 1, 11, W20, 38  
\*16 conversion \*6 conversion  
\*9-550 conversion

Department Clusters

Proposals due?-review cycle-----2 built-----

-----20C-1xx done

(3rd phase)  
start construction-----installation-----all installation done  
-----install 2nd phase  
installation-----3/87 end installation  
2nd dorms begin-----construction/installation-----end 2nd dorms  
installation-----end installation

\*66 conversion-----1,11,38 conversion-----]  
\*W20 conversion

1 built-----2-3 built-----4-5 built



*Dan Geer*

Return-Path: wfhogue@JASON  
Received: by JASON (5.15/4.7)  
id AA10185; Tue, 18 Feb 86 10:00:23 EST  
Received: by ATHENA (5.15/4.7)  
id AA04474; Tue, 18 Feb 86 10:02:53 EST  
Received: by JASON (5.15/4.7)  
id AA10179; Tue, 18 Feb 86 10:00:07 EST  
Message-Id: <8602181500.AA10179@JASON>  
To: jstewart@JASON  
Subject: Planning Agenda  
Date: Tue, 18 Feb 86 10:00:04 -0500  
From: wfhogue@JASON

Jackie --

Below is a proposed starting place for our meeting. Let me know what you think and feel free to do forward/discuss it with anyone you choose...

February 19, 1986

AGENDA -- Managers' Planning Retreat

1. Realistic Goals for this Session: We Can't Do It All In One Day

Given the planning vacuum of the past two years, it is unrealistic to expect to fix the Project in one day. We need to suggest some strategic goals, look at the difficulties of translating strategic goals into tactical ones, and then establish tactical plans. This very large task will require several meetings to establish a baseline, followed by ongoing maintenance.

2. The Strategic Plan: Some Educated Guesses

Based on comments, notes, directors' meeting minutes, and conversations, the Managers need to outline a broad strategic plan for the next 18-24 months.

The timeline developed by Alana, Jackie's list of questions, and the results of our joint meeting last week may help form this discussion.

Following the directors' lead, three major categories for consideration might be hardware, software, and educational plans.

A. Hardware -- Alana's timeline might serve as a useful starting point for formulation of overall hardware strategies.

B. Software -- The Technical Plan would be a big plus here. In its absence, we may need to deduce certain things about the Athena computing model, proposed cooperation with CMU and Brown, and realistic expectations based on Dan Geer's assessment of the systems development group.

C. Education -- This is the big void. Somehow, we need to suggest



a strategic plan that alters the allocation process to give greater emphasis to proper software design, longer-term, more thoughtful approaches to difficult questions, and improves communication between central Athena and the faculty projects.

This plan may be informed, in part, by Karen Cohen's work. Additional work may be forthcoming from Greg Jackson, Don Schon, and Sherry Turkle -- but it will be coming too late to help us. Perhaps an examination of their questions will help inform the planning process.

3. From Strategy to Tactics: Rocky Road.

Many questions need to be resolved, not the least of which are those listed by the managers in preparation for the joint meeting. In addition, there are several others that come to mind...

- \*\* laundry list of needed policies and procedures
- \*\* method to assign Project Managers, and definition of what Project Management means
- \*\* IS/Athena cooperation
- \*\* involvement of AT&T in the Project
- \*\* loss of key personnel in '87-'88

The managers need to provide their own answers and move on.

4. Tactical Plan

n Once the preceding steps take place, individual projects should fall into place. It is unlikely that we will reach this step in our initial meeting.



Please put major changes under  
my door by 1:15



February 20, 1986

To: Directors  
From: Bill Hogue  
Subject: Planning Retreat to Consider Strategic Issues

At Athena's mid-life, it may be appropriate to address, in written form, a variety of issues important to the future direction of the Project. I propose a planning retreat as the most efficient way to accomplish this end.

Below are listed six strategic issues about which there exists considerable confusion -- both on the staff and in the MIT community at large. This is by no means a comprehensive list, but it is a useful starting point for such a retreat.

Beneath each of the large questions are listed sub-questions which need to be considered. Many of the sub-questions can be answered by our management team, but only in light of clear statements addressing the larger issues.

## STRATEGIC ISSUES

1. What roadmap can we lay out to meet Project Athena's educational goals?

### -- Faculty Projects

- Can we formulate a clear restatement of what the Institute is trying to accomplish with these grant moneys?
- Should we begin to encourage more departmental proposals that have the implicit or explicit approval of departmental curriculum committees?
- Can Project Athena be more proactive in establishing feedback mechanisms and evaluation procedures to ensure that the Institute gets interesting, innovative, and visible results from the \$10-million investment that is at the heart of the Project?
  - \* provide faculty training?
  - \* establish pre-consultation with Athena staff and review of technical feasibility as prerequisites for funding?
  - \* obtain and evaluate status reports from developers?
  - \* collect and distribute faculty software:
    - coherence?
    - quality control?
    - sources?
    - documentation?

2. How can we clarify some fundamental issues concerning hardware and vendor relations to ensure compatibility with educational objectives?

### A. Hardware

- What are overall objectives governing location of hardware and appropriate vendor choices at specific sites?
  - \* generic workstations?
  - \* early visibility to black box specifications for 9/86?
  - \* cost effectiveness for post-1988?



- \* push toward departments with clear commitment to computer intensive environments?
- \* need to slow projected delivery schedules to ensure Institute's ability to use effectively?
- \* implications of mixed vendor Living Group sites?

B. Information -- Can we inform planning with regular, accurate grant accounting?

3. How can we strategically plan for staffing needs?

- Clear plan for staff migration as Project winds down, particularly for development areas where there is no established parallel organization in IS.
- Definition of student staffing levels and clear approval process.
- Overall examination of cross-group staffing in anticipation of vacancies and shifting workloads.
- Clear response on addition of new positions -- cannot allocate staff resources without straightforward approval or disapproval of new positions.
- Anticipation of what will NOT get done without additional staffing --- mapped to technical and strategic goals.
- Visibility to selection process for industrial staff.
- Implications of continued support for Phase I while introducing Phase II.
- Increased support staff levels to support Project areas currently unsupported (cost-effectiveness?)

4. Can we clearly set goals and expectations for Athena's involvement with, and responsibility to, MIT, IBM, DEC, and the outside world?

- A. Newsletter
  - Yes, no, target audience, staffing.
- B. Project Booklet
  - Format, staffing
- C. General Communications
- D. Strategy for broad software distribution...Athena/Berkeley contacts, participation on Standards Committees.
- E. Relationship with MIT sub-units outside Athena who want to "stay current with Athena."
- F. Documentation and user support.

5. Assuming the addition of a third major vendor to the Project, what are our contingency plans?



6. Can we reexamine and re-state our goals to help address the fundamental tension existing between a service environment that is market-driven versus an experiment which is driven by educational and technological goals?

A. User interface -- where are we going and how do our decisions map to our educational and technical goals?

-- Amplify Brown/CMU software or develop home-grown?

B. Where should limited resources be directed? (see staffing, above)

C. Model of computational environment we expect to see in '88.

D. Stability implications for operational and support groups.

E. Data from Karen Cohen and others to inform plans?



ngis  
planning

19 Feb 86

connie  
kelley  
jstewart  
geer  
yba  
sjericks  
wifhoque

evaluation is lacking  
esp. for faculty projects  
& their educational impact

Handling of visitors (will be taken  
care of by having open Fri. pm.'s)

a long list by everyone of their  
aggravations - mine attached

issue comes down to

Henry Wilson has no ride to Athena failure  
& won't listen to any complaints

Salyer & Lerman will not plan, but  
will critique

we (ngis) should do the plan

but we cannot answer the educational  
issues, i.e. the goal setting we  
hist. to meet



proposals

limit mg's meetings in size

for me, remove spen + r/p

dél prepare an overall list  
of what's up + what will be.]

list of questions for Director 20 Feb 86

something on faculty projects

how to keep projects non-trivial

+ using Athena's newness

insist on pre-consultation w/ staff

funded projects must be demon-

strated to us + spur turned

over to us

should we change the point of

solicitation (dept. level

rather than P.I.)

what h/w → whom + why?

staffing: industrials, count,

migration path, service related

vs. dev. related, diversity cost

public relations { <sup>extds. comms.</sup> dissemination } in MIT/out MIT

user interface + its importance } <sup>advertising</sup> have to do as good as CMU

planning contingencies for AT&T,

and hardware independence

vs. obsolescence



are we a service?  
tech plan & role  
file system (RVD, NFS, RFS, etc.)  
security on WS from industrials  
auth from K vs job desc; respect  
staffing levels (now + 87/88)  
documentation (req. + resp.)  
mail by whom (IS/Telecom/?)  
dgg/jis specialness  
budget authority + resp.  
CMU/Brown cooperation  
user interface (Andrew)

(tech vs mkt driven)  
update freq. ←  
vendor relations + resp.  
other vendors (AT&T)  
precedence of tasks  
potential obsolescence  
appropriate mgr. favour  
/usr/mit vs /usr/athens  
+ BSD access  
auxilliary Athenos  
(eg. RVD@LCS)  
guinea pigs for dev.  
w/in staff cluster  
single version vs. 100 flow-  
pushing X, etc., as a std.  
how to influ. industrial  
to provide staff we  
want + can use  
SSC/ACRB relations  
sec. support



I. Where are we going?

Goal setting and definition of what the goals mean.  
Integrated plan for project (priorities, between  
different projects, need to be set up) with  
a well-defined Project (planning) Manager.  
Long-range plan from Directors.  
Decide what policies need drawing up.  
Provide the long-range strategic plan.

II. How are we going to get there?

A. Who are we? (relationships internal to Athena)  
Closure on Endicott House Agenda.  
''Athena's vision''.  
Clear charter for every group.

B. Some specifics

RVD - where is it going as a model of computation.  
Real budgets.  
Realistically address problems with Operations.  
Determine the model for paying for equipment after  
the end of Athena.