

## Traineeship Issues Concerns

### Proposal:

Phase I: NSF Graduate Traineeship Program

FY: 92: \$25 M...

\$25,000 stipend plus institutional support  
requiring \$7 K institutional match  
1000 new starts

FY93---: Building to \$125 M per year

Phase II: Mission agency matches

FCCSET recommendations for \$150 M across  
all agencies in first year...originally FY92  
but deferred to FY93

Phase III: Building to \$300 - \$400 M by mid 1990s...

...then declining as doctorate problem is met.

Education and Human Resources as key priority

Pipeline problem

long term: rebuild

short term: doctorate shortage

Why critical?

turnover of faculty

industrial and government needs (.70%)

decline in U.S. nationals (some > 80%)

air bubble in pipeline

...absence of U.S. nationals at graduate level

or on faculties create role model problem

...UGs...and hence K-12s...cannot identify

with engineering/science careers

Particular concern:

New FCCSET process...

priorities: precollege > UG > graduate

Hence: + 38% > 22% > 2%

Thus FCCSET process is threatening graduate  
education, just at the most critical time!

What to do in short term?

NSB...

Two years of study...

Traineeship as the key initiative

Why not RAs?

Will not provide security of traineeship/fellowship  
(and security of long term support is the key  
to attracting more US nationals)

Also RAs are far more expensive (ICR, fringes)

Why not fellowships?

Want to provide maximum incentives to faculty  
to recruit. Best way to do this is to make  
them responsible for filling slots allocated to  
their departments.

Will spread the load of talented students better  
over university departments. In present system,  
everyone wants to go to MIT, Stanford, or  
Caltech...and not only can they not handle  
the load, but there are other better programs out there

Allows for better targeting of investments to national  
needs...and assists in building strong programs.

Belief:

Note this was a highly unusual action by the NSB...

yet felt to be of such overwhelming importance,  
that they believed highest priority should be given,  
even if this meant reallocation "within the envelope".

In particular it was critical to get this going in FY92...  
since we are losing valuable time in dealing with a very  
urgent crisis.