V. MANAGEMENT GOALS

Business Practices
- Electronic Proposal Submission
- Electronic Proposal Processing
- Videoconferencing

NSF Staff
- Diversity
- Work Environment

For FY 2001 we emphasized five performance goals (three of them new) related to implementation of information technologies and human resources development. These goals address the incorporation of advanced technology into NSF business operations, and human capital involving diversity and the NSF work environment.

Summary of Results for Management Goals

We achieved four of five management goals in FY 2001. We achieved our goals for electronic proposal submission, electronic proposal processing, videoconferencing, and staff diversity. The one management goal not achieved involved conducting an employee survey on our work environment. As in FY 2000, we engaged an outside firm to verify and validate performance information for most management goals.

We consider four factors to be especially critical to management excellence at NSF:

- Operating a viable, credible, efficient merit review system;
- Exemplary use of and broad access to new and emerging technologies;
- A diverse, capable, motivated staff that operates with integrity; and
- Implementation of mandated performance assessment and management reforms in line with agency needs.

These critical factors were used in our developing annual performance goals. Results for the management goals, most of which have quantitative measures, are prepared and reviewed by NSF staff. For selected goals, the auditing firm of PricewaterhouseCoopers LLP (PwC) reviewed the data collection, maintenance, processing, and reporting procedures used in our assessment.

A. Business Practices

Goal IV-1 – Electronic Proposal Submission
✓ Goal Achieved

Business Practices	NSF Staff
• Electronic Proposal Submission • Electronic Proposal Processing • Video Conferencing	• Diversity • Work Environment

Goal IV-1: Ninety-five percent of full proposals will be received electronically through FastLane.

A state-of-the-art communications and technology infrastructure has been essential to our successful management of an increasing workload. This investment also provides incentives for the recruitment and retention of high-quality employees. We continue to experiment with new means to do business electronically.

For example, FastLane, our web-based interface with grantee institutions, was developed in close consultation with the research and education communities. The most complex use of FastLane is for the submission of full technical proposals via the web. NSF is the *only* federal research agency currently receiving proposals electronically on a routine basis.

PERCENT OF PROPOSALS SUBMITTED ELECTRONICALLY IN FASTLANE					
	FY 1997	**FY 1998**	**FY 1999**	**FY 2000**	**FY 2001**
Baseline	4.4%				
Goal			25%	60%	95%
Actual		17%	44%	81%	✓**99%**[15]

RESULTS: NSF is successful for this goal. Of the 32,141 full proposals that were submitted in FY 2001, only 286 were not submitted through FastLane. *This equates to 99% of full proposal submissions received and processed through FastLane* – well in excess of the 95% goal.

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[15] The auditing firm of PricewaterhouseCoopers LLP (PwC) reviewed the data collection, maintenance, processing, and reporting procedures used to calculate results for this goal. They concluded that the procedures related to this goal were sufficient and adequate and yielded valid results. We provide the Executive Summary of their entire report, as well as a table listing their conclusions as to whether the processes we used for selected goals were verifiable and the results valid, in Appendix IV.

The following chart illustrates progress over the past five years:

**Percent of Proposals
Submitted Electronically
in FastLane
(Fiscal Years 1997 – 2001)**
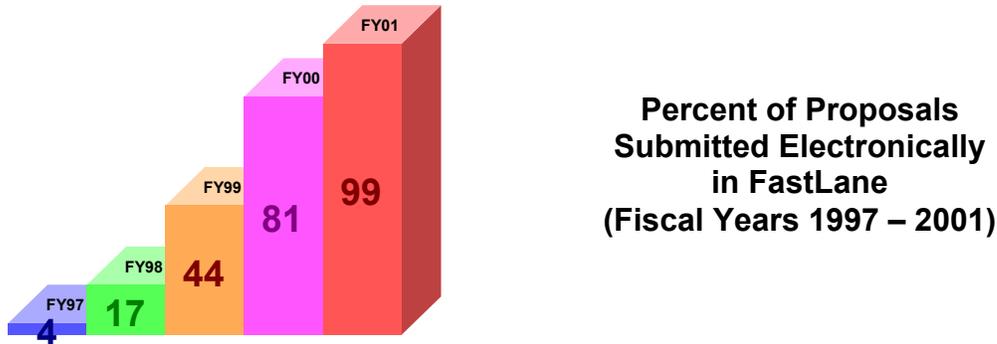
Outreach: We have continued aggressive outreach to the research and education community to promote the use and advantages of FastLane. We conducted over 30 FastLane presentations and workshops at scientific meetings, research administration conferences and educational institutions, and through videoconferencing.

Customer Service: Throughout FY 2001, our FastLane Helpdesk continued to assist our external customers.

Implementation: In view of our success with electronic submission, in September 2000, we issued Important Notice 126 to Presidents of Universities and Colleges and Heads of other NSF grantee institutions reaffirming that effective October 1, 2000, specified transactions with NSF had to be accomplished electronically via use of the FastLane system[16].

Electronic Signatures: We implemented acceptance of electronic signatures on incoming proposals in June 2001. In the remaining three months of FY 2001, and the first three months of FY 2002,19,982 (97%) of 20,451 submissions were received with electronic signatures.

IMPLICATIONS FOR THE FY 2002 PERFORMANCE PLAN: This goal will not be continued in FY 2002. Electronic submission of proposals via FastLane is now standard operating procedure at NSF.

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[16] http://www.nsf.gov/pubs/2000/iin126/iin126.htm.

Goal IV-2 – Electronic Proposal Processing
✓ Goal Achieved

Goal IV-2: In FY 2001 NSF will conduct ten pilot paperless projects that manage the competitive review process in an electronic environment.

This was a new goal in FY 2001, and represented a logical step in our evolution towards a paperless environment. As we noted above, more than 99% of all proposals are now submitted electronically. But once proposals are received, our current processes still involve paper. Ultimately, we want to make our entire proposal and award process an electronic, or paperless, process.

The pilot paperless project goal was intended to develop the technological capability to process electronically submitted proposals through the entire review process *without generating paper within NSF*.

Programs within four of our Directorates participated in the pilot. Successful accomplishment of the pilot project required all of the following tasks to be accomplished for proposals in the program:

- Receipt of all proposals through FastLane
- Electronic capture of proposal data into the Proposal, Principal Investigator and Reviewer System (PARS)
- Assignment of reviewers accomplished in PARS (if using ad hoc reviewers)
- Submission of reviewer requests through PARS (if using ad hoc reviewers)
- Printed proposals not sent to reviewers
- Submission of reviews in FastLane
- Panels, if conducted, utilize the electronic Interactive Panel System
- Funding recommendation by the Program Officer accomplished in PARS

RESULTS: NSF is successful for this goal. All ten participants in the FY 2001 pilot project successfully managed the review process in their programs electronically, demonstrating the capability for a paperless review process within NSF[17].

IMPLICATIONS FOR THE FY 2002 PERFORMANCE PLAN: In FY 2002 we will make various enhancements to several modules used in the paperless process. The FY 2002 goal doubles the number of projects, will include more directorates, divisions, and larger programs, and will incorporate the e-signature in the definition of a paperless project. The intent of making the FY 2002 pilots broader and more complex is to further demonstrate the capability and benefits of an internal paperless process, thus encouraging the majority of our programs to transition to paperless processing.

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[17] The auditing firm of PricewaterhouseCoopers LLP (PwC) reviewed the data collection, maintenance, processing, and reporting procedures used to calculate results for this goal. They concluded that the procedures related to this goal were sufficient and adequate and yielded valid results. We provide the Executive Summary of their entire report, as well as a table listing their conclusions as to whether the processes we used for selected goals were verifiable and the results valid, in Appendix IV.

Goal IV – Video Conferencing
✓ Goal Achieved

Goal IV-3: By the end of FY 2001 NSF will increase usage of a broad-range of video-conferencing/long distance communications technology by 100% over the FY 1999 level.

This was a new goal in FY 2001 and was designed to illustrate and promote the use of innovative business technologies within NSF. Over the past several years efforts have been underway to increase our ability to collaborate worldwide via videoconference. In FY 1999 we monitored videoconference usage and established a baseline of 50 videoconferences. During FY 2000 we focused efforts on increasing our technical capability in this area and marketing the technology to staff and the communities we serve. For FY 2001 we established a goal of conducting 100 videoconferences–double the FY 1999 baseline.

RESULTS: NSF is successful for this goal. We held a total of 142 videoconferences, a 184% increase over FY 1999, and logged about 342 hours of videoconferencing time (both point-to-point and multi-point) during the course of the year. Staff from six Directorates, seven Staff Offices, and members of the National Science Board conducted videoconferences during the year. Our staff used videoconferencing to hold Advisory Committee meetings, conduct FastLane training sessions for institutions across the country, conduct site visits, meet with PIs, and conduct peer review panels. We also held videoconferences with foreign sites.

NUMBER OF VIDEOCONFERENCES HELD				
	FY 1999	**FY 2000**	**FY 2001**	**FY 2002**
Baseline	50			
Goal		N/A	100	N/A
Actual		74	✓**142**[18]	

IMPLICATIONS FOR THE FY 2002 PERFORMANCE PLAN: In FY 2001 videoconferencing was viewed as a functioning, rather than experimental, technology. Because videoconferencing is an established practice for us it will not be continued as a goal. We will, however, continue to emphasize this technology for current and emerging business applications. For example, we intend to pilot videoconferencing for telecommuters and facilitate communication between visiting staff scientists and engineers and students and colleagues at their home institutions.

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MANAGEMENT GOALS

B. NSF Staff

Business Practices
- Electronic Proposal Submission
- Electronic Proposal Processing
- Video Conferencing

NSF Staff
- Diversity
- Work Environment

Goal IV-4 – Staff Diversity
✓ Goal Achieved

Goal IV-4: NSF will show an increase over 1997 in the total number of hires to S&E positions from underrepresented groups.

The NSF Strategic Plan notes that a diverse, capable, and motivated staff is one of the critical factors for our success. We are committed to diversifying our staff of scientists and engineers (S&E) in both permanent and visiting positions.

We continue to make progress in diversifying our NSF workforce.

During FY 2001 we conducted a number of activities to increase the numbers of minorities and underrepresented groups in the S&E staff. These activities included:
- Developing internal and external strategies for recruitment efforts, with direction and focus provided by the NSF Director and Deputy Director.
- Requiring supervisors to implement recruitment and selection plans to address diversity issues specific to their organizations.
- Soliciting input from senior officials regarding best practices and impediments to attracting and maintaining a diverse, professional staff.
- Ensuring diversity goals are reflected in individual performance plans.
- Endorsing comprehensive, nationwide searches for executive positions, as well as for the science and engineering staff.
- Broadening recruitment and outreach efforts through a variety of electronic websites and paid advertisements. Vacancy announcements are now listed on NSF's website and Directorate home pages, the Office of Personnel Management's (OPM) electronic listing, and the Department of Labor's Office of Disability Employment Programs Job link.
- Expanding NSF's mailing list for vacancy announcements to over 1,500 organizations, including Historically Black Colleges and Universities (HBCU), Tribal Affiliations, Hispanic Serving Organizations, and others.

We now encourage our Custom News Service subscribers to access our vacancy announcements and to request e-mail notification of specific vacancies as announcements are

posted. These electronic advancements in disseminating information have revolutionized the ability of the Foundation to bring its announcements to the attention of the science and engineering community and the general public.

RESULTS: NSF is successful for this goal. In comparison to the hiring statistics for FY 1997, during FY 2001 we achieved a 138% increase in the number of female hires and a 47% increase in the number of minority hires. FY 2001 is the 2nd year we exceeded our goal.

<table>
<tr><td colspan="7" align="center">APPOINTMENTS TO SCIENCE & ENGINEERING POSITIONS
FROM UNDERREPRESENTED GROUPS</td></tr>
<tr><td></td><td>FY 1997</td><td>FY 1998</td><td>FY 1999</td><td>FY 2000</td><td>FY 2001</td><td>FY 2002</td></tr>
<tr><td>Baseline</td><td>16 Female
15 Minority</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Goal</td><td></td><td></td><td>Efforts to attract underrepresented groups</td><td>More than 16 Female, 15 Minority</td><td>More than 16 Female, 15 Minority</td><td>More than 35 Female, 19 Minority</td></tr>
<tr><td>Actual</td><td></td><td></td><td>Achieved[19]</td><td>35 Female 19 Minority</td><td>✓38 Female[20]
22 Minority[21]</td><td></td></tr>
</table>

The success we have achieved over the past several years in the employment of women and minorities is reflected in the total on-board strength in our S&E corps. Women and minorities now comprise 39% and 21%, respectively, of our current S&E workforce, in comparison to 34% and 18% in 1997.

IMPLICATIONS FOR THE FY 2002 PERFORMANCE PLAN: For FY 2002 we will increase the baseline against which we measure success to reflect more recent hiring practices. In lieu of the 1997 baseline (16 women and 15 minorities) the baseline will become the results achieved in FY 2000 (35 women and 19 minorities). The new goal is much more challenging and will necessitate a more proactive approach in recruiting and retaining individuals from underrepresented groups.

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[19] In FY 1999, our goal was "In FY 1999, as all appointments for scientists and engineers are considered, the recruiting organization will demonstrate efforts to attract applications from groups that are underrepresented in the science and engineering staff as compared to their representation among Ph.D. holders in their fields."

[20] Includes 1 Female hired by OPP. FY 2001 is the first time OPP data is included.

[21] The auditing firm of PricewaterhouseCoopers LLP (PwC) reviewed the data collection, maintenance, processing, and reporting procedures used to calculate results for this goal. They concluded that the procedures related to this goal were sufficient and adequate and yielded valid results. We provide the Executive Summary of their entire report, as well as a table listing their conclusions as to whether the processes we used for selected goals were verifiable and the results valid, in Appendix IV.

Goal IV-5 – Work Environment
✗ Goal Not Achieved

Goal IV-5: NSF will establish various baselines that will enable management to better assess the quality of worklife and work environment within the Foundation.

Performance Indicator: Development of an employee survey.

This was a new goal for FY 2001. We realized that a systematic method of collecting relevant information on our human capital and work environment was needed in order to promote a more effective and efficient workplace and ensure that the needs of our staff were being addressed. We are committed to enhancing employee potential and promoting higher performance.

Fundamental to achieving this goal was the establishment of an organizational assessment tool (workforce survey) that would be distributed to our staff. We:

- Researched, reviewed and analyzed numerous workforce assessment tools to help identify an appropriate survey that could be administered to staff.
- Selected, after careful and extensive review, an assessment survey prepared by the Office of Personnel Management.
- Established an internal working group to develop an implementation process for this survey within NSF. We also identified employee focus groups to review questions and discuss possible concerns and responses.
- Solicited extensive involvement of all levels of staff to determine whether the survey needed to be adapted to reflect our academic culture and organization. Our senior management provided input regarding the scope of the survey questions and the timing of implementation. We briefed union officers and stewards on the survey process and management's expectations for future actions.

RESULTS: NSF was not successful for this goal. While significant progress was made towards achieving this goal we did not achieve the goal because the survey was not administered.

WHY WE DID NOT ACHIEVE THIS GOAL: Implementation of the survey was delayed for several reasons, including an extensive process to identify an appropriate survey instrument, adapting the survey to reflect NSF's culture, and carefully addressing employee, supervisory and policy level input.

STEPS WE WILL TAKE IN FY 2002 TO ACHIEVE THIS GOAL: A survey will be conducted during FY 2002.

IMPLICATIONS FOR THE FY 2002 PERFORMANCE PLAN: This goal is contained in the FY 2002 Performance Plan. This survey will inform the agency's approach to meeting the standards for success outlined in the Human Capital initiative of the President's Management Agenda.