

1993-94 SESSION  
COMMITTEE HEARING  
RECORDS

Committee Name:

Joint Committee on  
Finance (JC-Fi)

Sample:

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- 05hrAC-EdR\_RCP\_pt01a
- 05hrAC-EdR\_RCP\_pt01b
- 05hrAC-EdR\_RCP\_pt02

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➤ \*\*

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➤ Hearing Records ... HR

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➤ Miscellaneous ... Misc

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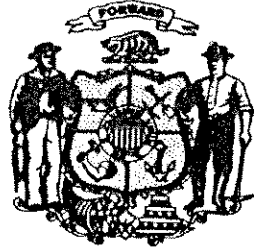
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# State of Wisconsin

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JOE LEEAN

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ASSEMBLY CHAIR  
BARBARA J. LINTON

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Phone: 266-7690

## JOINT COMMITTEE ON FINANCE

January 31, 1994

TO: Mr. James R. Klauser, Secretary  
Department of Administration

FROM: Senator Joe Leean  
Representative Barbara J. Linton  
Co-Chair, Joint Committee on Finance

We have reviewed the request from the Department of Administration dated January 7, 1994 under s. 16.515 and 16.505(2) pertaining to requests from the Public Service Commission and the Department of Natural Resources.

There were no objections to these requests and accordingly they have been approved.

JL:BJL:ns

cc: Roger Grossman  
Bob Lang

January 10, 1994

TO: JOINT COMMITTEE ON FINANCE MEMBERS

FROM: Senator Joe Leean  
Representative Barbara J. Linton  
Co-Chairs, Joint Committee on Finance

Attached is a copy of a request from the Department of Administration dated January 7 , 1994 pertaining to requests from the Public Service Commission and the Department of Natural Resources.

Please review these items and notify Senator Leean's office not later than January 26, 1994, if you have any concerns about the request or would like the Committee to meet formally to consider it.

Also, please contact us if you need additional information.

JL:BJL:jk

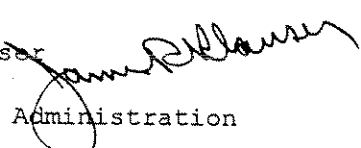
Attachments

**CORRESPONDENCE/MEMORANDUM**

STATE OF WISCONSIN  
Department of Administration

Date: Jan. 7, 1994

To: Honorable Joseph LEEAN, Co-Chair  
Honorable Barbara J. Linton, Co-Chair

From: James R. Klausner   
Secretary  
Department of Administration

Subject: s. 16.515/16.505(2) Requests

Enclosed are requests which have been approved by this department under the authority granted in s. 16.515 and s. 16.505(2). The explanation for each request is included in the attached materials. Listed below is a summary of each item:

<u>AGENCY</u>	<u>DESCRIPTION</u>	<u>1993-94</u>		<u>1994-95</u>	
		<u>AMOUNT</u>	<u>FTE</u>	<u>AMOUNT</u>	<u>FTE</u>
P.S.C. 20.155(1)(g)	Local Area Network	\$ 241,900			
D.N.R. 20.370(8)(mk)	Computer Trainer Positions		1.0		1.0

As provided in s. 16.515, this request will be approved on Jan. 31, 1994 unless we are notified prior to that time that the Joint Committee on Finance wishes to meet in formal session about this request.

Please contact Roger Grossman at 266-1072, or the analyst who approved the request in the Division of State Executive Budget and Planning, if you have any additional questions.

Attachments:

# CORRESPONDENCE MEMORANDUM

STATE OF WISCONSIN  
Department of Administration

*Date:* January 6, 1994

*To:* James R. Klauser, Secretary  
Department of Administration

*From:* Julie Keal, Budget Analyst JJK  
Division of Executive Budget and Planning

*Subject:* S. 16.515 Request from the Public Service Commission.

## Request

The Public Service Commission requests a supplement of \$241,900 PRO in FY94 to the §20.155(1)(g) appropriation for a local area network based computer system.

## Background

The PSC currently uses an AS/400 minicomputer for office automation purposes. This includes word processing, scheduling, calendaring, and electronic mail. The system is now too small to serve the PSC's needs. It is at capacity, and the number of users and the amount of memory they use creates congestion, which leads to long response times, shuts users out of the system, and often causes the system to go down.

In addressing these problems, the PSC studied two options: expanding the AS/400, and moving to an entirely network based system. It chose the network option because it was less expensive and because it was consistent with the direction in which the industry and other agencies are moving.

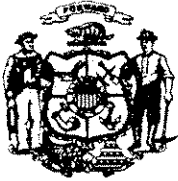
## Analysis

The PSC's problems with the AS/400 are serious. Work time is lost when computer work takes longer than it should, and when users are prevented from accessing the system. Because of this, the PSC has been working toward an entirely network based system by buying only computers which are network-compatible. It is thus well-positioned to make this change.

The timing of the change is convenient. The PSC will be moving to a new building in the autumn of 1994. Wiring only one computer system will be more efficient than wiring both the AS/400 and the network.

## Recommendation

Approve the request. The network will improve productivity and promote efficiency at the PSC.



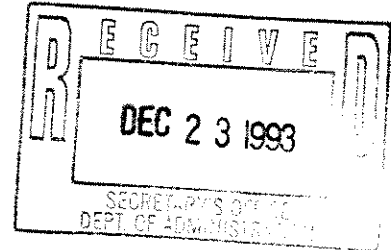
## Public Service Commission of Wisconsin

4802 Sheboygan Avenue  
P. O. Box 7854  
Madison, Wisconsin 53707-7854

Cheryl L. Parrino, Chairman  
John T. Coughlin, Commissioner  
Scott A. Neitzel, Commissioner

December 23, 1993

James R. Klauser, Secretary  
Department of Administration  
101 E. Wilson St, 10th Floor  
Madison, WI 53707-7869



Re: 16.515 Request for \$ 241,900 in PRO funding to replace the AS/400 Word Processing Administrative System with LAN based client/server networks.

Dear Secretary Klauser:

This request is to assist the Public Service Commission (PSC) solve a significant problem with our current administrative and word processing system. The PSC has experienced numerous delays and downtime from capacity problems with the AS/400-PC network that was installed in February 1990 and serves the office automation (text processing, calendaring, scheduling and electronic mail) needs of the agency. The current system cannot be expanded; if we were to remain with the AS/400 technology, it would require a major upgrade to a new AS/400 model. A new AS/400 system would cost more than the option we are proposing and would only be a temporary fix that could have significant costs for future enhancements. Without the upgrade to the AS/400 system, there is no way to eliminate the continued interruption of the work of PSC staff. Downtime from system outages severely impacts the productivity of the staff and causes frustration to all.

Because of continual system problems, I asked agency staff to study the options we have and identify the changes necessary to eliminate the problems. The study was done by both our information system staff and DOA/BITM staff member Bill Braham. Their findings are summarized in the attached report. The two viable options they identified were studied by the agency's Administrative Council and the consensus was to eliminate the AS/400 in favor of a less expensive and more permanent move to file server technology on a local area network (LAN). The LAN platform, including client/server architecture, is the future of

the industry and the direction in which many state agencies are going.

The bottom line is the existing system cannot sustain the required automation features required for the commission to operate, and action needs to be taken now. In addition, there are many reasons why we feel this direction is advantageous, both now and into the future:

1. The change to LAN technology prior to the move of the agency to the new building negates the need for redundant wiring to connect that computer system along with the PC/LAN.
2. It will allow the use of client/server technology to implement projects in our Strategic IT Plan such as data transfer for cases, connection to utility computers, and development of our customer and utility databases.
3. The LAN option eliminates having two separate systems which compete for the agency's very limited resources for support and development. It also provides a single standard for all agency word processing which improves the current situation of having to support two different word processing software programs, and reduces the need for continued document conversion from one system to the other.
4. The change will help the PSC to become consistent with technology used by other agencies. The software used on the LAN will be compatible with the direction the state is moving as a whole, which offers our small agency the potential to use similar applications developed by other state agencies.
5. The LAN option provides more flexibility to take advantage of new developments in software and hardware, and will allow the PSC to participate more fully in the use of telecommunications to deliver services to its customers.

This change is something I feel cannot wait for another two years to request in the 95-97 biennial budget. We have worked with IBM to resolve the problems to the best of our ability. We have found that the serious problems relating to system outages and loss of productivity due to slow system response time to basic commands cannot be solved on our existing system.

I believe that you will find that the costs for the changes to the LAN based system, as outlined in the attached spreadsheet,

Page 3

are reasonable and modest. The benefits of making the change outweigh the decreased productivity and operational costs of continuing with the existing system. Nothing in our request duplicates funding provided in our base budget for data processing related activities. I am committed to do as much of the upgrading of hardware from those resources provided in the base budget as possible. The figures outlined on the spreadsheet are beyond the capabilities of our limited budget to meet. I hope that I can count on your support to pass this request on to the Joint Finance Committee.

Sincerely,

*Cheryl L. Parrino*

Cheryl L. Parrino  
Chairman

cc: Julie Keal, DOA Budget Analyst  
Georgia L. Mulcahy, DAS Administrator  
Barb Bartz, Director, Information Systems  
Gordon Grant, Director, Fiscal Services

Attachments:

PSC Spreadsheet on Request  
T1 Network Feasibility Study

CLP::12149301.GOG/LETTER.DAS



Hardware Costs

a) Equipment to run the email and calendar software

2	PS/2 95-OMT 486DX,50MHZ,16MB, 1GB HD,OS/2 2.1	\$9,705	\$19,410	
2	IBM 15P 15" SVGA	\$647	\$1,294	
2	LAN Streamer MC 32 Adapter	\$766	\$1,532	
4	IBM 1.0GB SCSI Hard Drive	\$1,988	\$7,952	
2	IBM 2.3GB Internal Tape Drive	\$3,621	\$7,242	
2	IBM 2.3GB SCSI Controller Card	\$201	\$402	
2	IBM 2.3GB SCSI Drive Cable	\$49	\$98	
20	IBM 8mm Data Cartridge for 2.3GB	\$19	\$380	
2	Sytos Back-up Manager for OS/2	\$166	\$332	
2	Redundant Power Supply	\$2,730	\$5,460	
	Sub-Total			\$44,102

b) Equipment to Provide Access to LAN Email

22	Upgrade CPU's 55SX, 70 PCs	\$1,400	\$30,800	
8	Replace 50/50Z/60 (needs OS/2)	\$4,440	\$35,520	
6	Replace 50/50Z/60	\$3,844	\$23,064	
5	MAU - 4/16 MBS	\$1,520	\$7,600	
40	Media Filter - 4/16 MBS	\$38	\$1,520	
	Sub-Total			\$98,504

c) Software for Email and Calendaring

200	Mail License	\$65	\$13,000	
200	Calendar License	\$45	\$9,000	
10	Dial In Access	\$190	\$1,900	
2	Access SoftSwitch	\$190	\$380	
2	Training Modules for LAN (CBT)	\$12,000	\$24,000	
	Sub-Total			\$48,280

Total Hardware/Software \$190,886

Consulting/contractual Costs

a) Conversion Costs

400	Person Hours - Doc Conv/Clean (12000 Documents x 1/30 Hr)	\$45	\$18,000	
300	Database/Query Conversion (3 Database/Query x 100 Hrs)	\$45	\$13,500	
150	Mail/Calendar Conversion (150 Users x 1 Hr)	\$45	\$6,750	
	Sub-Total			\$38,250

b) Implementation Costs

160	Person Hours - Consultant Implement mail/calendar system	\$80	\$12,800	
	Sub-Total			\$12,800

Total Consulting/Contractual \$51,050

Grand Total One Time \$241,936

# Public Service Commission of Wisconsin

## Project T1 Network Feasibility Study

### Final Report

November 1, 1993

#### Project Team:

Barbara Bartz, DAS  
Scot Cullen, TELE  
Bonnie Haag, DAS  
John Jaroch, DAS  
Clifford Koehler, DAS  
Ken Stofflet, DAS  
Tim Ulrich, TELE

**Public Service Commission of Wisconsin**

**Project T1  
Network Feasibility Study**

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## Introduction

The initial portions of the AS/400-PC network in use at the Public Service Commission were installed in February, 1990. The AS/400 was purchased at a cost of approximately \$350,000 for the system, software and all peripherals. Subsequent to the initial installation, nearly all additional expenditures in the office systems of the PSC have gone into LAN-attached PCs and peripherals, save for an Uninterruptable Power Supply (UPS) device for the AS/400 and occasional emergency repair expenses. Ongoing maintenance has been included in the annual operating budget, but no funds have been allocated for normal system growth and enhancements.

In 1992, the PSC agreed to serve as a pilot agency of the Wisconsin Strategic Planning Project (WiSPP) in the development of Business and Information Technology Strategic Plans. The IT Plan identified Project T1 as a "Feasibility Study to Assess Providing Additional Capabilities for the AS/400 in Conjunction with the Local Area Network Facilities." The emphasis at that time was on the accommodation of additional functions, such as:

- Automated Facsimile (FAX)
- Imaging and Work Process Automation
- Communications to Outside Networks and Computers
- File/Data Storage for the LAN
- Departmental Computing, including Programming, Reporting and Database Support.

This project was scheduled to begin in Fiscal Year '95.

Earlier this year, the AS/400 support staff raised a "red flag" indicating that we were rapidly approaching a crisis point beyond which the current AS/400 would be unable to sustain the storage requirements of the current users, the planned growth of additional users on the system, and the optimal response times which most of the system users have come to expect. In the absence of ongoing investment in the growth and maintenance of the system, the AS/400 had reached its capacity and quick action would need to be taken to maintain its viability as an Office Automation (OA) system for the PSC. The Administrative Council took this as an opportunity to raise the priority of Project T1 and move it up in the schedule with a shift in focus: what improvements are needed so that current and future user needs can be handled in a cost-effective manner? Ultimately this question has come down to a choice between two options:

- Upgrade the AS/400 to a newer, higher capacity model, while at the same time continue with the planned development of the LAN
- Eliminate the AS/400 and replace it with networked file server technology.

## Scope

The scope of this project encompassed the entire computer system currently installed at the Public Service Commission: standalone PCs, networked PCs, the network itself, the AS/400, and to a lesser degree, the mainframe computing center at DOA. The scope included assessing current and future user needs, an assessment of the current operating environment and future technological options. Recommendations were to include changes or improvements that will allow the agency to select the hardware and software best suited to the development and operation of its applications.

## Objective

The objective of the project was to study the existing system and recommend improvements so that current and future user needs can be handled in a cost-effective manner.

## Methodology

The project team used three methods to arrive at our results:

- User Survey - a survey of current users was conducted to ascertain both opinions and current and future uses envisioned for the PSC's computer systems
- Consultant's Report - a consultant (Bill Braham) was obtained from DOA/BITM with the intent of providing an independent, unbiased analysis and judgment of how best to use and enhance the systems we have
- Independent Analysis - project team members conducted their own analysis of the options available, using many sources as input, including the User Survey, the Consultant's Report, the expertise of the participants, the PSC IT Strategic Plan, the Statewide IT Plan, and vendor cost estimates and statements of direction.

The conclusions of these various avenues of inquiry are presented here in a highly abbreviated form, with supporting documentation available in the Project T1 Appendix.

## Givens

We attempted to start with a list of assumptions/givens, which are summarized here:

- We cannot simply maintain the *status quo*

- We do not want to switch to an e-mail or calendaring system which has less functionality than what we have now
- Strategic architecture for the LAN will remain OS/2 operating system, IBM PS/2 hardware, LAN Server LAN software
- LAN Management tools are needed whether we stay with the AS/400 or not
- We cannot at this time consider all possible platforms for office automation; we need to narrow our focus to the environments with which we are familiar: the PC/LAN and the AS/400

### Consultant's Report

The consultant identified two viable options, either of which he felt would likely meet the needs of the PSC. His report went on to discuss "which of the two would best meet the needs". One option was to upgrade the current AS/400, the other to move away from the AS/400 toward networked file server technology. He recommends the second option, that of moving toward replacement of the AS/400 by increased use of the LAN and file server technology. Making this move would:

- Position the PSC in the mainstream of the industry
- Provide a wide range of available software from which to choose
- Make available a large pool of support resources on which to draw
- Maximize opportunity for flexibility and future growth.

The consultant recommends against retaining the *existing* AS/400 as a data storage device, specifically citing:

- The amount of memory is barely adequate
- The equipment is beginning to age
- IBM no longer manufactures this model and will likely not support it much longer
- The need for maintaining internal skills for AS/400 support.

## Results of User Survey

Analysis of the User Survey identified many factors which are important to the users, including such matters as:

- **Ease of use** - In this regard, the users show a slight preference for the PC/LAN over the AS/400. This is not to be interpreted that the users would find a LAN-based e-mail and calendaring system easier to use than the current AS/400-based OfficeVision; on the contrary, introducing new LAN-based e-mail and calendaring software packages could result in a learning curve where perceptions of ease of PC/LAN use could drop.
- **Sharing of documents** - Both environments accommodate this need, and either option will continue to accommodate this as well.
- **Quick response time** - Either solution can provide improved response times at implementation. However, it must be recognized for either solution that the system must continue to grow with the user base if optimal response time is to be maintained.
- **Security** - neither environment is secure today due to prior management decisions. Either environment can be made more secure by implementing policies, procedures and available security features (such as password expiration and logon timeouts).
- **Backups** - are handled adequately on the AS/400 today, but will not be handled adequately on the PC/LAN until additional hardware and software is acquired and procedures are implemented. If the AS/400 is eliminated, the LAN solution must incorporate hardware, software, and procedures needed to manage this function.

All of these concerns can be addressed with upgrades to either the AS/400 or the LAN.

Evaluation of **user requirements for information** identified many requirements which could be handled from either the AS/400 or the PC/LAN, and several which are clearly PC/LAN-oriented. Many of the identified data access needs will likely be implemented on the PC/LAN regardless of whether the AS/400 is upgraded or not.

Our analysis of the User Survey does not provide clear direction recommending either solution.

## **PSC Information Technology Strategic Plan**

A review of the PSC Information Technology Strategic Plan reveals the following common conclusions:

- The need for a strategic **LAN-accessible database** does not lend strong support to either platform.
- **IT support is short-handed.** A decision to upgrade the AS/400 will do nothing to resolve this problem. A decision to eliminate the AS/400 may, in the short term, exacerbate this problem, though in the long term may assist in resolving this problem as we attempt to maximize support for remaining platforms.
- **Which option best creates a flexible strategy for the future?** In an environment of resource constraints such as we have at the PSC, it appears that investing in a LAN upgrade now would provide a greater payoff in providing a flexible strategy for the future than investing in an AS/400 upgrade with incremental attempts at adding to the LAN.
- **Computer to computer connection to major utilities** can be successfully achieved from either environment, and does not lend support to either option. Selection of the appropriate environment for e-mail and calendaring should be made independent of this issue.

These issues identify the need for expanding and upgrading the PC/LAN to meet PSC strategic directions independent of the choice of platform for e-mail and calendaring software.

## **Statewide Information Technology Plan**

Although the goals established in the Statewide Information Technology Plan do not preclude the upgrade of the AS/400, they lend support to upgrading the PC/LAN:

- Standardization of communications, hardware and software
- Adequate and qualified IT support for Local Area Networks
- Cross-agency coordination of efforts
- Provision of an environment which will support end user development.



## Procurement Considerations

A review of the procurement procedures revealed the following relevant information:

- A LAN-based solution would be the simplest from a procurement standpoint because we would continue to purchase components off of existing procurement bulletins; therefore, this option reduces to a funding issue
- The option to upgrade the AS/400 would require preparation of either a Request for Bid (RFB) or a Request for Proposal (RFP), which could be vendor-specific or brand-specific with proper justification
- The option to upgrade the AS/400 would present additional steps, such as approval of BITM and the approval of the Joint Finance Committee; this may present a problem as Joint Finance has recently shown a tendency toward consistency of technology among the diverse state agencies.

## Analysis Conclusions

The consultant's report helped the project team to narrow down our range of options to two choices:

- Upgrade the AS/400 to a newer, higher capacity model, while at the same time continue with the planned development of the LAN
- Eliminate the AS/400 and replace it with networked file server technology.

After considering the various options and the range of input available to the project team, we have concluded that **either option will improve the system to the extent that the current and future needs of the Public Service Commission can be handled in a cost-effective manner.** Many of the identified needs can be effectively met in either environment. Although some of the needs may be better handled on the LAN, those can be accommodated and do not preclude selection of the AS/400 option. For those needs which can be met by either environment, it is difficult to quantify which option is truly the best. In a rapidly changing technological environment, any judgment which we make today as to which environment is best for a particular function may easily be invalidated tomorrow.

The project team was unable to reach a consensus on the best option to select for the future needs of the PSC. The team is, however, in agreement that either option can work and will support the Administrative Council in whichever option it selects.

## Comparison of Features

The following chart is presented as a side-by-side comparison of features available under each option:

	LAN	AS/400
Hardware needed	2 IBM PS/2 95-OMT 486DX 16 MB memory 1 GB hard drive 4 1.0 GB Hard Drive 2 2.3 GB Tape Drive 2 Redundant Power Supply	AS/400 Model F50 48 MB Memory (96 MB Total) 1.2 GB 1/4" Cartridge Tape Drive 16/4 MBPS Token Ring Card 4 GB Disk Storage Space (8.85 GB Total) High Availability Disk Array Subsystem (allows changing disk drives without downtime) 9600 baud modem ASCII controller (for Remote PC Communication)
Software needed	E-mail package Calendaring package	None. (An Upgrade would come with the latest software installed on it)
First-year costs - hardware, software, implementation, conversion	\$274,562	\$242,600
Token-ring upgrade (optional)	\$62,142	\$62,142
Full PSC on LAN (optional)	\$234,380	\$340,860
First-year costs with options	\$571,084	\$645,602
Second and subsequent year annual costs	\$41,100	\$67,600

Software Eval	640 hours @ \$20/hr	\$12,800	\$0
PSC Staff Costs	160 hours @ \$20/hr	\$3,200	\$0
End-user training	1,500 hours @ \$20/hr	\$30,000	\$0
RFB/RFP preparation		\$0	160 hours @ \$20/hr \$3,200
Procurement Considerations	Components available through statewide procurement bulletins		Two options: Request for Proposal or Request for Bid. DOA would need to approve the specs for either, but since the dollars are not going to be available until July, this paperwork, approval, and selection could possibly all be done by the time the dollars are available.
Implementation Considerations	More difficult to implement; requires conversion of documents from AS/400 to new format, extensive user training, possible phase-in of one organizational unit at a time rather than mass conversion		Easy to implement: Swap out in a weekend. No interruption to users. No extra training required. No conversions needed.
Future Upgrade Considerations	Modular components, available on statewide procurement bulletins		F50 can be expanded up to 74 GB storage space and up to 192 MB memory. Product is part of standard progression.
Vendor Statements of Direction	LAN Server 3.0 continues as a strategic product		Vendor has plans through the year 2000. Product can be utilized as "client-server" technology, some future directions given by IBM is 64-bit RISC technology replacing the existing 32-bit technology; continual enhancement of interface capabilities (i.e. running applications/programs from other environments such as UNIX).
Industry Trends	Industry trends depend on which publication is referenced.		Industry trends depend on which publication is referenced.
State Agency Trends	State agencies are moving towards LAN-based applications, with at least DOT and UW-ADP having already begun the implementation of LAN-based e-mail packages. Trend appears to be toward Client/Server with some sort of mid-range device as server.		State agencies are moving towards LAN-based applications. AS/400 is inconsistent with other agency directions, however the <i>concept</i> of a mid-range device in a client/server arrangement is consistent with other agency directions.

User Survey Results	The PC/LAN had the edge on ease of use and response time; back up of data would improve with upgrade and procedures; security levels can be more stringent on the PC/LAN if desired. The user survey did not give clear direction concerning an appropriate upgrade choice.	The AS/400 had the edge on the sharing of documents; response time on the AS/400 will improve with an upgraded model; data is backed up regularly on the AS/400; security levels can be more stringent on the AS/400 if desired. The user survey is basically a toss up depending on the level of knowledge the user completing the survey had.
PSC IT Plan	Issues arising from the PSC IT Plan identify a need for expanding and upgrading the PC/LAN to meet PSC strategic directions independent of the choice of platform for e-mail and calendaring software.	The PSC's IT Plan did not define the future of the AS/400, as this was to be addressed with the T1 Feasibility Study. An upgraded AS/400 would provide the Commission with greater flexibility when looking at new applications by providing an additional platform for consideration.
Statewide IT Plan	The Statewide IT Plan is focused on issues of standardizing communications, hardware and software, both to achieve economies of scale in purchases, and in allowing cross-agency coordination of efforts. These issues support the selection of the PC/LAN, a direction consistent with other agencies.	The Statewide IT Plan is more LAN-focused. However, that does not mean that having a multi-level system is bad for the Commission. As stated earlier, it simply provides the Commission with additional flexibility.
Future Uses	Future uses are innumerable. Intended future direction is for a common user interface to all PSC applications based on a graphical user interface (GUI) standard. A big step toward accomplishing this goal would come with the installation of a GUI-based e-mail and calendaring packages.	Available software is infinite. Capabilities range from electronic fax, high level languages, remote job entry, rumba, showcase vista, sql... Interfaces with other software products is a priority and becoming more transparent. Note that selection of the AS/400 does not preclude future possible LAN-based applications, and may even be able to work cooperatively with them.
Timing	Estimate is 10-12 months to switch from AS/400 calendar and e-mail to a complete LAN system. In order to complete the installation in the October-December 1994 time frame, we need to begin with software evaluation in January. This will require an intensive resource commitment from the PC LAN support staff and selected agency staff.	If the Commission chooses to upgrade the AS/400, the paperwork could be started immediately after budget approval and bids/proposals sought and selected so the equipment could be installed as soon after the dollars are available as possible. Upgrading the AS/400 could take less than one month of staff resource time.

## Pros and Cons

The following chart is presented as a side-by-side comparison of pros and cons associated with each option:

	LAN	AS/400
	<p>CON: Implementation will take more resource time</p> <p>CON: Implementation will take more calendar time</p> <p>PRO: This will also get the LAN into shape quicker than otherwise possible (assuming funding allows for resources to assist)</p> <p>CON: Extensive data conversion required (16,000+ documents, calendars, databases and associated queries, personal directories)</p> <p>PRO: Single platform provides focus for scarce resources</p> <p>PRO: ITS is making overtures that they may be willing to provide help in procurement and support of the LAN to be paid for in the IT bill (some would argue that this is a CON)</p>	<p>PRO: Quicker, less resource time to implement</p> <p>PRO: Implementation will take less calendar time; once funds are available and bid or RFP completed, could be completed immediately; possible completion by mid-July</p> <p>CON: LAN will get less attention, continue slow progression to desired goal</p> <p>PRO: No data conversion required</p> <p>CON: Dual platforms result in competition for scarce resources</p> <p>CON: With the AS/400, we stand alone in procuring hardware upgrades and in providing operational support</p>
	<p>PRO: Consistent with other state agency directions, may be able to rely on statewide support network; others outside of the PSC familiar with environment</p>	<p>CON: Lack of consistency with other state agencies</p>
	<p>PRO: GUI-based e-mail and calendaring software will be consistent with WordPerfect for OS/2 and with stated direction toward a common GUI standard interface</p>	<p>CON: Text-based calendaring and e-mail software inconsistent with upcoming GUI standard</p>
	<p>CON: New OA software will require learning curve for end users; extensive retraining will be required</p>	<p>PRO: No learning curve required if we stay with the same OA software; no retraining will be required</p>

<p>CON: Planned (or unplanned) obsolescence: evolution of PC operating systems has tended to quickly make older machines obsolete</p> <p>PRO: Support of one platform rather than two consolidates resources</p> <p>PRO: Support of one platform rather than two simplifies the environment</p> <p>PRO: Stability; LAN has had very few interruptions of service</p> <p>PRO: Fewer platforms results in greater stability; currently, PC Support (software which connects the LAN to the AS/400) is the weak link in the chain</p> <p>UNKNOWN: How stable will the LAN be with major upgrades?</p> <p>CON: Will there be enough staff to cover LAN support requirements? (Note that additional staff have been requested in the cost estimates)</p> <p>CON: Support requirements will be significant during installation, conversion and end-user learning &amp; training with new OA software</p> <p>CON: Expertise developed for AS/400 would be lost</p>	<p>CON: Planned (or unplanned) obsolescence - our current model AS/400 will not be supported by future software releases after December</p> <p>CON: Support of two platforms rather than one divides support resources</p> <p>CON: Support of two platforms rather than one maintains complexity of environment</p> <p>PRO: Stability; has had very few interruptions of service</p> <p>CON: Unreliability of PC Support software results in an unstable LAN-AS/400 link</p> <p>UNKNOWN: How stable will the LAN-AS/400 link be with an upgraded AS/400?</p> <p>PRO: Requires less support staff time for troubleshooting and maintenance (note, however that an additional resource is still requested for ongoing LAN support requirements even if the AS/400 is selected)</p> <p>PRO: Smoother cutover to new system will require little or no increase in user support requirements during conversion phase</p> <p>PRO: Investment in AS/400 expertise would not go to waste</p>
<p>CON: Elimination of AS/400 eliminates one access path to the mainframe; if the bridge goes down, we lose all access</p> <p>PRO: Simplicity - single platform, single operating system</p> <p>CON: Carries greater risk due to unknowns</p> <p>CON: Change - resistance to change, instability inherent in converting to new systems</p>	<p>PRO: AS/400 connection to the mainframe provides a measure of safety in redundant access</p> <p>CON: Complexity - dual platform, dual operating system</p> <p>PRO: Safe choice, little risk of unknowns</p> <p>PRO: Stability - provides the commission with a stable system and little or no disruption</p> <p>PRO: Improved capability with up to 300% greater throughput/efficiency ratio</p>

	<p>PRO: Future development/implementation environment responsibility in one bureau allows enforcement of consistent standards and methodologies</p> <p>PRO: Consolidate development training and expertise in one environment, one bureau</p> <p>PRO: Consolidate development support for one environment, one bureau - increased need for development support limited to PC/LAN environment</p>	<p>CON: Future development/implementation environment responsibility in two bureaus interferes with enforcement of consistent standards and methodologies</p> <p>CON: Development training and expertise is split between two environments, two bureaus</p> <p>CON: Development support is split between two environments, two bureaus - may see increased need for both AS/400 and PC/LAN development support</p>
	<p>PRO: Flexibility is wide open for future Client/Server (C/S) needs</p> <p>CON: If funding is not there, we may be limited to the LAN without the option of a mid-range device for C/S</p> <p>PRO: Client and server components in place, both under OS/2</p> <p>PRO: Open C/S software choice not limited to IBM solution</p>	<p>PRO: Additional platform now gives us greater flexibility in the future</p> <p>CON: Additional platform now may lessen our flexibility of acquiring a more appropriate platform in the future if desirable, therefore lessens our options</p> <p>CON: Client components in place under OS/2, server component may be limited to AS/400</p> <p>CON: May limit choice of software for C/S if tied to IBM solution</p>
	<p>PRO: Enhancement of OS/2 operating system, evolution of PC power and capabilities continues to improve</p> <p>PRO: Many enhancements and third-party software packages are available that would improve the capabilities and flexibility of the PC/LAN environment</p>	<p>PRO: IBM has been continually improving the AS/400's capabilities in regard to working with PC software packages in OS/2 (e.g., ShowCase Vista, Rumba, major enhancements to PC support, etc.)</p> <p>PRO: Many enhancements and third-party software packages are available that would improve the capabilities and flexibility of the AS/400</p>

## Cost Summaries

The costs associated with each option are summarized below:

### Option 1: PC/LAN

#### One-Time Hardware/Software Costs

2 post offices (including monitors, hard drives, tape drives, and redundant power supplies, 22 terminal replacements with PCs)	\$150,582
Software (e-mail, calendar, dial-in)	<u>\$24,280</u>
Sub-Total	\$174,862

#### One-Time Implementation/Conversion Costs

Conversion costs - labor	\$15,800
Implementation costs - labor	\$12,800
PC support staff training	\$6,000
Computer-Based Training packages for e-mail and calendar	<u>\$24,000</u>
Sub-Total	\$58,600

#### Ongoing Annual Costs - First Year

AS/400 support staff (MIS-2)	-\$33,600
Shifted AS/400 support staff to PC/LAN support (MIS-2)	\$33,600
New PC support staff (MIS-4)	\$42,600
Software maintenance	\$5,000
AS/400 annual maintenance (1/2 year)	<u>-\$6,500</u>
Sub-Total	\$41,100

#### Basic Upgrade Total Costs \$274,562

#### Optional One-Time Costs

16 MBS Token Ring Upgrade	\$62,142
Upgrades to existing PCs to bring full PSC up on LAN	<u>\$234,380</u>
Sub-Total	\$296,522

#### Total First-Year Expenditures (one-time and ongoing) Including Options \$571,084

#### Ongoing Annual Costs (second and subsequent years)

AS/400 support staff (MIS-2)	-\$33,600
Shifted AS/400 support staff to PC/LAN support (MIS-2)	\$33,600
New PC support staff (MIS-4)	\$42,600
Software maintenance	\$5,000
Additional operating budget for ongoing upgrades/enhancements	\$6,500
AS/400 annual maintenance	<u>-\$13,000</u>
Sub-Total	\$41,100



Option 2: Upgrade AS/400

One-Time Hardware/Software Costs

1 AS/400 Model F50 (hard drives, tape drive, modem)	\$200,000
Software (e-mail, calendar, dial-in)	<u>\$0</u>
Sub-Total	\$200,000

One-Time Implementation/Conversion Costs

Conversion costs - labor	\$0
Implementation costs - labor	\$0
PC support staff training	<u>\$0</u>
Sub-Total	\$0

Ongoing Annual Costs - First Year

New PC support staff	\$42,600
Software/hardware maintenance (over and above current budget)	<u>\$0</u>
Sub-Total	\$42,600

Basic Upgrade Total Costs \$242,600

Optional One-Time Costs

16 MBS Token Ring Upgrade	\$62,142
Upgrades to existing PCs to bring full PSC up on LAN	\$234,380
22 terminal replacement with PC	<u>\$106,480</u>
Sub-Total	\$403,002

Total First-Year Expenditures (one-time and ongoing) Including Options \$645,602

Ongoing Annual Expenditures (second and subsequent years)

New PC support staff	\$42,600
Additional operating budget for ongoing upgrades/enhancements	<u>\$25,000</u>
Sub-Total	\$67,600

## Issues/Decision Points

The following are issues which the Administrative Council will have to consider in making their final decision:

- 1) **IT Support is short-handed.** This is a reality which must be dealt with regardless of whether we upgrade the AS/400 or not:
  - If we upgrade the AS/400 - LAN support remains short
  - If we upgrade the AS/400 and begin to use it as a development/applications environment - AS/400 support will also be short
  - If we eliminate the AS/400 - LAN support becomes even more critical as we rely more heavily on the LAN for e-mail and calendaring; elimination of AS/400 will make AS/400 support resource available for reassignment to LAN support.

We have attempted to address this issue by including an additional IT support resource under either option. Under the proposal for a LAN-based system, it is our recommendation that John Jaroch's position continue in an IT support function. (Please note that Terry Kaufmann's position is coming to BIS with many responsibilities already defined, and these other positions are considered over and above Ms. Kaufmann's.)

- 2) Time may be a critical factor; which solution can be implemented quickest? Assuming that we can get past the cost and procurement issues, **swapping out the AS/400 would be the quickest and least painful solution:** the hardware could be swapped out in a weekend, and all users could continue to use familiar e-mail and calendaring functions.
- 3) **Either solution can meet our needs.** If the cost of both solutions is similar, the decision may come down to a matter of convenience (ease of conversion) or philosophy.
- 4) **Which solution positions us best for the future?** Though not clearly addressed in either strategic plan, the widespread use of client/server technology is on the horizon with a promise of more rapid system development and lower operating costs. Expansion of the PC/LAN *may* better position the PSC to take advantage of this technology and to take advantage of the expertise of other agencies which may go ahead of us in this arena.
- 5) **An upgrade to the AS/400 does not preclude continued expansion and upgrades to the LAN.** It may allow a slower, more controlled upgrade path for the LAN. It may just as possibly compete for limited dollars and resources which could otherwise go toward upgrading the LAN and LAN support.
- 6) The Budget Repair Bill is a good time to consider whether we should **accelerate the process of putting everyone on the LAN.** For either option selected, there is a cost

identified above for upgrading existing PCs to bring everyone onto the LAN. If the AS/400 option is selected, then we also need to include the optional cost of replacing the 22 AS/400 terminals with PCs.


- 7) Another option to consider at this time is whether we should **upgrade the token ring cards to improve the speed of the network**. For either option selected, there is a cost identified above for incorporating this option.
  
- 8) **A solution to this issue today does not mean that the issue will go away tomorrow**. If the PSC's budget had provided funds for AS/400 upgrades and normal system growth over the last few years, we would not be in the crisis mode we are in today. In our rapidly changing technological environment, an investment in a technological solution must not be looked at as a one-time expenditure but rather as a commitment to a direction which must be nurtured and maintained if it is to grow with the agency and continue to meet the agency's needs in the future.

# CORRESPONDENCE MEMORANDUM

STATE OF WISCONSIN  
Department of Administration

Date: December 27, 1993

To: James R. Klauser, Secretary  
Department of Administration

From: Shelley L. Moore, Policy and Budget Analyst   
Department of Administration

Subject: Department of Natural Resources s. 16.505 Request for Computer Trainer Positions

## REQUEST

The Department of Natural Resources (DNR) requests 3.0 FTE permanent PR-S positions funded under appropriation s. 20.370 (8)(mk) (general program operations--service funds) in the Bureau of Information Management to conduct the DNR computer training program. Since s. 20.370 (8)(mk) is a continuing appropriation, any necessary expenditure authority increase can be approved through the allotment process.

## BACKGROUND

The DNR initially submitted this request on July 23, 1992; it was subsequently tabled pending Department of Administration (DOA) completion of the DNR management and efficiency study (A Management and Operations Study of the Wisconsin Department of Natural Resources, May 28, 1993).

The requested positions would be classified as Management Information Specialist 3 and would replace 3 limited term employes (LTEs) currently being used to conduct DNR computer training classes. The new positions would be used to complement 5.0 FTE permanent positions which constitute the Information Services Section (ISS). This section provides the following services:

- ✦ the DNR computer training program;
- ✦ consulting and user support;
- ✦ annual reviews and adjustments to agency hardware and software standards;
- ✦ tests and evaluations of DNR software upgrades;
- ✦ coordination of new user tool and development efforts, and;
- ✦ evaluation of new technologies for DNR applications.

## ANALYSIS

DNR has more than 2,000 personal computers across the state; over 1,000 are connected to the DNR VAX network. An additional 352 computer terminals are connected to the network. As of July, 1993, 1,000 DNR user identifications have been issued for the DNR central office and 1,700 for DNR field offices. The DNR argues that 3.0 permanent positions are needed to address: 1) current workload needs associated with user demands; 2)

increased demand for computer training, particularly in the districts; and 3) to reduce training costs associated with contracting with outside vendors.

Workload Analysis

The relevant ISS workload calculated by DNR for fiscal years 1993 and 1994 are detailed in Table 1. Note that DNR based this request on an FTE position equivalency of 1,480 hours annually; 600 hours were subtracted for holidays, vacation, sick leave, breaks and meetings. This analysis substitutes a more commonly accepted 1800 hour/FTE equivalency. Also, this analysis separates LTEs from permanent staff, as LTEs are limited to 1040 hours annually and are ineligible to obtain any leave for vacation, holidays, or illness.

Table 1: DNR Information Services Section Workload

Work Activity	Actual FY93 Hours	Projected FY94 Hours
Training	6,066	6,660
User Support	5,882	5,180
R & D	960	1,480
<b>Total</b>	<b>12,908</b>	<b>13,320</b>
Base FTE Hours (1800*5 FTE)	9,000	9,000
Staff Hours Needed	3,908	4,320
LTE/FTE Equivalent	3.76 LTEs or 2.17 FTEs	4.15 LTEs or 2.4 FTEs

DNR conducted FY93 activities with 5.0 permanent staff and 4.0 LTEs funded through training fees. According to DNR staff, the LTE positions in FY93 were not employed for the entire fiscal year. The 4.0 LTEs funded through training fees should generate 4160 hours of training hours (1040 hours x 4.0 LTEs). Thus permanent staff is currently absorbing 1,906 hours of training workload.

For fiscal year 1994, the following workload reallocations will occur among ISS staff: an increase in training hours (from 6,066 to 6,660 hours); an increase in research and development (from 960 to 1,480 hours) and decreased user support (from 5,882 hours to 5,180 hours).

Assuming that projected workload for FY94 is accurate, this workload analysis sufficiently demonstrates that 2.4 FTEs, or 4.15 LTEs, or a combination of additional FTE/LTE staff is needed. Determination of whether LTE, project or permanent staff are appropriate must be analyzed by assessing the permanent demand for the DNR in-house computer training program, as well as other alternatives to additional staff.

### Projected DNR Computer Training Program Demand

The demand for the DNR computer training courses is detailed in Table 2:

Table 2: DNR In-house Computer Training Program

	Number of Courses <sup>1</sup>			Number of Students		
	Districts	Central Office	Total	Districts	Central Office	Total
<b>FY93</b>						
Original Projection <sup>2</sup>	240	378	618	1920	2419	4339
Actual	57	250	307	424	1695	2199
<b>FY94</b>						
Original Projection	240	378	618	2400	2419	4819
Revised Projection <sup>3</sup>	128	244	372	960	1664	2624

Table 2 Notes:

- 1 Most courses are 1/2 day; full-day courses are counted as two.
- 2 Original projections do not include additional courses and students which were projected to attend coursework in a second DNR training room, which was not set up.
- 3 Revised FY94 projections are based on actual July, 1993 results.

Assuming DNR course projections for FY94 are accurate, it appears that the agency has sufficient internal demand for computer coursework to justify the workload projections and this request for additional staff. However, since the revised projections for numbers of courses and students are based on one month in FY94, future projections must be qualified.

### Discussion and Alternatives

The DOA Bureau of Information and Telecommunications Management (BITM) staff were asked to provide an assessment of both the merits of this request, as well as available alternatives and comparisons with other agencies' strategies for training needs. In addition, it should be noted that this proposal was included in the annual information technology plan submitted by DNR and approved by BITM. The comments of BITM staff are reflected in the following discussion points.

The projected demand for in-house training must be qualified by the following: 1) attendance at a four-hour class on software or DOS upgrades is not necessary for most staff; 2) FY94 projections are based on only one month of actual data, and 3) DNR overestimated demand in the past (see Table 2 original estimates, as well as a previous s. 16.505 request in 1991 which was denied, in part, for this reason).

Other agencies, particularly larger agencies, do conduct some in-house computer training, but many are moving to CD-ROM, video and on-screen courses to address these training needs. DNR staff are investigating

these alternatives and may be applying these technologies to agency training needs in the future.

DNR is also attempting to reduce computer training costs by conducting in-house courses, rather than using contractors. The average cost per class for DNR courses in FY93 was \$57.75. For FY94, costs are projected at \$67.75, due to an 11% increase in course fees, as well as additional attendance in full-day courses. The cost-savings projected by DNR in conducting in-house training versus using vendors is probably overstated; the DOA bulletin lists contractor courses as ranging from \$50-\$65 per course, rather than \$90-\$110/course, as stated by DNR. In addition to a perceived cost-savings, DNR has not been satisfied with the quality of vendor-provided training, as the opportunity for customization to agency needs is greatly reduced.

It appears that sufficient workload and course demand exists to justify a temporary growth in additional staff. However, it does not appear that DNR has justified the addition of permanent staff. Considerable questions remain concerning long-term course demand. In addition, it does not appear that the agency has fully investigated using alternatives employing advanced technologies, such as CD-ROM training, or use of vendors for standardized courses which do not demand great customization. Pending resolution of these uncertainties and a complete agency analysis of alternatives, creation of 1.0 project position appears to be an appropriate solution through the biennium. Should the agency deem this a priority, further action could be requested in the agency's 1995-97 biennial budget request, which would provide an opportunity for review of the training program's status by the Governor and the Legislature.

#### **RECOMMENDATION**

Modify the agency request and approve 1.0 FTE PR-S project position through October 1, 1995 to assist in providing computer training for DNR employees.

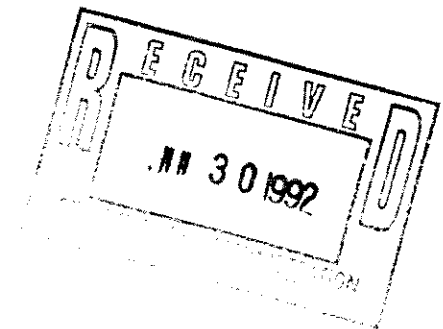
*Joe Polasek*  
*Antel*

State of Wisconsin

**CORRESPONDENCE/MEMORANDUM**

DATE: July 23, 1992  
TO: Shelley Moore - DOA  
FROM: Joe Polasek - DNR  
SUBJECT: Request for Training Positions

FILE REF: 9600



REQUEST

The Department of Natural Resources requests three permanent Program Revenue-Service funded FTE's in FY93. As our training needs grow, we will undoubtedly request additional positions in the future. The three FTE's requested at this time will support computer training in the Central Office and districts; provide user support for the Department's personal computers, terminals and printers in its central, district and area offices; and perform hardware/software product evaluation. The positions will be financed through user fees imposed for each course and funded out of appropriation 20.370(8)(mk). The positions will be filled as Management Information Specialist 3's. The hourly wage will be \$13.039 plus fringe benefits.

BACKGROUND

The DNR began the installation of its own computer network about four years ago. The network provides its users with improved electronic mail, PC local area networking, computer conferencing, and a variety of tools designed to enable its staff to use information technologies to improve the efficiency and effectiveness with which they perform their jobs.

The network has proven to be highly successful with staff. Use of the technologies available has grown dramatically since its inception. The Department currently has 1,662 personal computers (924 attached to the network), 352 terminals and 1,762 user ID's (users only need an ID if they are connected to the network).

Currently, the Information Services Section (ISS) has five staff to perform in-house training and provide user support for all of the Department's users and computers. Their assignments and responsibilities include:

1. Conduct and manage an extensive in-house computer training program for staff in Madison and the districts. ISS staff teach some courses and coordinate vendor provided courses in other instances.
2. Provide statewide consulting and user support to all of the Department's users on issues relating to hardware and software.



3. Review and adjust the Department's hardware and software standards annually.
4. Test and evaluate all of the Department's software upgrades.
5. Coordinate the development of new user tools such as PARADOX and Office Automation tools (Email, calendaring, document management, etc.).
6. Evaluate new technologies for applications within the Department and possible inclusion in the Department's standards.

The present ratios of 1 staff person to 350+ users and workstations makes it impossible to provide adequate levels of service to Department staff in all of these areas. Deficiencies in support for several products (Email, dialup services and software, database products) are a result. Although the staff have done a commendable job of managing the workload and competing priorities, the level of staffing needs to be improved if users are to use the current network facilities to their maximum advantage. And, the current needs will be multiplied by the impending introduction of new Email, calendaring, Windows, imaging, and Geographic Information Systems in the Department.

The situation is especially critical in the DNR districts where staff are not being provided adequate or consistent computer training opportunities. As Attachment 1 indicates, there is a great deal of demand for training in our field offices. ISS has piloted more frequent courses in the district and has had 100% enrollment for the sessions provided. But these courses have been relatively few in number since there hasn't been sufficient staffing to extend the pilot to all districts on a regular basis.

We also have found that most courses that are now taught by outside vendors could be more useful to DNR staff if they were taught by DNR staff. Feedback from students indicates that courses taught by in-house staff are better customized to the Department's standards. Furthermore, the staff doing the training is readily available for follow-up consultation and support. However, a small number of highly technical courses will continue to be taught by vendors (e.g., GIS and ORACLE Development Systems) under this proposal.

#### PROPOSED TRAINING PROGRAM

The need to provide adequate training in the use of information technologies was one of the areas stressed in the Information Technology Management in Wisconsin, report of the Information Technology Advisory Board to the Secretary of the Wisconsin Department of Administration. Consistent with the recommendations for this report, the DNR proposes to improve the staffing of its existing training and user support programs to meet the following objectives:

- Reduce costs. Currently, classes from outside vendors cost \$90-\$110 per half-day session. For in-house training, we

will charge \$45, a reduction of 50%-55% for equivalent training. Given the extent of the existing needs for training and tight budgets, savings of this amount are a significant issue.

- Expand the amount of training offered to DNR District staff. The resources now available are insufficient to handle both the Central Office and District needs.
- Improve the levels of ongoing user support and consultation for the use of products, provide increased product evaluation and testing, and expedite the review and introduction of new user tools. The number of users and the sophistication of their applications are growing rapidly. Both demand more support.

To accomplish these objectives, we propose to add three Fte's and equip a second training room in GEF 2. This proposal has been developed in conjunction with the Department's data coordinators and District IM Staff Specialists, and approved by the DNR Information Management Steering Committee. The expanded training program has been discussed with Phil Hodapp and will be included in our FY93 BITM delegation plan as a separate initiative.

#### IMPLEMENTATION SCHEDULE

The PC training program will have a phased implementation:

1. Add two FTE's as soon as possible to support an expansion in district training. This will address the existing backlog in district locations. The Department has recently completed a district computer training pilot project. The purpose of the pilot was to determine whether there is enough demand on a regular basis in the districts to implement a permanent in-house district training program. Results were affirmative, particularly in the context of several upgrades that will occur in FY93 & FY94 - DOS 5.0, WordPerfect 5.1, Email, and Windows. We will conduct 10 training sessions per year per district in the 4 outlying districts. Southern and Southeast Districts will be trained in GEF 2.

These FTE's will also further the conversion of all PC training now done by outside vendors to in-house staff. Eventually, outside vendors will be retained only for highly technical courses (e.g., GIS and ORACLE development tools).

2. Equip a second training room in GEF2 to expand our capacity to conduct courses. We currently have capacity to conduct only one course at a time with eight (8) students. However, we need the ability to schedule more than one session, and to train larger numbers of staff. Mandatory upgrades (DOS 5.0, WordPerfect 5.1, Email) will require ALL Department computer users to be trained in a short time-frame; the same is true for the advent of new technologies in the Department (e.g., GIS, imaging). This will increase the demand for training

facilities. We plan to have this room in operation by January 1, 1993 at which time we would add a third FTE to accommodate the need for new training and continue the conversion of PC courses from outside vendors to in-house instructors.

#### COMPUTER TRAINING NEEDS

Please see Attachment 1 for an analysis of the Department's need for computer training. Based on this analysis the Department projects a need for 11,021 half-days of training in FY93 (see attached summary). The strategy proposed would address approximately 50% of the estimated need. This analysis was done using a number of survey tools.

Each year, we estimate the number and types of machines users intend to purchase in the coming fiscal year and the number of those which they intend to connect to the network. This information allows us to calculate rates and project training and support needs as well as our PC maintenance and network capacity needs.

In addition, the Department requires each employe to prepare a training plan each year. This plan lists the courses the employe intends to take in the coming year and is approved by their supervisor. Therefore, this plan reflects what employes have been approved to take, not just their wishes. Computer courses are included in the plan. The Department's training office compiles training plans into a database that we use to project the numbers of specific courses needed during the coming year.

Third, as technology evolves, the Department upgrades its software and hardware. Some upgrades are mandatory - every machine running a particular software package must upgrade. This means MOST staff using those machines will be experiencing changes in software that requires some retraining. The software upgrades for the coming year are known and were included in the analysis.

Finally, a supplemental survey of needs for specific courses was completed recently. The results of this survey also were factored in.

REVENUES AND EXPENDITURES

The addition of three FTE's to the existing staff will allow us to provide the volume of training below:

	<u>FY93</u>	<u>FY94</u>
GEF2:Room 1 (students) (42 weeks * 9 half days * 6.4 students/session)	2419	2419
GEF2:Room 2 (21 weeks * 9 half days * 6.4 students/session)	1210	
(42 weeks * 9 half days * 6.4 students/session)		2419
Districts (40 weeks * 6 half days * 8 students/session)	1920	
(40 weeks * 6 half days * 10 students/session)		2400
TOTALS	5549	7238

- NOTES:
1. Experience thus far with our in-house training has found an occupancy rate of 7+ students in GEF2; 8 (100%) per session in Districts.
  2. Estimates reflect periods when training will be slow due to holidays, hunting seasons, etc.

## REVENUES

- I. Program revenues will be generated primarily by charging a standard fee of \$45 per half-day course for all courses. The training rooms and laptops will be rented when not in use. People taking outside courses pay a prorated share of the vendor charges plus 15% for use of the training room hardware and software. Carryovers from previous FY revenue also could be applied.

	<u>FY93</u>	<u>FY94</u>
Revenues		
Course fees	249,696	325,728
Rentals	5,500	5,500
Vendor Courses	36,800	36,800
Prev FY Carryover	8,000	-55,405
TOTALS	299,996	312,623

Note: FY93 carryover to FY94 stems from need to equip second training room with PCs and other hardware. Leasing equipment would eliminate this deficit, but total cost for equipment over two years would be approximately 40% higher (approx. \$45,000). The deficit seen as more economical over two years.

## EXPENDITURES

To equip the training program adequately, the existing PCs must be upgraded or replaced with hardware capable of running Windows and the various other software used by the agency including GIS, PC/SAS, and ORACLE. Enhanced projection capability will be needed to augment regular instruction with Video and Computer-aided training. The budget needed is:

	<u>FY93</u>	<u>FY94</u>	
<u>Room 021</u>			
Projector	\$ 10,000		Note 1
PC's	25,800		Note 3
Printer	0		
Maintenance	1,936	2,178	Note 4
Software	1,500	2,400	Note 5
Total	\$ 39,336	\$ 4,578	
<u>New Room</u>			
Projector	\$ 10,000		Note 1
PC's	46,800		Note 6
Printer	2,000		
Maintenance	750	2,178	Note 4
Software	0	2,400	Note 7
Total	\$ 59,550	\$ 4,578	
<u>District Expansion</u>			
District PC's	36,710	\$ 8,210	Note 2
Projector	4,500		
Maintenance	484	2,420	Note 4
Software	600	3,000	Note 7
Total	\$ 42,294	\$13,630	
Grand Total	\$141,180	\$22,786	

- Note 1: Includes color projector for use with PC's to project screen image plus large screen TV monitor and VCR for video aids.
- Note 2: Six new laptops plus monitors and keyboards to bring training capacity from two (2) to eight units in FY93. Two more laptops and monitors added for FY94 to increase capacity to 10.
- Note 3: Five PC's to replace old equipment. New ones needed to support Windows software and GIS training. Old PC's do not have hardware to do this.
- Note 4: DNR maintenance fee for PC's. New PC's only pay \$90 for staffing support in the first year since they are under warranty.
- Note 5: Costs to upgrade software for training, word processing, spreadsheet, etc. Costs for 021 are higher since it will be in operation full year.
- Note 6: Nine (9) new PC's to equip new room. Both rooms are equipped with nine units. Eight will be used for each class; ninth is backup in event of hardware failure.
- Note 7: Software upgrades for new room for partial year of operation.

Total Expenditures

	<u>FY93</u>	<u>FY94</u>
Permanent Salaries (@13.039/hr)	\$ 81,676	\$ 81,676
Fringes @ 35%	28,587	28,587
LTE Salaries *	17,888	17,888
Fringes @ 7.1%	1,270	1,270
Supplies and Services **	76,070	82,076
Permanent Property ***	<u>149,910</u>	<u>13,010</u>
 Total Expenditures	 \$355,401	 \$224,507

\* LTE salaries will support two half-time LTE's: a Program Assistant 1 at \$8.588/hour to coordinate training registrations, and a Technical Writer at \$9.30/hour. The technical writer produces training materials and documentation to be used during courses. Fringes at 7.1%.

\*\* Supplies and services includes \$3,500 per year per position, \$5,000 for training supplies, \$20,000 per year for travel costs to implement the district training program, \$36,800 for vendor fees, hardware/software maintenance fees and software for district expansion from training room table above.

\*\*\* Permanent property includes dollars to upgrade the equipment in the existing training room, equip a second training facility in GEF 2, buy equipment for district training and PC's for new staff.

Annual Balance:

	<u>FY93</u>	<u>FY94</u>
Revenues	\$299,996	\$345,514
Expenditures	355,401	224,507
NET	-\$ 55,405	\$121,007

All charges will be billed to Bureau data processing accounts. If a surplus should occur during a fiscal year, the excess could be easily rebated to Bureaus and rates lowered in subsequent years, or used to upgrade the program further with additional staff or training equipment. Any decision regarding a surplus will be made with the input of the Data Coordinators and approved by the Information Management Steering Committee. To avoid roller coaster rate setting from year to year, we would like to allow a surplus to be carried over for replacing obsolete or failing equipment.

COST EFFECTIVENESS

Currently, the Department contracts out most of its computer training. We pay vendors \$90-\$110 for a half-day training course. We charge \$45 for a half-day course. Under this proposal, vendor provided training would be phased out. Eventually, all computer training would be provided by ISS staff.

Given the number of training courses projected above, the following cost comparisons are relevant, assuming all training would be provided either by vendors or ISS staff.

	Cost Using Vendors <u>@\$100/half-day*</u>	Cost Using ISS Staff <u>@\$45/half-day</u>	Savings Using <u>ISS Staff</u>
FY93 (5549 half-days)**	\$554,900	\$249,646	\$305,254
FY94 (7238 half-days)	\$723,800	\$325,728	\$398,072
Total Savings FY93-FY94			\$703,326

\* \$100 is an average (\$90+\$110)/2

\*\* See above for estimates of sessions to be taught

SUMMARY

This proposal will:

1. Provide increased computer training opportunities to both Central Office and District staff, thereby allowing them to efficiently and effectively use their computers to improve the way they do their jobs.
2. Free up existing staff time to provide more technical assistance to staff and do more hardware/software evaluation, a crucial component of any data center responsibility.
3. Reduce computer training costs to the Department as a whole.

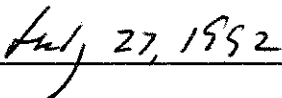
If you have any questions, please feel free to contact Linda Freitag at 4-6139 or Pat Powers at 266-0460.

Approved:



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Marty Henert, Division Administrator



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Date

cc:	Paul Willinghamz	PE/5
	Ken Weidner	FN/1
	Janet Price	IM/5
	Susan Felker-Donsing	MB/5
	Tanace Matthiesen	MB/5



ATTACHMENT 1  
COMPUTER TRAINING NEEDS ANALYSIS

**Introduction**

The Department of Natural Resources has a strong commitment to training its staff in all its geographic locations. This commitment extends to computer training. The Department has about 1200 employees in Madison (Central Office and Southern District) and 1500 in field offices located elsewhere in the state. This number does not include project and LTE positions.

The Department currently has 1,662 personal computers across the state. 924 are network connected. There are 283 network connected terminals statewide. To access the network, users must have an ID. These figures are machines in-house plus purchase orders as of 1/15/92. There are about 1,762 user ID's in the Department, 1,014 in Central Office and 748 in the field offices. These numbers convey the magnitude of DNR's user community.

There are a number of ways to look at training needs. These include the kinds of training needed and the times when training is needed.

**Types of Training Needed**

The Department's central and field offices are connected by a computer network. Certain system software operates on the network to provide services such as mail, file transfer and conferencing. All staff getting user ID's are required to take a 4 hour course to give them the basic information they need to use these services.

All personal computer hardware and software used by Department employees must be network compatible, i.e., must have the capability to "talk" to other network devices. To ensure this is the case, standards for software and hardware have been set through investigations and trials of hardware and software. Table 1 below shows the standard personal computer software packages the Department owns. BIM trains or coordinates outside vendor training on each of these standard packages. See Attachment 2 for courses offered and their length in hours.

Table 1  
STANDARD SOFTWARE PACKAGES

<u>Type</u>	<u>Name</u>	<u>No. Owned by Dept.</u>
Word Processing	Wordperfect	1,662
Note: Terminal users use Wordperfect on the VAX		
Spreadsheet	Lotus 1,2,3	691
	Quattro Pro	46*
Database	Paradox	53*
Graphics	Harvard Graphics	313*
Operating System	DOS	1,662

\*Some of these are Lanpacks which offer access to up to 5 users.

Times When Training Needed

New Staff

Most new Department staff need computer training to be effective in their jobs. Table 2 below shows the number of new staff in the Department due to turnover for the years indicated:

Table 2  
NUMBER OF NEW STAFF DUE TO TURNOVER

<u>1990</u>	<u>1989</u>	<u>1988</u>
190	160	119

In addition, the Department has experienced steady growth in the number of new permanent and project positions. Table 3 indicates the number of new positions in the Department each fiscal year since FY 1984. In addition, the Department will request substantial numbers of additional staff in the 93-95 biennium for the Clean Air and Stormwater initiatives.

Table 3  
NEW PERMANENT AND PROJECT POSITIONS BY FISCAL YEAR

<u>Year</u>	<u>No. of Positions</u>
1984	52
1985	83
1986	35
1987	89
1988	37
1989	91
1990	158
1991	141
1992	144 (perm only)

From: SASPMISA, New positions since 1984 by year, district and work city, December 16, 1991

New staff who will be working with networked computers must be trained on the basics of using the network, i.e., LOGON, mail and notes training and Wordperfect on the VAX or Transition to Wordperfect on the VAX. New staff using personal computers who do not have basic personal computer skills need DOS and Wordperfect training. Staff who will be working with job specific databases will need training in using the software their specific application(s) use(s). These will be one or more of the standard software packages listed above.

Existing Staff

Existing staff who have not previously been trained need computer training. Staff may change jobs within the Department and need new computer skills. Existing staff also need ongoing or "refresher" training. Each year as part of annual performance evaluations,

Department staff request, and their supervisors approve, training courses for the following year. Table 4 below is a summary of training courses requested and approved for Department staff for this fiscal year, by location.

Table 4  
TRAINING COURSES APPROVED FOR DEPARTMENT STAFF

<u>Course</u>	<u>Number of Staff</u>	
	<u>Field Offices</u>	<u>Central Office</u>
Intro to Wordperfect	171	71
Advanced Wordperfect	118	86
Lotus 1,2,3	129	77
Harvard Graphics	89	73
DOS	79	66
Intro to PC's	165	43
Network Logon, Mail, Notes	40	48
Basic DNR Network (Intro to VMS)	120	96
Total	911*	560*

\*Some staff requested more than one course. This does not translate into total numbers of staff.

Please see attached spreadsheet for a calculation of the number of training hours required to meet these requests. Since these figures are from the evaluations done in May and June of 1991, it is possible that some of this training need has been satisfied.

As indicated above, there are a number of personal computers in the Department which are not yet network connected. In addition, new personal computers and terminals are being purchased continuously. Some of these PC's get connected. These new machines and connects create a need for training for staff who will now have machines. Attachment 1 shows the projected number of purchases and new network connects between now and the end of FY93, the courses staff will need and the projected number of training hours required to meet those needs. The information on projected number of connects came from a Department Capacity Growth Projection Survey done in June, 1992.

One of the largest training efforts occurs when there is a change in technology used in the agency. New technology will be ever present. Imaging (the electronic storage and retrieval of documents) and geographic information systems are examples of new technology the Department will be dealing with in the next several years.

Software upgrades create a need for significant retraining. Last year, the Department upgraded from SAS 5.0 to SAS 6.0. A number of training courses were held to prepare staff for the change. The Department is currently upgrading from DOS 4.0 to DOS 5.0 and from Wordperfect 5.0 to Wordperfect 5.1. Upgrades are made to take advantage of new features and efficiencies the software provides. These changes require refresher training so that staff may take advantage of those new features. The Department is currently installing a software package on the mainframe called All-in-1. This will increase the ease of use of the system, but

will require re-training (4 hours per user) of all computer users connected to the network. It will provide a different menu and interface than what users are used to seeing and will offer new capabilities. Table 5 below indicates the number of training hours needed as a result of the above three upgrades.

TABLE 5  
TRAINING NEEDED DUE TO UPGRADES

<u>Software</u>	<u>No. of Copies</u>	<u>Class Length</u>	<u>Total Hours</u>
Wordperfect	1,662	4	6,648
DOS 5.0	1,662	4	6,648
Office Automation	1,207	4	4,828
	Total		18,124

**Summary of Training Need**

It is difficult to project numbers of hours of training needed for some of the categories of training listed above, such as new job skills, changes in technology, etc. However, there are three very "hard" projections we can rely on. These are:

- 1) Training requested and approved for staff in annual training plans 11,416 hours
- 2) Training which will be required by new connects to the network 7,399 hours
- 3) Training required due to new PC purchases 7,147 hours
- 4) Training required as a result of currently scheduled upgrades 18,124 hours

Based on these three indicators alone, the Department projects a need for 44,086 hours of training by the end of FY 1993.

trngnf

Course Name  
Hours

NO. OF MACH	IVAX LOGON & NOTES	PC WORD-BEG	PC WORD-INT	PC * WORD-INT	RUN-MS DOS	PCSA	INTRO		TRANS		VAX		NOTES		VAX VMS		PURCH SYSTEM		NETMAN QUERY & REPORTING		TRANS TO		LOTUS 1,2,3		HARVARD GRAPHICS		INTRO TO PC'S		TOTAL HOURS					
							TO VAX WP	VAX WP	TO VAX WP	WP	MOD	MOD	8	8	4	4	4	4	4	4	4	4	4	4	4	4	4	4		4	4	4	4	4
76	100	304	400	304	400	304	400	0	0	0	0	40	40	203	266	12	20	12	20	12	20	80	40	202	66	266	203	267	608	800	3,184	4,120	7,304	
3	4	12	16	0	0	0	0	12	16	0	0	10	10	8	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	53	95	
100	168	400	672	800	1344	400	672	400	672	0	0	0	0	267	448																			
160	192	1368	568	944	688	632	528							960	768																			
876	1280	2776	2712	1648	1760	1336	1600	704	1072	12	16	0	0	50	50	1437	1493	12	20	12	20	80	40	1234	6	882	1916	66	850	1928	1144	13,021	12,941	25,961

\* Assumed half of eligible staff will take training

\*\*Assumed one-third of eligible staff will take training

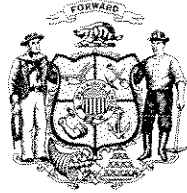
Course Name  
Hours

NO. OF MACH	LOGON & MAIL & NOTES Dist. Co.	PC WORD- PERF-BEG 8	PC * WORD- PERF-INT 8	RUN- NING * IMS DOS 8	IPCSA 4	INTRO TO VAX WP 4	TRANS TO VAX MP 4	VAX NOTES MOD 4	INTRO TO ** VAX VMS 8	NETMAN PURCH SYSTEM 4	NETMAN QUERY & REPORTING 4	TRANS TO ISAS 4	LOTUS 1,2,3 8	HARVARD GRAPHICS 8	INTRO TO PC'S 8	TOTAL HOURS				
																	Dist. Co.	Dist. Co.	Dist. Co.	Dist. Co.
76	100	304	400	304	400	304	400	0	0	40	40	80	40	202.66	266	608	800	3,184		
3	4	12	16	0	0	12	16	0	0	10	10	0	0	0	0	42	53	95		
TRAINING NEEDED																				
DUE TO NEW																				
CONNECTS																				
IM FY93:																				
PC's																				
Terminals																				
1																				
TRAINING NEEDED																				
DUE TO NEW PC'S																				
IM FY93																				
100	168	400	672	800	1344	400	672	400	672	0	0	0	0	0	0	267	448	2,667	4,480	7,147
TRAINING																				
APPROVED ON																				
TRAINING PLANS:																				
160	192	1368	568	944	688	632	528	960	768	1032	616	712	584	1320	344	7,128	4,288	11,416		
GRAND TOTAL																				
876	1280	2776	2712	1648	1760	1336	1600	704	1072	12	16	0	0	50	50	1437	1493	13,021	12,941	25,961

\* Assumed half of eligible staff will take training  
\*\* Assumed one-third of eligible staff will take training

Tommy G. Thompson  
Governor

Patrick J. Fiedler  
Secretary



Mailing Address  
149 East Wilson Street  
Post Office Box 7925  
Madison, WI 53707-7925  
Telephone (608) 266-2471

## State of Wisconsin Department of Corrections

January 4, 1993

Senator Gary George, Co-Chairperson  
Representative Barbara Linton, Co-Chairperson  
Joint Committee on Finance  
113 South State Capitol  
Madison, WI 53702

Dear Senator George and Representative Linton:

This is notification as required by Wis. Stats. s. 303.01 (c) that the Department of Corrections intends to establish a prison industry at the Sanger Powers Correctional Center in Oneida, WI. This proposed industry was approved by the prison industries board on December 16, 1992.

The details and description of the new industry are covered in the attached document titled "New Industry Proposal". This industry will incorporate two initial product lines. The first is our first venture under Wis. Stats. s. 303.06 (2) and our recently received waiver from the federal restrictions on shipment of inmate made goods in interstate commerce. This first product will be a small wood crate that our private sector customer has been importing from Mexico for several years.

The second product line that will be manufactured in this shop is refuse containers and other park and recreation products made out of recycled plastic materials. These products will use these recycled plastics as substitutes for wood in items such as picnic tables and park benches for sale to our traditional prison industries markets.

The production of these items will initially employ five inmates in an underutilized building on the old Oneida Farm property. The attachment shows the financial detail and indicates that this venture will be profitable during the first year of operation.

If you need any additional information or have any questions, please contact me. Thank you.

Very truly yours,

A handwritten signature in black ink, appearing to read "Patrick J. Fiedler".

Patrick J. Fiedler  
Secretary

PJF/ss

cc: Kenneth J. Sondalle  
Steve H. Kronzer

## New Industry Proposal

### Marketing Summary

**Industry:** Outdoor and Novelty Wood Products

**Products:** Recycled plastic refuse containers, wood crates for patio lights, park benches, sign posts, yard light holders, wooden trunks, yard ornaments etc.

**Description:** This operation would manufacture wood and recycled plastic wood substitute products, generally for outdoor use, which require less sophistication and wider tolerances than those currently produced in the wood furniture shop. This shop would be located in one of the vacant farm buildings at the Sanger Powers Correctional Center in Oneida, WI. Initially, this industry would employ five inmates, and would be supervised by a full time BSI Industries Supervisor.

**Market:** (Current)

BSI Section of Enterprise Development currently has commitments from the Department of Natural Resources for 616 to 656 recycled plastic refuse containers, and a commitment for another 360 from the Department of Transportation. At a selling price of \$160.00 each, this will amount to \$156,160 in sales for the next calendar year. In addition, the DOT has also asked if BSI could develop a recycled plastic park bench, and a 4 inch X 4 inch sign post of the same material.

A second product commitment is from the Brettellen Marketing Group of Milwaukee for a small wood crate that is part of a deck light which they now import from Mexico. This company has assured us that we will get an order for 50,000 to 60,000 units this season (December through April), with deliveries starting in February, and all of their business (estimated at 80,000 to 120,000) for next season. This will amount to \$22,000 in revenue for this season, and approximately \$45,000 for next season. In addition, if BSI is successful with the deck light, Brettellen will also contract with us for a "Navajo Pole" that is used to support a citronella yard light, and also a Spanish style trunk that is sold to furniture and novelty stores. These two products would account for another estimated \$30,000.



**Market: (potential)**

The market for the recycled refuse containers is huge. On the basis of conservative estimates, the state park system would have a need for over 8000, city, village, and county parks would account for an additional 4300, City and village street departments' usage would be about 1750, DOT rest areas -- 6000, DNR ranger stations -- 250, local school systems would be a prospect for about 15000, and the University System would be a potential for another 2600 units. This amounts to a total market of over 37,900 units, or \$6,064,000.

The recycled plastic refuse container is expected to obtain almost universal acceptance since it is made of recycled material, and because the current alternative product is the aggregate concrete waste receptacle that sells for around \$450 each. On the basis of this data, we estimate that BSI will be able to obtain 10% of the total state market, and 5% of the county, city and municipal markets over a five year period. We project that during the first 5 to 6 years, this can be expected to grow at a rate of about 10%. Beyond that period of time, the market would become saturated, and due to the durability of this product, the replacement market would be significantly less. Other products that can be made out of this material should be able to make up for the future reduction in revenue.

Other products that would need to be developed for use of the recycled plastic simulated wood product are park benches, picnic table, and sign posts. Since these are used in the same markets as the refuse containers, we expect that the market size would be similar to that of the receptacles. These products have not been included in the revenue projections below.

The private sector market for this quality level of product is extensive and almost unlimited. Many souvenir and novelty wholesalers and mail-order companies currently import wooden items from the Philippines and Mexico. These include yard ornaments, outdoor furniture, juvenile furniture, signs, plaques, cutting boards, wooden toys, pen and pen sets, etc. Current prospects include The Country Store, Lipman Gifts, Meyer Wholesale, and Aim Variety.

**Revenue Projections:**

	<b>FY'93(5 mos.)</b>	<b>FY'94</b>	<b>FY'95</b>
Recycled Plastic	\$86,000	\$202,000	\$222,000
Private Sector Sales	<u>22,000</u>	<u>75,000</u>	<u>140,000</u>
	\$106,000	\$277,000	\$362,000

**Costing:**

Refuse Containers	material:	\$98.46 each
	labor:	1.25 hours each
Deck Lights	material:	\$0.13 each
	labor:	.0113 hours each

**Pro-Forma Income Statements**

	FY'93	FY'94	FY'95
Revenue	\$106,000	\$277,000	\$362,000
Inventory Usage	59,443	146,540	178,112
Direct Labor (5-FY'93, 5-FY'94, 8-FY'95)	11,578	41,960	74,672
Staff Salary (Industries Supervisor 1) & Fringe	14,600	35,000	35,000
Misc. Supplies and Services	6,000	15,000	18,000
Depreciation	700	700	700
	<hr/>	<hr/>	<hr/>
Net Profit	\$13,679	\$37,800	\$55,516

**Capital Requirements:**

Saws from Sanger Powers @ book value	?(less than \$1000)_____
Air compressor	1000
Shrink wrap machine	1500
Plastic welder	2500
Staple gun and misc. hand tools	<u>1000</u>
Total	<\$7000