

OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO005	\$428	\$1,559	\$1,559

TITLE:

ENTERPRISE-WIDE INTERNET/INTRANET

DESCRIPTION:

FRA proposes to implement an intranet to meet its organization's internal information needs while keeping data safe from Internet-related security risks. A corporate Intranet is a private information repository, which uses internet-based technologies to combine all computer and information resources into a single network spanning across the corporate enterprise. FRA proposes to build its enterprise-wide Intranet on the existing LAN/WAN infrastructure. This Intranet could provide FRA's mobile workforce with much needed administrative support; for example; access to time and attendance information; access to travel authorization and reimbursement data/forms; and, access to other administrative information to support them without having to return to an office.

The basic elements of an Intranet are: World Wide Web servers, browsers and Transmission Control Protocol/Internet Protocol networks. Typical Intranet installations revolve around a Web server that provides links to databases, existing systems, document repositories and other electronic resources. An Intranet will give FRA employees immediate access to all these resources.

Enterprise Intranets are packaged solutions of individual services that include data/voice network services, computer and networking hardware, software, Intranet applications, network design and engineering, implementation, maintenance, and network management. Enterprise Intranets provide far more than simply a network of inter-connected sites. Various client sites, network elements, and communications systems are all integrated together to create a dynamic, secure, reliable, performance-oriented, flexible, cost-effective intranet that offers enhanced functionality and value to the network's end-users and administrators. FRA's Enterprise Intranet capability will include the following components:

Intranet Component Package Includes:

Data Communications Network Links Connectivity between client sites using advanced, state-of-the-art, reliable communications backbone to provide private line and switched data services. Client connectivity options include dedicated DS-3/DS-1/DS-0 private line, Frame Relay, Asynchronous Transfer Mode (ATM), or dial-up services.

Core Intranet Applications Planning, design and implementation of core intranet applications (e.g. e-mail, file transfer, news groups, and directory services); Includes hardware, software licensing, set-up, installation, integration, and ongoing maintenance.

Software End-user and network software required for a corporation's intranet, including TCP/IP, web browsers, security services, core intranet applications, and database/application middleware.

Network Management Web-based, integrated network management system for control of

network facilities, communications hardware & network elements.

Internet Access Gateway High-speed gateway connection from client's intranet directly to the Internet; enables intranet users to access Internet, browse WWW sites, transfer files, interact with external applications, etc.

Intranet Consulting & Design World-class design, consulting, engineering, and support; customizing of intranet capabilities/applications.

An Intranet employs internet-based technologies within its network infrastructure to achieve major benefits. These benefits include the ability to navigate through information and resources using a web browser and the creation of a standard user-interface to network applications without the use of the public Internet.

OA GOALS SUPPORTED: Improve FRA's productivity and increase the ability to exchange internal and external safety mission-related information.

DOT GOALS SUPPORTED: Improve mission performance, data sharing, system integrity, communications, and productivity through deployment of information systems which are secure, reliable, compatible, and cost effective now and beyond the Year 2000. **CONTACT:** Cristal Perpignan, (202)493-6128

OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO007	\$0	\$284	\$284

TITLE:

ENTERPRISE-WIDE DATA MART AND DATA MANAGEMENT SYSTEM

DESCRIPTION:

FRA must restructure its corporate business and operational data systems to improve data repository, retrieval and management so that the staff may have effective, on-line access to mission-critical data. Safety needs access to CFR, keyword searches, and technical bulletins by discipline (hazardous material: motive, power and equipment; operating practices; signal and train control); and access to carrier data (i.e. operating rules). The kind of restructuring envisioned by FRA is known as a data mart. Using data mart and data management software, FRA personnel can find the information they need to make educated business decisions. The essence of a data mart is that it provides a single image of corporate business reality. Current data can be monitored and compared with past data. Predictions of future trends can be made rationally. New business processes can be devised, and new operational systems quickly spawned to support those processes.

FRA proposes to implement a data mart of its relevant business and operational data. Data will be collected from many sources across the enterprise—i.e. departmental and corporate databases and existing systems. Individual data sources will be combined, processed, filtered, mapped, restructured and formatted before being committed to mart storage.

FRA proposes to implement the following new database technologies for achieving these ends, particularly:

- A web-active on-line interactive facility to create, edit, retrieve, and delete data from the datamart;

- Data mining and other front-end analysis tools;

- Universal servers/virtual data mart model to provide support for multiple data types so databases can be used to manage unwieldy information;

- Object-relational data base technology; and

- Better database management tools to control databases that will become increasingly multifaceted as user needs change and the demand for data accelerates.

Implementation will include:

- Data Extraction - collecting basic operational data from various corporate databases, legacy systems and external data sources.

- Data Aggregation - relating, combining, and layering all collected data based on data relationships and meaningfulness.

- Data Formatting - formatting and storing data in a well-organized structure to enable efficient analysis and interaction by end-users.

- End-User Interface - specifying a distinct, simplified end-user interface to the data warehouse (e.g. web browser) that anticipates a range of users, functions and levels of sophistication—management, staff, planning, strategic and executive functions.

- End-User Analysis Tools - procuring analysis tools used to further summarize, analyze, structure, manipulate and evaluate data for decision-making.

- Data Maintenance - maintaining value of data by refreshing data and archiving/removing data with diminishing decision-making value.

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DOT GOALS SUPPORTED: Improve mission performance, data sharing, system integrity, communications, and productivity through deployment of information systems which are secure, reliable, compatible, and cost effective now and beyond the Year 2000.

MILESTONE 1 AND DATE: Develop Project Plan

CONTACT: Cristal Perpignan, (202) 493-6128

OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO008	\$261	\$707	\$707

TITLE:

INFORMATION TECHNOLOGY INFRASTRUCTURE, COMPUTER, COMMUNICATIONS PLATFORMS

DESCRIPTION:

FRA needs a system that supports the daily automated office functions in its headquarters and also supports the information exchange in the proposed enterprise-wide intranet and the enterprise universal remote access capabilities. FRA's proposed information infrastructure would use computer platforms that are flexible, robust and easy to manage.

The functionality of the information infrastructure will include supporting the headquarters local area network (LAN) operations, supporting communications between regional and headquarters offices, and supporting communications between remote users and headquarters. Although users are geographically spread across the country, the information infrastructure will support seamlessly all functions in a virtual LAN environment as if users were working side by side in the same office.

The components of FRA's information infrastructure will include file server, e-mail servers, a directory server, Internet/intranet information servers, proxy servers, and firewalls. In addition to their primary functions, some of these servers will also support related office automation and communications applications. Therefore, the components of the servers will include hardware, software, licenses, configuration management, system design and management tools.

The computer platforms of the information infrastructure will support the above mentioned functionality as well as interoperability with other existing client systems. It is proposed to establish integrated computer platforms using the Windows NT and UNIX operating systems. Both systems are powerful and easy to manage. In addition, both systems have built in functions to support the IP protocols for Internet/intranet applications as well as compatibility to support the majority of existing clients.

OA GOALS SUPPORTED: Improve FRA's productivity and increase the ability to exchange internal and external safety mission-related information.

DOT GOALS SUPPORTED: Improve mission performance, data sharing, system integrity, communications, and productivity through deployment of information systems which are secure, reliable, compatible, and cost effective now and beyond the Year 2000.

MILESTONE 1 AND DATE: Develop Project Plan

MILESTONE 2 AND DATE: Assess current technologies

CONTACT: Cristal Perpignan, (202) 493-6128

OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO012	\$264	\$264	\$264

TITLE:

MILESTONE 3 AND DATE: Test and implement THE RAIL WAYBILL SYSTEM

DESCRIPTION:

The Rail Waybill System (Waybill System) updates and maintains FRA's computerized waybill sample, which is the only source of national railroad origin and destination commodity transportation data. These data are utilized for analyzing the routing of hazardous materials; performing merger analyses, diversion studies, and network flows; developing policy programs; and recommending regulations and legislative action. These data also support FRA analyses of intra- and inter-modal competition. In addition, the Rail Waybill System is utilized in preparing DOT filings in Surface Transportation Board (STB) proceedings, as well as in conducting marketing, inter-modal, and other analyses. FRA has an agreement with the STB whereby FRA contributes funding each year toward STB's costs to develop the Annual Waybill

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OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO013	\$100	\$100	\$100

TITLE:

FRA RAILROAD NETWORK GEOGRAPHIC INFORMATION SYSTEM

DESCRIPTION:

FRA's Railroad Network Geographic Information System (GIS) is a computerized database representing the 160,000 route miles of the railroad system in the United States, along with the rail lines in Canada and Mexico. It includes a wide array of geographically referenced information used for FRA's safety program, traffic simulations, and intermodal planning. The database was created at a 1:2,000,000 scale (about 2 kilometer accuracy) as a macro analysis tool for studying the national impact on traffic pattern shifts, such as the routing of hazardous materials (used in the allocation of rail safety inspectors). FRA has created a 1:100,000 scale database necessary for a variety of micro analyses.

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OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO014	\$1,338	\$1,338	\$1,338

TITLE:

RAILROAD SAFETY INFORMATION SYSTEM

DESCRIPTION:

FRA is responsible for the enforcement of numerous laws in the area of rail safety. In connection with that responsibility, FRA has been granted authority to prescribe, as necessary, appropriate rules, regulations, orders, and standards for all areas of railroad safety. As part of this effort, FRA has established procedures to identify, record, and report information relative to rail safety.

In order to process and analyze the large volume of data generated by this information collection activity, the Systems Support Division of the Office of Safety maintains and operates the Railroad Safety Information System (RSIS). RSIS is comprised of the following major subsystems: the Railroad Accident/Incident Reporting System, Railroad Inspection Reporting System, and Grade Crossing Inventory System. This information is used to assess railroad performance and to develop safety assurance and compliance programs to insure maximum

CONTACT: Robert Finkelstein, (202) 493-6280

OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO002	\$2,568	\$3,110	\$3,626

TITLE:

FRA LAN/WAN AND OFFICE AUTOMATION SYSTEM

DESCRIPTION:

Eight regional local area networks (LAN) and Headquarters (LAN) linked together to form a FRA wide area network (WAN), complimented by an array of Windows-based microcomputers, is used to support the missions and goals of the FRA. Functions for the Offices of the Administrator, Administration and Finance, Safety, Policy, Railroad Development, and Chief Counsel are supported by this infrastructure.

Applications that reside on the local area network include word-processing, database, spreadsheet, file sharing, electronic forms, e-mail, web browsers, calendar and scheduling, as well as other applications. More specialized applications include controlled correspondence tracking system, scanning and imaging, and access to department-sponsored systems such as IPPS and DELPHI.

CONTACT: Cristal Perpignan, (202) 493-6128

OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO017	\$0	\$300	\$300

TITLE:

ENTERPRISE-WIDE UNIVERSAL REMOTE ACCESS

DESCRIPTION:

Three years ago FRA reinvented the safety program, moving from site inspections to systems compliance. This trend requires that FRA develop a systems approach to safety. A systems approach means providing Safety Inspectors and Engineers with on-line access to corporate information and analytical tools to enable them to perform their functions more effectively and efficiently. One way to do this is to provide Safety Inspectors with remote access to FRA's corporate information infrastructure and databases. At any given time, nearly half of FRA's employees are on travel and are in need of remote access to e-mail, collaboration shareware, transaction processing, access to corporate databases, and intranet communications. The requirement to provide telecommunications technology for remote access to the primary workplace is critical. The successful implementation of an Intranet network requires the expertise of a network communications specialist capable of implementing, testing and troubleshooting state-of-the-art networking technology. Corporations are adopting these new technologies to revolutionize the way they conduct business. Specifically, developments in

corporate network applications, operation structures, and office automation are driving the demand for remote access.

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OA:	INITIATIVE ID:	FY-2000:	FY-2001:	FY-2002:
FRA	FRAOO022	\$1,102	\$1,861	\$1,861

TITLE:
GENERAL HARDWARE/SOFTWARE SUPPORT

DESCRIPTION:

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