



Users Satisfied with FIRN2; Options Exist for Future Services to Educational Entities

at a glance

The Florida Information Resource Network (FIRN) was created in the early 1980s to electronically link the state's public education entities to computing resources. Over the years, its services have expanded from providing a means to transmit administrative and student information to providing electronic mail and Internet connections. To meet growing demands, the State Technology Office, on behalf of the Florida Department of Education, contracted with Hayes E-Government Resources to provide educational network services under an arrangement known as FIRN2.

Educational entities are generally satisfied with FIRN2 services. However, the demand for bandwidth provided by FIRN2 is increasing as schools expand computer use and adopt new technologies. As a result, future costs for FIRN2 services are expected to increase.

The department should develop a strategic plan for addressing the increasing demand for services, and the Legislature may wish to consider several options for providing educational entities with services currently provided through the FIRN2 system.

Scope

This project was conducted in response to a legislative request to review the design of the Florida Information Resource Network and examine options for providing Internet access and data reporting services to school districts, libraries, community colleges, and universities.

Background

The Florida Information Resource Network (FIRN) was created in the early 1980s to electronically link Florida's public education entities to computing resources. FIRN's purpose was to provide equal access to computing resources for all public education entities, to enable the exchange of information among these entities, and to transmit administrative data to the Florida Department of Education (DOE) in a timely manner. Over the years, FIRN services have expanded from providing a way to transmit administrative and student information to providing electronic mail and connections to the Internet.¹

In 2003, the State Technology Office (now the Department of Management Services' Enterprise Information Technology Services), on behalf of DOE, contracted with Hayes E-Government Resources, Inc. (Hayes) to provide educational network services, including Internet access and data reporting services, to school districts, public post-secondary institutions, and libraries.² The services provided by Hayes are referred to as FIRN2 since they replaced the former FIRN network that was owned, operated, and

¹ While FIRN2 provides the vast majority of its services to public education entities and libraries, it also provides services to some private schools.

² On July 1, 2005, the information technology functions that were previously performed by the State Technology Office were incorporated into the Department of Management Services' Enterprise Information Technology Services.

maintained by the state. Hayes subcontracts with various telecommunications companies to provide connections to the Internet.

DOE purchases FIRN2 services from Hayes on a subscriber basis. Hayes offers these services in bundled and unbundled packages as well as individual optional services. Bundled services include Internet access, bandwidth management, 24-hour technical support, and network equipment maintenance. Bandwidth refers to the amount of data that can be transmitted along a communications channel in a given period of time and is measured in bits per second. The unbundled package provides Internet access only; this option is used primarily by universities and community colleges. Optional services include email, data encryption and content filtering.³ DOE allocates educational entities an amount of bandwidth through FIRN2, but entities can choose to pay for additional bandwidth using the Hayes contract prices or by purchasing from another provider.

Although FIRN2 services are available to all public educational entities in Florida, some use other providers for Internet access. For example, 6 of the 67 school districts do not use FIRN2 for Internet access because they have arrangements with private or municipal Internet service providers. However, these entities still use the FIRN2 network to submit education-related data to DOE through virtual private networks managed and maintained by Hayes.⁴

Two state entities are involved in administering the FIRN2 contract.

- The Department of Education is responsible for issuing service orders on behalf of the entities using FIRN2 and making sure any FIRN2 services added for E-rate eligible entities (see below) will be covered by E-rate. It also is responsible for managing bandwidth distribution among FIRN2 subscribers, auditing billing services and conducting reviews of the service.
- The Department of Management Services' Enterprise Information Technology Services, under a Service Level Agreement with the

Department of Education, assists in processing service orders, monitors the performance of Hayes, and provides bandwidth utilization reports.

Resources

As shown in Exhibit 1, FIRN2 services are supported by state general revenue, E-rate, and trust fund dollars.

Exhibit 1 General Revenue Appropriations for FIRN2 Have Remained Constant over the Last Four Years

Fiscal Year	General Revenue	Educational Aids Trust Fund	E-rate
2000-01	\$8,019,473	\$0	\$2,410,427
2001-02	6,591,281	0	2,463,836
2002-03	5,649,779	3,900,000 ¹	2,909,750
2003-04 ²	5,649,779	0	— ³
2004-05	5,649,779	7,850,221 ⁴	6,803,255
2005-06	5,649,779	7,850,221 ⁴	7,391,000 ⁵

¹ The department reports it did not use this appropriation because the funds would have to be reimbursed by educational entities. If the funds were reimbursed, FIRN's eligibility for E-rate discounts would have been jeopardized.

² FIRN2 was created in 2003 when Hayes was contracted to provide educational network services, including Internet access and data reporting services, to school districts, public post-secondary institutions, and libraries. In prior years, the FIRN network was owned, operated, and maintained by the state.

³ FIRN2 was ruled ineligible for E-rate discounts by the Universal Service Administrative Company during Fiscal Year 2003-04. However, FIRN2 was ruled as being eligible for E-rate discounts in subsequent years. The Department of Education is appealing the company's earlier ruling that made FIRN2 ineligible for E-rate discounts in Fiscal Year 2003-04 and is seeking approximately \$7.3 million.

⁴ This funding was appropriated as a contingency in the event FIRN2 was not approved for E-rate discounts. However, the department has not had to use these contingency funds, which have been carried forward while the department's E-rate appeal is under consideration.

⁵ Expected E-rate contribution.

Source: General Appropriations Acts and Florida Department of Education.

General Revenue. The Legislature appropriated approximately \$5.6 million in general revenue for FIRN2 services in each of the last four fiscal years.

E-rate. The federal E-rate program provides discounts on services obtained by eligible K-12 entities and libraries. E-rate discounts are provided by the not-for-profit Universal Service

³ Federal law mandates that all K-12 Internet access must be blocked from websites which may contain objectionable material.

⁴ A virtual private network is a secure connection between two points across the Internet.

Administrative Company.⁵ These discounts range from 20% to 90% of the costs of telecommunications services, Internet access, and internal connections. Discounts vary based on factors such as the number of free and reduced lunch program participants served by an entity and whether the entity is located in an urban or rural area. The portion of the cost that is discounted is paid by the program directly to the service provider.

The Department of Education is not eligible to receive E-rate discounts. Instead, it applies for E-rate discounts on behalf of the school districts and libraries that receive FIRN2 services. The Universal Service Administrative Company pays Hayes directly for the discounted portion of FIRN2 costs. Individual school districts and libraries also may apply for E-rate discounts for services that exceed the levels provided under the contract with Hayes.

Trust Fund. The Legislature appropriated approximately \$7.9 million for FIRN2 services from the Educational Aids Trust Fund in Fiscal Years 2004-05 and 2005-06. This funding was appropriated as a contingency in the event FIRN2 was not approved for E-rate discounts.⁶

Findings

FIRN2 users are generally satisfied with services, but the system faces challenges in meeting future demand

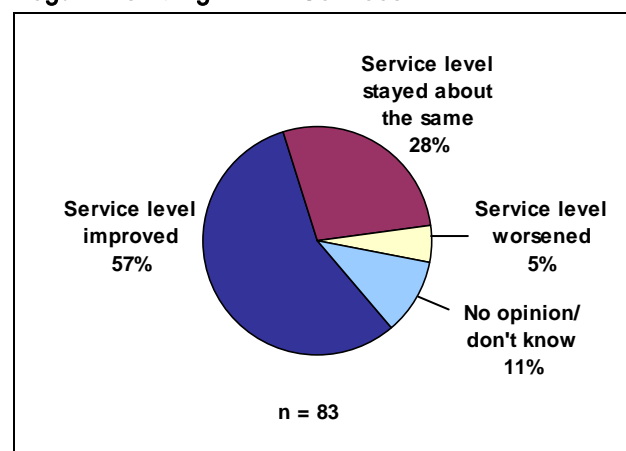
Most educational entities appear to be satisfied with the services they receive through FIRN2.

⁵ The Schools and Libraries Universal Service Support Mechanism, popularly known as the "E-rate," was created as part of the Telecommunications Act of 1996 to ensure that all eligible schools and libraries in the United States have affordable access to modern telecommunications and information services. The program is funded through a universal service fee charged to companies that provide interstate and/or international telecommunications services. The Universal Service Administrative Company operates and administers the E-rate program and is regulated by the Federal Communications Commission. Although schools and libraries apply for discounts, the company pays vendors directly.

⁶ FIRN2 was ruled ineligible for E-rate discounts by the Universal Service Administrative Company for Fiscal Year 2003-04. The Department of Education is appealing the company's ruling and is seeking approximately \$7.3 million. However, because the appeal has not been resolved, the department has not had to use these contingency funds. The contingency funds have been carried forward while the appeal is under consideration.

We surveyed educational entities regarding their satisfaction with FIRN2 services.⁷ Most (89%) of the 72 entities that reported using FIRN2 for instructional activities were satisfied with the Internet access provided by FIRN2. Further, as shown in Exhibit 2, survey respondents also reported that service levels have improved since Hayes began providing FIRN2 services.

Exhibit 2 The Majority of Survey Respondents Reported That FIRN2 Service Levels Have Improved Since Hayes Began Providing FIRN2 Services¹



¹ We excluded seven entities that submitted surveys but did not respond to a question on changes in services since FIRN2 was created in calculating the percentages shown in this Exhibit.

Source: OPPAGA survey of entities that use FIRN2.

However, some entities reported that FIRN2 did not provide them with enough bandwidth access to meet their needs, and these entities expressed a need to increase the amount of bandwidth available so they could have faster connections to the Internet.

Meeting the increasing demand for bandwidth is a major challenge for the system. DOE staff estimate that school district demand for bandwidth increased by 30% between Fiscal Years 2003-04 and 2004-05, and it expects this growth rate to continue throughout Fiscal Year 2005-06. The increase in demand is attributed to schools increasing the number of computers that access the Internet and related services through FIRN2, the use of new voice and video technologies, greater use of online instructional materials and

⁷ Of the 155 entities we contacted, 90 (58%) responded to our survey, including 49 of the 67 school districts (73%).

online learning programs, and increased use of online administrative applications that make extensive use of electronic data. As a result of this increasing demand, some educational entities are purchasing additional bandwidth using their own funding sources as their needs exceed the levels allocated by DOE through FIRN2.

The Department of Education should develop a strategic plan to address the challenges facing FIRN2 including the increasing demand for services and bandwidth. A strategic plan for FIRN2 should

- identify critical needs and identify strategies and resources to address these needs;
- specify goals and measurable objectives for the system;
- specify standards that can be used to evaluate performance in achieving the system's goals and objectives; and
- provide a contingency plan for funding FIRN2 in the event it does not receive E-rate discounts in the future. In the past, Educational Aids Trust Fund dollars have been used to pay for additional bandwidth and as a contingency source of funding for FIRN2 services.

Without such a strategic plan, the department lacks an adequate basis for demonstrating how it will meet and fund future demand for these electronic services.

There are several options for providing FIRN2 services

There are several options that the department and the Legislature could consider for providing educational entities with services currently provided through the FIRN2 system. These options include

- maintaining the system as currently designed;
- providing services through the state's information network for state agencies; and
- requiring educational entities to directly contract with service providers.

We could not directly compare the cost of these options because FIRN2, the state network, and other service providers offer different packages of services at different prices. The cost-effectiveness of these options can be determined only if

providers submitted bids that can be compared to FIRN2's prices, and should be explored when the FIRN2 contract is rebid.

Option 1: Maintain the current system.

Under this option, the current arrangement for providing FIRN2 services would be continued after Hayes' current contract expires on June 30, 2007.⁸ This could be done through a contract extension or through a contract with a new vendor. Under this system, educational entities would still need to determine which services to obtain through FIRN2. As noted previously, some school districts use other providers for Internet access because they have arrangements with private or municipal Internet service providers. However, all entities use the FIRN2 network to submit education-related data to DOE through virtual private networks managed and maintained by Hayes.

The current system has advantages, such as allowing the state and school districts and libraries to qualify for E-rate discounts, which currently account for 71% of E-rate eligible FIRN2 service costs. The current system also provides a central point of contact and accountability for services (Hayes) and does not require educational entities to deal with different service providers. The current system also reduces administrative workload for educational entities since they do not have to issue their own requests for proposal for services or enter into their own contracts. Also, all data that is transferred to DOE uses the same data encryption method. In addition, it allows smaller educational entities to receive the same core services as larger entities.

However, this option commits the state to continuing to serve as a contracting agent for providing bandwidth and Internet access to educational entities. Also, as noted previously, some school districts have largely opted out of FIRN2 by entering into arrangements with private or municipal Internet service providers rather than using FIRN2 to provide such services.⁹

⁸ The contract includes an option of two one-year renewals. Under these renewals, the contract does not have to be re-submitted to the USAC for E-rate fund approval. However, the contract pricing and other features can be adjusted.

⁹ Six of the 67 school districts have entered into arrangements to obtain Internet access from private or municipal service providers. However, Department of Education staff report that two of these

Option 2: Eliminate FIRN2 and provide services through the state's information network for state agencies.

Under this option, FIRN2 would be eliminated as a separate network for educational entities and the entities would become subscribers of Florida's statewide network for state agencies. Most state agencies purchase Internet access and data services from this network under agreements with the Department of Management Services' Enterprise Information Technology Services. Under this option, the services would be paid for by state or local funds.

If this option were adopted, educational entities would be able to obtain services through a larger network, which may, in theory, be expected to reduce the costs of services. However, we were not able to directly compare the cost of services under FIRN2 with the state network because they offer different packages of services at different prices.

However, this option has potential disadvantages. Services acquired through this network may not be eligible for E-rate funding, which would increase state or local costs. Department of Education managers indicate that information services must be bundled and provided by a single vendor in order for them to be eligible for E-rate discounts. The state network would not qualify as a vendor because it is an aggregator of services which it sells to other state entities.

Also, the state network does not currently include some of the services provided by Hayes under its FIRN2 contract. For example, Hayes currently provides technical support such as network troubleshooting and bandwidth management, which is not provided under the state network. This technical support is critical to small entities, as they may not have the resources to hire technical staff needed to run their own networks.

Finally, educational entities would need to have a means for encrypting student and other data they currently send to the department through the FIRN2 system. Using a single entity to provide data encryption, as is currently the case with FIRN2, provides better assurance that the data from each entity will be submitted and encrypted in a consistent manner.

Option 3: Eliminate FIRN2 and require educational entities to directly contract with service providers.

Under this option, FIRN2 would be eliminated and its former subscribers would be required to establish their own contracts with providers, such as private vendors, the Department of Management Services, or local municipal or county networks to obtain needed services. Educational entities could use technologies such as virtual private networks to ensure a secure connection to transmit confidential data to the Department of Education. K-12 entities and libraries also could apply for E-rate discounts.

This option would provide educational entities with flexibility to use their resources to obtain needed services. It would also eliminate the state's role of providing a separate network for educational entities. However, as with Option 2, this option would raise concerns regarding the consistency of data encryption and submission if it resulted in educational entities using multiple methods to encrypt data.

Also, if this option were adopted, the Legislature would need to decide whether the state should provide funding support to entities that do not have sufficient financial resources to pay for Internet access and technological services currently provided by FIRN2. One-third of the entities responding to our survey expressed concern about paying for such services if FIRN2 was eliminated. Further, the Legislature would need to require that a system be established and maintained to securely transfer data to DOE. Finally, the Legislature would need to determine what role, if any, the Department of Education would serve in assisting educational entities in obtaining needed services. For example, the Legislature may wish to make the department responsible for helping educational entities establish and maintain virtual private networks for transmitting data.

Conclusions and Recommendations

Educational entities generally are satisfied with FIRN2 services. However, the demand for bandwidth provided by FIRN2 is increasing due

districts are planning to return to FIRN2 to obtain these services.

to the entities using more computers and adopting new technologies. As a result, DOE expects the costs of providing FIRN2 services to increase in the future.

To address this challenge, we recommend that the Department of Education develop a strategic plan for providing information technology services to the state's public educational entities. This plan should identify critical needs and identify strategies and resources to address these needs; specify goals, measurable objectives, and standards for assessing FIRN2's performance; and provide a contingency plan for funding FIRN2 services in the event that the system does not qualify for E-rate discounts in the future.

The Legislature may wish to consider options regarding the state's future role in providing Internet and data transfer services to educational entities. These options include

- maintaining FIRN2 as currently designed;
- eliminating FIRN2 and providing services through the state's information system for state agencies; and
- eliminating FIRN2 and requiring school districts, community colleges, and universities to obtain services directly from providers. If the Legislature implemented this option, it would need to decide whether the state should provide funding support to entities that do not have sufficient financial resources to pay for Internet access and technological services currently provided by FIRN2. It also would need to decide what role, if any, the Department of Education would serve in assisting educational entities in obtaining needed services.

If the Legislature wished to pursue the latter two options, it should direct the Department of Education to begin a process to secure bids from vendors to assess the cost-effectiveness of various alternatives. The department will need to rebid the current contract prior to June 2007. In doing so, the department should obtain input from educational entities and other stakeholders.

The Legislature also should direct the Department of Education to conduct an assessment of educational entities' needs for technological services, including Internet access and bandwidth needs, and evaluate various options for

addressing those needs. In conducting this assessment, the department should obtain input from various stakeholders, including representatives of FIRN2 users (both technical staff and non-technical staff such as district superintendents or school administrators), representatives of state educational technology associations, and private information technology experts. The department should provide its report and recommendations to the Legislature before the 2007 session. This would allow the Legislature sufficient time to consider options for delivering FIRN2 services before the current contract with Hayes expires in June 2007.

Agency Response

In accordance with the provisions of s. 11.51(5), *Florida Statutes*, a draft of our report was submitted to the Commissioner of the Department of Education for his review and response.

The Commissioner's written response is reproduced in its entirety on the following pages.

OPPAGA supports the Florida Legislature by providing evaluative research and objective analyses to promote government accountability and the efficient and effective use of public resources. This project was conducted in accordance with applicable evaluation standards. Copies of this report in print or alternate accessible format may be obtained by telephone (850/488-0021 or 800/531-2477), by FAX (850/487-3804), in person, or by mail (OPPAGA Report Production, Claude Pepper Building, Room 312, 111 W. Madison St., Tallahassee, FL 32399-1475). Cover photo by Mark Foley.

Florida Monitor: www.oppaga.state.fl.us

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Gary R. VanLandingham, OPPAGA Director

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March 31, 2006

John L. Winn
Commissioner of Education



Mr. Gary R. VanLandingham
Director
Office of Program Policy Analysis
and Government Accountability
111 West Madison Street, Suite 312
Tallahassee, Florida 32399-1475

Dear Mr. VanLandingham:

The Department of Education appreciates the hard work and thoroughness that the Office of Program Policy Analysis & Government Accountability (OPPAGA) staff provided during the review of the Florida Information Resource Network services to the educational community, for the period May 2005 through March 2006. Please consider this letter the Department's official response to the draft report *Users Satisfied with FIRN2; Options Exist for Future Services to Education Entities* dated March 2006.

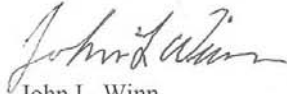
The Department believes that two issues were omitted from the report which allows the Department to capitalize on cost savings while improving the level of FIRN2 services:

- On the FIRN2 E-rate application, the DOE can combine district discount percentages by simple average into volume buying of FIRN2 services. Approximately \$500,000 more in federal funding can be received by consolidating purchasing power.
- Since FIRN2 was outsourced, the level of additional bandwidth service to the districts has increased by a factor of five, while state funding has remained unchanged. This has occurred because of the increase in E-rate funding for the services that were outsourced for private schools, school districts, and libraries.

Mr. Gary R. VanLandingham
March 31, 2006
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The Department appreciates the opportunity to respond to this review. Should you require further information, please contact Inspector General John M. Franco at (850) 245-0403.

Sincerely,

A handwritten signature in cursive script, appearing to read "John L. Winn".

John L. Winn
Commissioner

JLW/jmf/br