Q. How does SIF work?

There are four elements that make SIF work:
- Software Application:
  a software program implemented within a school or district.
- SIF Data Object:
  Sets of information shared by software applications using the rules of the SIF Specification
- SIF Agent: (for example, BusBoss)
  A software program (written by a vendor) that serves as the intermediary between the software application and the SIF Zone
- ZIS (Zone Integration Server):
  A software program that serves as the central communications point in a SIF Zone

When a software application with a SIF Agent sends out a message to the ZIS, the ZIS forwards that information onto the applications that are listening for this information. The information is routed through the application's agent. SIF Certified software applications and agents do not talk to each other directly; each application talks to its agent and it talks to the ZIS, which handles all further communication. The ZIS's role as a "third party message handler" means that the SIF framework is easily expandable, very reliable, and relatively straightforward for software companies to write agents for.

Q. I´m a Superintendent, what does the SIF Implementation mean to me?

As a Superintendent, your role as both the key instructional leader and chief of operations places you in a unique and demanding role, unlike almost any other in business today. Your twin responsibilities for educating children and managing the staff and resources necessary to accomplish that goal are particularly challenging in the face of technological innovation, increased state and federal accountability and municipal funding cycles. Your need for accurate, integrated data to make informed and fiscally responsible decisions has never been greater. Implementing software programs that utilize SIF can provide you with a flexible and robust technological infrastructure to help you meet these demands. Depending upon the number of SIF Certified applications installed at your site, the SIF Implementation's impact on your school or district may include: saving time for instructional staff; streamlining administrative tasks; enabling more efficient allocations of support staff; and more effective facilities planning and enrollment forecasting. SIF can provide your teaching staff with the confidence that the data they have access to--from class lists with parent/guardian address and phone numbers, to grade reports and bus schedules--is the most up- to-date available in the system. The savings in time and effort necessary to register a new student for transportation services, library or cafeteria not only help a busy staff and their teaching schedules, but it helps the new student feel a part of the entire school community from their very first day. The ability to share data among instructional, administrative and support software applications makes it possible to be more accurate with both short- and long-term planning, including better forecasting student enrollments to avoid overcrowding or to plan for new construction. The SIF Implementation can give you and your staff access to the type, quality and timeliness of data that will help you better foster, develop and manage the personnel and resources to nurture and educate our children for tomorrow.

Q. I´m a teacher, what does SIF Implementation mean to me?

For teachers, the impact of SIF in your school or district could be significant. The SIF Implementation's ultimate goal is to provide all school and district personnel with appropriate access to the most correct and timely data available. If your district implements SIF-Certified software applications, the first benefit you may encounter is the confidence in knowing that the data you have access to, --from class lists with parent/guardian address and phone numbers, to grade reports and bus schedules--is the most up-to-date available in the system. Similarly, if you are now responsible for any sort of data entry, such as entering students in an Instructional Management System or a grade book program, you may find that all of this data entry has already been accomplished by the SIF Certified software, preserving your time for planning and direct instruction. These initial benefits of data accuracy and data streamlining will be the most apparent and the ones that will affect you most directly. The savings in time and effort necessary to, register a new student in the library or cafeteria or for transportation services will also be forthcoming.   These changes not only help with your busy schedule, but they also help the new student feel a part of the entire school from his or her first day. Ultimately, the ability to share data among instructional, administrative and support software applications will make it possible to be more accurate with both short- and long-term planning. Because data is more accessible and more easily analyzed, it may be possible to better forecast student enrollments to avoid overcrowding or to plan for new construction. You may never have to deal with the "nuts and bolts" of implementing SIF in your school or district, but the impact on your ability to be an informed and effective teacher will be both direct and substantial.

Q. What is SIF Certification?

The SIF Certification Program is a formal program undertaken by SIFA to confirm that software programs adhere to the rules and definitions of the SIF Implementation Specification. SIFA has contracted a well-respected international certification organization to serve as the SIF Certification Authority. The SIF Certification Program involves a series of formal tests which validate that software applications properly implement the SIF specification. A software program which successfully completes the program will be able to display the "SIF Certified" logo on its package, website and in promotional literature. The SIF Certified logo is your indication that this particular version of the software program has been tested and certified to properly communicate and share information with other SIF Certified software programs. It is important to note that software programs will be Certified only to a particular release of the SIF Specification. The particular release of the specification will be indicated on the logo, for example, the words: "SIF Certified, Version 1.1", indicate that this version of the software program is Certified with SIF Specification Version 1.1. In completing the Certification Program, each company must complete a Conformance Statement Questionnaire that indicates which SIF data and messages the company's application supports. The application will then be tested against this questionnaire to confirm the company's statements. The completed questionnaire will be available on the certification authority's website for you to review. In order to continue to use the SIF Certified logo, each company must support a "conformance guarantee" which states that they will continue to keep their application in conformance with the specification throughout the duration of their certification period. For more information, please visit **http://certification.sifinfo.org**

Q. Why does SIF Certification matter?

Certification is important for both educators and software companies. For educators it gives them the confidence that the SIF Certified software applications they purchase will work together with other SIF Certified programs without having to do any special programming or make any significant modifications to the software. It also allows educators to choose "best of breed" software applications that meet their computing needs and it allows them to confidently increase the number of programs sharing data. For software companies, it verifies that their software program will be able to properly share information with software programs from other companies. This can be an important differentiator when school districts are making substantial software investments. Knowing that a new program will work with one already installed saves time and money for the school as well as for the company. SIFA has prepared **SIF RFP language** for schools and districts to use when purchasing software to ensure that they receive SIF Certified applications and are working with SIFA Vendor Members.

Q. What is the SIF Specification?

The SIF Specification is a set of documents developed by SIFA work groups, committees and task forces comprised primarily of software engineers from educational software companies. These documents articulate a set of common definitions for school data and a set of rules for how this data can be shared. The common data definitions are called data objects. Data objects cover many items that are involved in schools. For example, a student's name, address and phone number are part of the "StudentPersonal" data object. Having different software programs understand this common definition of a student makes it possible for them to share this information properly. There are 89 data objects currently defined. Additional data objects will be defined as the Specification matures. In addition to the data objects themselves, the SIF Specification also defines the rules for how software programs can send these data objects to each other. This set of rules is called the "infrastructure" and uses ways of sending messages that are built on the types of technology utilized by the internet. By using open and commonly available means to transport these data objects, SIF ensures that all vendors will be able to use the SIF framework and that all school systems will be able to implement it regardless of what kinds of computers or networks they have. Ensuring that SIFA is vendor-neutral and software-platform independent is an important guiding principal of SIFA and a foundation for the long-term viability of the SIF Specification.

Q. What technology is the specification based on?

The SIF specification is based on the W3C endorsed standard Extensible Markup Language (XML). It defines common data formats and high-level rules of interaction and architecture, and is not linked to a particular operating system or platform.

Q. What do all those numbers and letters following the Specification mean?

Because the development of the SIF Specification is an evolving process, it is necessary to indicate to vendors and the general public when changes have been made to the specification. SIFA has created a regular process to make changes and implemented a numbering scheme to reflect those changes. For example, the current release of the SIF Specification is 1.5r1. The first number in front of the period (1) is the number of the major release, the number just after period (5) indicates the minor release version and the r1 indicates that this is a ´revision´ or ´fix´ version. A ´revision´ or ´fix´ number indicates that there have been some small text changes to the documentation, but no other changes have been made since the last release. Making a substantial change to the messaging rules or data definitions would constitute a Major release and would change the number in front of the period such as: 2.0. A change in the status of a data object, for example, would trigger a minor release and be written like: 2.1. SIFA members are currently working on Specification version 2.0. To summarize:

- Major versions address those things that can change the ways in which applications work together.
- Minor versions address the status of data objects but not how the applications function.
- Fix versions address unanticipated minor items or items that can be included without changing the status of a data object.

Anything that happens in a Fix release is included in the next Minor release and any Minor changes are included in the next Major release. Fix and Minor releases are ss on the way to the next major release. All releases of the specification: are scheduled.

Q. How can I tell if a company is involved in the SIF Association?

There are more than 300 leading education software vendors and customers involved SIFA. They can be involved in two different ways:

1. SIFA Member. This means that the company/organization has paid their SIFA dues and is involved in the working groups writing the specifications. Please note, any company may be a member of SIFA, but that does not necessarily mean that any of their products are SIF Certified.

2. SIF Certified. This means that company's product have met SIF criteria and passed certification testing. All products may be tested for certification. For the up-to-date list of certified applications, visit **Certification Register**.

For a complete listing of SIFA Vendor Members visit their online directory.

Q. How do I know if I am ready to implement SIF?

SIF Implementation Support Tools

The SIF Association is proud to provide this suite of valuable tools for schools, districts and states to help them begin and continue working toward data interoperability and automated vertical reporting. These tools, along with the other available online resources from SIF Association, empowers end-users to implement data interoperability solutions via gap analysis development, project planning, RFP access and documented best practice strategies.

- SIF Implementation Readiness Assessment Tool: http://siftoolkit.espsg.com
  - Provides schools, districts and states with a free online interoperability assessment tool.
  - The "value-add" is an editable output document that includes assessment and next steps for interoperability planning.
  - The document can be integrated as a piece of your technology plan and offer insight in where you are in gaining data interoperability.

- SIF Implementation Planning Kit: http://www.sifassociation.org/tool_kit.asp
  - This SIF Planning Toolkit provides:
    - o Project planning
    - o Data management
    - o Computer hardware, software, networking
    - o Budgetary and human resource concerns
  - This planning kit was designed by and for educators to provide processes for getting the best possible technology solution for their school and/or districts data interoperability.

- EdSTART : http://www.sifassociation.org/us/access-ed-start.asp
  - The SIF Association's Educational Software and Technology Application Registry Tool
  - This site allows schools and states access to products, services and best practices aligned with the SIFAssociation's vision.
  - The site provides end users and vendors with accurate and up-to-date information on data initiatives, tools and procurement opportunities.

- SIF Certification Register : http://certification.sifinfo.org/register.html
  - The SIF Certification program is a voluntary program of the Association open to any product meeting the conformance testing requirements. The certification registry provides tested product's conformance statements for objects and elements supported.

- SIFA University: http://www.sifassociation.org/sifau.asp
  - These online courses are designed to help you gain an understanding of what SIF and the SIF Association are, assist in Project Planning and Implementation and courses designed with NCES on Improving Data Quality.

It is the hope of the Orbit Software, Inc. and SIFA that by providing you access to these valuable tools you will gain greater interoperability knowledge as you work towards an integrated SIF Solution.