



*Consortium for  
Service Innovation*

# **Support Exchange Standards**

## **Executive Brief**

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# Support Exchange Standards

## Achieving New Capability, Collaboration and Opportunity Across Support Organizations

### Abstract:

This document outlines the capabilities and benefits of the Support Exchange Standards, a set of data definitions for exchanging support information across organizations. An overview frames the business issues and opportunities addressed through the standards. Examples and scenarios of usage describe how the standards can improve support interactions. The capability to interface and exchange with multiple organizations in a support context ultimately points towards a vision of a 'virtual support community', where standards facilitate new relationships and new business opportunities. Tools and support for implementation are available, and a broad base of support exists within the industry.

### Business Challenges in Support

*Businesses are under increased pressure to perform in the open systems technology marketplace. Increased complexity and interdependence of products demands more information exchange and collaboration between vendors and partners.*

The rapid rise of open systems computing has created a technology marketplace where products are increasingly integrated and interdependent with each other. Customers of technology products expect these products to be supported as integrated technology solutions. At the same time, the number and diversity of products and features continues to grow rapidly, as do the number and diversity of customers using them.

The success of the high tech market has put the burden directly on the support organization to determine ways to scale its capability in an environment of explosive growth and complexity. Some of the facets of this marketplace include:

#### *Product Complexity and Interdependency*

Technology products have become extremely feature-rich and deep, and at a pace of change which quickens daily. At the same time products have become more interdependent, allowing for sophisticated operations between products. The functions of computer hardware, software, networking and telecommunications have become increasingly interwoven, and all applications are becoming increasingly linked to and from the Internet. The customer has become the product integrator, often creating highly customized configurations which may never be reproduced elsewhere.

#### *Meeting customer expectations*

The customer expects the support for their products to be as seamless and integrated as the products are to each other. To the customer, plug 'n play functionality only works when the configurations can be supported. Yet the primary existing support model is based on a single-organization, controlled-product model, where call centers field questions about a discrete set of supported products. This model is poorly suited to multi-vendor situations where the customer's configuration requires knowledge and analysis of multiple products working together in a specific way. The customer's expectations for an

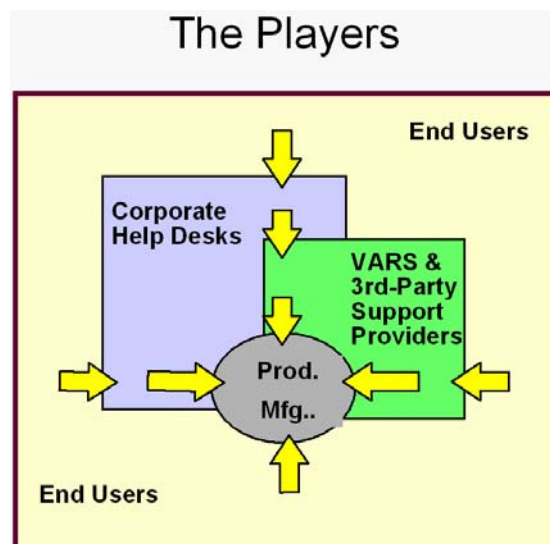
integrated computing solution are poorly met when they encounter an un-integrated, non-collaborative multi-vendor support situation.

*Need for Information and Expertise*

The increasing complexity of the support task drives the need for knowledge about the products involved, as well as the expertise and assistance of others outside a support organizations' core product set. The diversity of products and implementations makes it impossible for a single individual (or organization) to retain sufficient knowledge to handle all possible questions and issues. Organizations need "just in time" access to relevant product information as issues occur, and as new products and configurations are added.

*Interfacing efficiently with support partners and business partners*

In order to facilitate response to the diversity and complexity of potential issues, support organizations increasingly rely on relationships with partners. However, relationships are often costly and difficult to set up and maintain. The number and variety of potential support partners – outsourcers, VAR's, product vendors, help desks - is growing. The number of support relationships required can run into the dozens, even hundreds or thousands. Without a standardized way of sharing information through relationships, they will remain customized and highly dependent on the people invoking them for effective support interchange.



Every transfer of information between support partners  
Incurs translation, labor, cost and time

*Increasing cost of multi-vendor support and expertise*

All of the above factors have contributed to an increase in the cost of performing multi-vendor support. Research performed by the Consortium found that multi-vendor support issues can cost up to 17 times more than a single vendor incident. Finding, affording and retaining people with sufficient experience and skill to handle complex multi-product issues is also a continuous challenge. Performing consistent and effective support within organizations has also become an increasing challenge in a global, multi-site support workplace.

***Support organizations need ways to scale their access to knowledge and expertise as their customer needs grow, to share with and leverage other partners in their technology space. The days of the single-vendor solution are gone.***

## What Exchange Standards Can Do

***Exchange standards for incidents and solutions provide a mechanism for exchanging critical information across organizational boundaries, and for forming and evolving collaborative relationships.***

### *Ability to exchange critical support information*

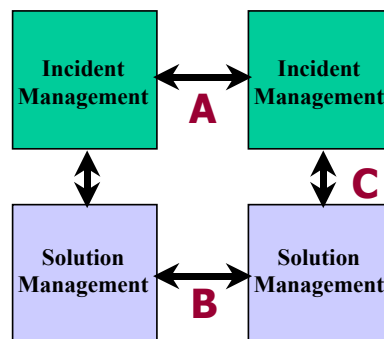
Exchange standards are data specifications that define a common set of content types and structures. They provide a way for different organizations to represent information to each other in a common way, across different data sets, tools and platforms. These standards create the capability for support organizations to leverage each others' knowledge, and to dialogue with each other in addressing current issues.

There are two fundamental types of support information that can be exchanged in responding to a customer situation:

***Incidents*** – the dialogue and interactions which gather the necessary information to frame and diagnose the problem, test and confirm the resolution

***Solutions***- knowledge about known issues and questions, and the effective steps to address them

An exchange standard for incidents provides the capability to interface directly with another support organization, to create a diagnostic session in which knowledge can be shared and used to resolve an issue. Solution exchange allows organizations to share knowledge about previously known issues, including the structures used to make the solutions more easily found and used in an online search situation. Incident and solution exchange can be enabled together, to enable the creation of new solutions from the incident exchange process.



Standards can be used to exchange incidents (A), solutions (B), or between incident and solution systems (C)

## Business Benefits of Standards

***The business benefits of using standards include reduced costs for multi-vendor support, increased customer satisfaction, analyst efficiency and empowerment, and new organizational business opportunities.***

The capability to exchange incidents and solutions extends the reach of the support organization to its relevant support partners. This capability brings multiple business benefits to the customer, employees and the organizations involved.

### *Improved Customer Satisfaction*

The customer receives coordinated, efficient assistance with multi-vendor issues. Instead of the customer being routed to various sites to repeat their story to each vendor involved, the information itself is routed to the customer's point of contact. Information about the situation is captured as the incident progresses, and can be routed through incident exchange to the next appropriate support resource without losing knowledge gained to date. Customers get what they value most: responsive organizations, the right expertise, and a faster resolution.

### *Analyst Efficiency and Empowerment*

Support analysts are empowered to extend their capability into partner organizations, to access relevant knowledge about a current customer issue, or to work directly with experts at other sites to resolve incidents. Solution and incident exchange work as subsets within existing knowledge and call management tools, which can be imported and exported between applications. The analyst's interface to knowledge remains within the tools they are comfortable and familiar with.

### *Reduced Costs*

Once the exchange standards are adopted, the cost and time required to create a new collaborative relationship between standards-compatible partners is greatly reduced. The cost of invoking and completing a session between two partners is reduced due to the use of standardized processes and data to facilitate efficient interactions. As standards-compatible tool vendors proliferate data import/export becomes less costly as it becomes embedded in the tools themselves. Additional cost reductions can include less cross-product training, ability to leverage less experienced resources to handle multi-vendor issues, and ability to get support solutions out to more support partners to handle initial basic customer inquiries within their systems.

### *Improved Partnerships and Collaboration*

Support partners can leverage solution and/or incident exchange to define specific, quantifiable capabilities to each other. The use of data exchange standards helps stimulate common processes and interactions during collaboration, and creates a shared record of the services provided between partners.

### *New Business Opportunities and Competitive Advantage*

Standards-compatible organizations will have the capability to interact in a variety of ways which are not available to non-compatible organizations. The efficiency, scalability and increased interoperability with standards partners forms a distinct competitive advantage in an organizations' service capability. Customers perceive these benefits directly as standards-compatible organizations demonstrate their ability to work together to resolve their issues efficiently and cooperatively.

## How the Standards Can be Used

*There are several fundamental scenarios for deriving value from the standards: incident escalation/exchange, common solution access, and cross-organizational solution development*

### *Incident exchange scenarios*

Standards-compatible organizations can leverage the Service Incident Exchange Standard in a variety of business scenarios:

#### *Across the organization (multi-site/multi-group escalation)*

Many organizations have multiple incident management systems and data sets between support sites. Incident exchange can be used to improve multi-site incident transfer, and help define a consistent set of data that can be used across the organization.

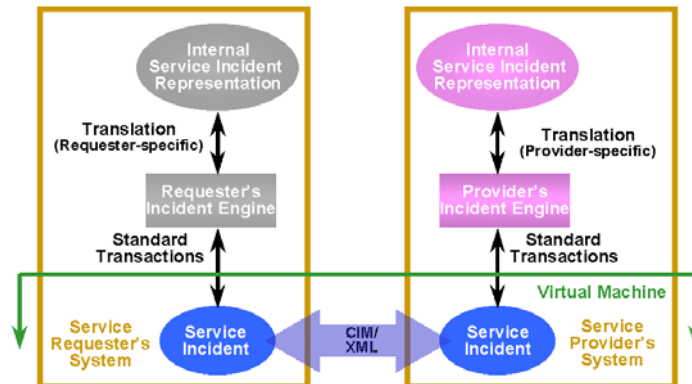
#### *Between partners (access to/from your support partners)*

Incident exchange provides the capability for support partners to collaborate with each other, passing incidents forward and backward to create virtual escalation mechanisms.

#### *Coordinated support for mutual customers*

In cases where a mutual customer requires response from more than one organization, the organizations can work together to coordinate their efforts and provide a single best resolution.

## Incident Exchange Model



## Solution exchange scenarios

The ability to share solution content also provides for several business scenarios:

### *Push to partners (VAR, outsourcer, remote centers)*

Solutions can be propagated out to all relevant partners, creating a wider circle of knowledge and responsiveness for known and important issues.

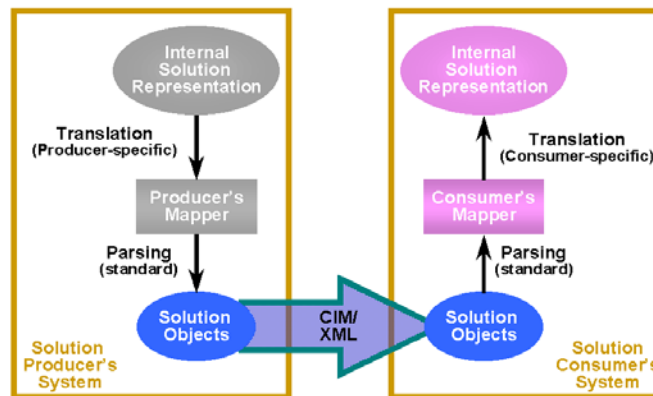
### *Shared solution access/exchange*

Multiple organizations, possibly within a larger corporate entity, may wish to exchange solutions on a common product or technology area. It is also possible to pool solutions for common access, creating a repository of shared knowledge.

### *Creating a data migration path: new tools and content structures, solution creation from incidents*

Placing solutions into a standardized format allows them to be transferred between different toolsets, where they can be moved to further increase their value. The act of resolving multi-vendor incidents may lead to new multi-vendor solutions, which can be culled from the SIS, which shares solution data objects with SES.

## Solution Exchange Model



## Vision of the Virtual Support Community

*Exchange standards enable virtual relationships between organizations, paving the way for entire support communities focused on common customers, technologies or markets.*

The vision of a standards-enabled support world suggests groups of mutually supporting organizations, who agree to common data and processes with each other. Such “virtual support communities” would provide a coordinated set of services to specific customer segments, by leveraging each others’ capability and participation. In this vision customers bid for services required, receiving the best available help at the price they’re willing to pay. Organizations deliver specific capabilities and expertise, and are free to focus on the service deliverables they find most valuable for their business.

A well-organized virtual support community lets resources and value flow to each other, and lets customers and organizations set the services criteria as needed for each situation.

The Consortium has proposed a framework for virtual support communities, outlined in the paper on “The Multi-vendor Support Strategy”. This framework defines discrete levels of activity and collaboration between organizations, and uses the Exchange Standards as its underlying data transfer mechanism.

## How the Standards Work

*The exchange standards have several specific components which make them flexible and extensible, yet well structured for different tools and data sets. They are built with an eye towards enhancement and growth, without leaving any data behind today.*

The Exchange Standards use an object association model to define specific data objects and their relationship to each other. The SIS and SES share many common objects, but also contain items unique and specific to their particular function.

### *SIS data model*

The Service Incident Exchange Standard defines the base elements of an incident, including Customer, Organization, Entitlement and Problem information. The standard also defines the transactions necessary to achieve incident workflow (e.g., Request Service, Entitlement, Provide Problem Information, Request Closure, etc.) SIS shares Problem and Resolution objects with the SES to allow for solution migration from incidents.

### *SES data model*

The Solution Exchange Standard defines the base elements of a solution, at different levels of detail and complexity. Problem and Resolution objects are defined, along with Reference objects and Administrative information about the history and ownership of the solution. The SES data model has levels of compliance that can represent multiple levels of complexity, from simple reference documents, problem/resolution type material, to highly structured data which defines specific data types and features. The object-oriented approach of SES also enables it to handle non-document types of content, such as reasoning-based and tree-based representations.

### *Markup*

Both standards share a common markup language based on the Common Information Model (CIM) being developed by the Desktop Management Task Force (DMTF). CIM provides for both local and global object definitions, and provides an efficient, well-structured representation through the Managed Object Format (MOF).

### *Interoperability*

To assure consistent implementation of the standards data models, and help share learning about the standards as they are used, the DMTF hosts a series of Compatibility Workshops for those who wish to test and demonstrate compatibility with SES or SIS.

Those who demonstrate the ability to import and export standards data will be included on the CSC/DMTF Compatibility List. For further information see the CSC or DMTF websites.

## A Comprehensive, Integrated Approach

*The standards group is creating translation tools, a compatibility verification program, and supplemental documentation to help people implement consistently and effectively. The work is interoperable with other key industry standards, and will continue to evolve.*

### *Tools*

Several parsing and translation tools are being provided for public use by CSC and DMTF member organizations. These tools can be used to view and generate SES/SIS markup. Some are available royalty-free and may directly imbedded in products and translation mechanisms. These tools can also serve as reference implementations for those wishing to design their own translation mechanisms.

### *Integration with other Standards*

#### **DMTF/CIM**

The Common Information Model developed by the DMTF provides a comprehensive set of definitions for computing data management and support, including systems, network, software, user and service information. The Exchange Standards use the markup developed by CIM, hence are built to be compatible with the CIM data definitions. By integrating with CIM SES and SIS can leverage standard data management information in flowing incidents and solutions up from anywhere in the computing environment.

#### **XML**

Both CIM and SES/SIS will work with the emerging XML standards for internet data definition and markup.

### *Working Together to Define the Future*

The Consortium and DMTF are committed to making the standards successful, and in continuously evolving them through member input and experience. A variety of documentation is being produced about the standards, including the specifications themselves, FAQ's and Focus Topics to annotate proper usage. As members gather experience through implementation this knowledge will be shared and used to further improve the standards, and to demonstrate and support their effective use.

## Who is using the standards?

***A number of one-to-one implementations exist today. The next step is to implement one-to-many and many-to-many interactions.***

The standards were developed by a diverse combination of over 35 support-related companies, in a joint collaborative effort. The following companies have implemented the incident exchange standard.

Incident Exchange Adopters
Fujitsu
Hewlett Packard
Microsoft
AT&T
Unisys
Bank of America

## Where can you find out more?

### *Web sites*

The Distributed Management Task Force (DMTF) website has technical information about the overall architecture, CIM as well as SES/SIS. See [www.dmtf.org](http://www.dmtf.org).

The Consortium for Service Innovation website has information about the standards and their use in a business environment. See [www.serviceinnovation.org](http://www.serviceinnovation.org)

### *Membership and Committees*

Both the Consortium and DMTF welcome participation in the further maturation of the standards work. The Exchange Standards committee is a joint working group open to members of either organization. Various sub-committees also exist on specific topics such as CIM integration, XML and future features and functions.

### *About the Consortium for Service Innovation*

The Consortium for Service Innovation is an alliance of innovative support organizations from technology companies that have joined forces to collaborate on support solutions for industry-wide problems. The Consortium is dedicated to shaping the future of technical support through the development of new strategies, business models, and industry standards. For more information on the Consortium:

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