
**Features & Benefits
of
TPF Software's *Resolution/KB***



**TPF Software Inc.
8729, Gleneagles Drive
Raleigh, North Carolina
USA, 27613-5419
Tel: (1) 919-676-5501
Fax: (1) 919-676-5503
www.tpfsoftware.com**

Executive Summary

Resolution/KB is a web-based knowledge base that allows organizations to track and resolve issues. Currently, Resolution/KB is being used primarily by software development organizations.

Resolution/KB solves problems faced by every organization that creates software: How to track and resolve issues with software products in a way that promotes a more responsive relationship with end users while keeping developers on track and administrators informed.

In addition, **Resolution/KB** solves problems faced by corporate software departments in particular: How to securely allow only the access that is appropriate to each user, developer, and administrator who needs to participate in the tracking system.

Among the benefits of **Resolution/KB** is that it

- Creates better relationships between developers and software administrators,
- Fosters increased accountability for developers,
- Allows better targeting of new features in applications,
- Increases productivity by providing an easier way to keep track of issues and problems,
- Enables collaboration with other departments and organizations, and
- Offers easy product administration.

Table of Contents

<u>EXECUTIVE SUMMARY</u>	<u>2</u>
<u>TABLE OF CONTENTS</u>	<u>3</u>
<u>THE NEED FOR RESOLUTION/KB</u>	<u>4</u>
GENERAL REQUIREMENTS	4
SPECIAL CORPORATE REQUIREMENTS	4
<u>RESOLUTION/KB</u>	<u>6</u>
WHAT IS RESOLUTION/KB?	6
FEATURES OF RESOLUTION/KB	6
BENEFITS OF RESOLUTION/KB	10
<u>CONTACT INFORMATION</u>	<u>11</u>

The Need for Resolution/KB

General Requirements

Every organization that develops software needs to track and respond to issues associated with development. Software defects are the most obvious type of issue that needs to be tracked; however, in an age in which the dominant paradigm has become Open Source, the expectations placed on software organizations have changed and grown. End users are no longer content to wait until the next major release of software to get their problems resolved and their desires fulfilled. Users want to have a conversation *now*; they are eager and ready to collaborate. Software organizations that find a way to benefit from this give and take with end users can provide better customer service, produce better software, and cultivate a more satisfied clientele.

Issues that need to be tracked to enable this give and take include the following:

- Software defects (bugs) and fixes,
- Internal development tasks,
- User enhancement requests (wish-list items),
- User questions and developer answers.

Additionally, to make the tracking truly responsive and collaborative, the following features should be included in a tracking system:

- The ability to access the knowledge base through the Internet or an intranet using browser-based tools;
- The ability to add and log comments for each issue;
- Automatic e-mail notification that issues have been added;
- Automatic e-mail notification of responses and issue status changes;
- Ways to upload and download images and attachments to provide more information about the problem;
- Ways to search the resulting knowledge base of issues and responses.

And, of course, the following requirement is also a given:

- Ways to add and track issues associated with multiple products.

Special Corporate Requirements

Software departments in major corporations have additional requirements that are not faced by organizations that produce software only for the general public. Ordinary, consumer-oriented software companies may have two types of “collaborators” who are involved in their issue tracking systems: developers (who are “inside” the corporation) and end users (who are “outside”).

But departments that produce software for their corporations face more complexity. First, these departments usually produce at least two different kinds of software: software tools that are used internally within the corporation and application software that is utilized to serve the general public. Furthermore, in today's "flat-world" environment – in which contractors, home-based workers, and third-party developers who live on different continents are likely to use and contribute to the same software product – the distinction between who is "inside" and who is "outside" the organization has become more complex. As a result, types of people who utilize the issue tracking system can include the following:

- "End-user" staff (sales staff and service personnel) who use the software to deliver services to the general public;
- "End-users" of internal software tools who work for the same corporation, but in other departments;
- "End-users" of internal software tools who work in partner corporations (perhaps outsourcing companies) at home and overseas;
- Developers and software administrators who work directly for the department;
- Developers and software administrators who collaborate on parts of the software but who work for other corporations (perhaps outsourcing companies) at home and overseas.

Given the additional complexity of today's corporate environment, the following additional features are also desirable in a tracking tool:

- Realistic and flexible provisions for determining the rights and privileges of collaborators (different levels of being one the "inside" and on the "outside");
- Ways to log internal comments that only those who are truly "inside" the organization can see;
- Flexible ways for allowing or denying access to certain products (for example, to keep some developers from accessing information about some products);
- Ways for potential collaborators to indicate they want to join the "conversation" with a minimum of work for administrators;
- Ways to delegate administration of third-party developers to third-party administrators.

Resolution/KB

What is Resolution/KB?

Resolution/KB is a web-based application that allows software organizations to track and resolve issues associated with software development, especially in a corporate environment.

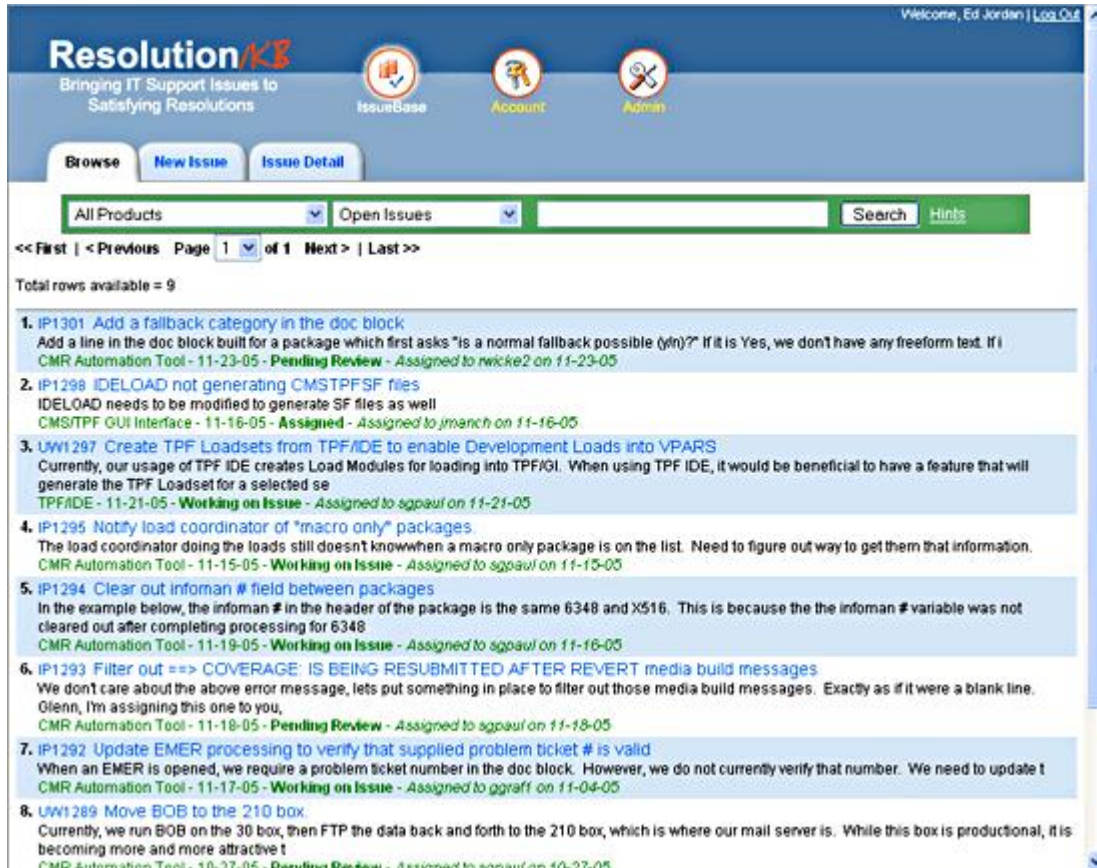


Figure 1: The search page in Resolution/KB.

Administrators, developers, and end users who have been given access can log in to **Resolution/KB** to report issues about products, update issues, or search the knowledge base of issues and responses to find out about known problems and their resolutions.

Features of Resolution/KB

Resolution/KB includes the following features:

Browser-based Access

Because **Resolution/KB** works through the browser, installation and updates are eliminated. As a result, administration of the application is much less time-consuming and expensive.

Support for multiple products

Administrators can define as many products or projects as desired. Administrative tools to do this are built into the application.

Ability to add ongoing comments for each issue

Successive comments added to an issue create an ongoing conversation that leads to a resolution of the issue.

Automatic e-mail notifications

Users with appropriate access rights receive automated e-mails notifying them

- When an issue is reported for a product,
- When comments are added to issues,
- When the status and other properties of an issue change.

Each automated e-mail contains full information for the issue, including all comments, so that users don't have to visit the **Resolution/KB** application in order to understand what has happened (see Figure 2 below).

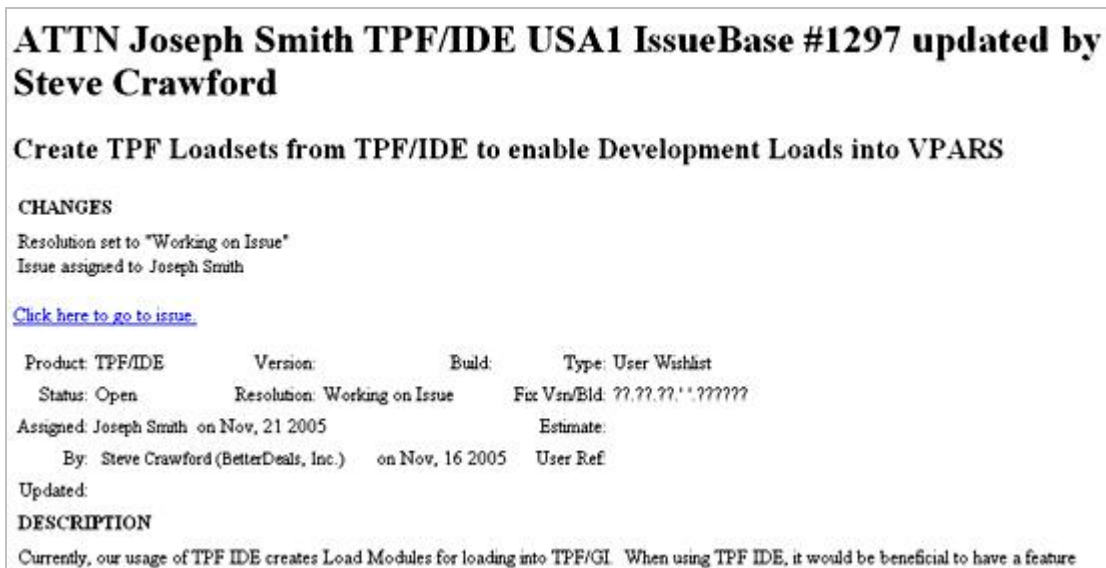


Figure 2: Automated e-mails containing complete information keep interested users in the loop.

Ability to upload images and attachments

Users with access to an issue can upload images (for example, screenshots) and other attachments to fully describe each issue.

☑ Search capabilities

Users can search the knowledge base of issues based on product, issue resolution/status, and on the full text of the issue summary and issue description. The text search allows users to search for multiple single words or exact phrases, to exclude words and phrases from the search, and to search for any of a series of words or phrases.

☑ Informative search listings

The results of a search show part of the description text for each matching issue, allowing the user to quickly zero in on the issue being sought (see Figure 3 below).



Figure 3: Search listings show enough description text to let users find the issue being sought.

☑ Issue Types

Issues are reported according to their “type” (Internal Problem, Internal Task, User Problem, User Question, User FAQ, User Wish-list). This allows administrators and developers to understand what kind of issue they are dealing with.

☑ WYSIWYG editing

Although **Resolution/KB** is a browser-based application, it provides WYSIWYG (What-You-See-Is-What-You-Get) editing fields for issue descriptions and user comments (see Figure 4 below). This eliminates the need for users to learn HTML commands in order to start new paragraphs, create bulleted lists or place text in bold or italics.

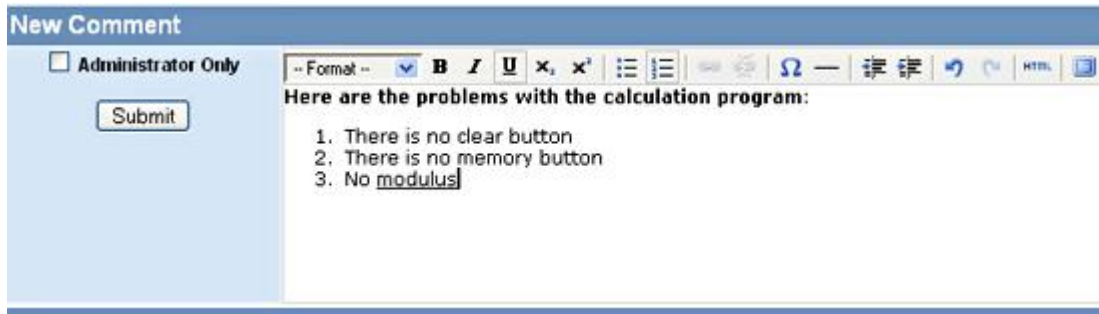


Figure 4: The WYSIWYG editor eliminates the need for users to learn HTML.

☑ User Access defined per product

Users of **Resolution/KB** are assigned access levels on a per-product basis. Per-product access provides flexibility and security; it allows you to give outsourced

programmers, for example, access only to those products on which they have been contracted to work.

Ability to define multiple organizations

Outsourcing and other corporate tactics may require your department to collaborate on projects with outside companies. When this is the case, **Resolution/KB** allows you to define other “organizations” in the database and to define users as belonging to these other organizations. You can then designate one or more users in the other organizations as being “product sub-administrators”; these product sub-administrators can then take responsibility for assigning limited access rights (for the products on which they are working) to other programmers in their organization only. This delegation of authority frees up your department’s administrators from needless administrative duties.

Multiple levels of user access rights

Resolution/KB provides multiple levels of user access rights. These include the following:

- Super Administrator;
- Product Administrator;
- Product Sub-administrator;
- Product Super Reporter;
- Product Reporter;
- Product Viewer;
- No Access.

These access levels allow you to permit access to product information only to those users who need it. For complete details on these access levels, please consult the **Resolution/KB** documentation.

Default levels of access

A default access level (for example, “Product Reporter”) is defined for each product. This default access level is automatically given to users who have not been assigned an access level that is lower or higher than the default. Default access levels reduce the amount of work that administrators have to do for each new user.

Self-signup

Resolution/KB allows users to sign themselves up for access to the knowledge base. When they do this, they provide their name, organization, and contact information, as well as their reason for needing access. An automated e-mail is then sent to administrators who decide whether to provide access to this new user or reject the user’s request. The process of self-signup reduces the amount of work that administrators have to do for each new user.

Administrator-only comments

Resolution/KB allows comments to be made on issues that only product administrators and super administrators can see.

Issue assignment

Issues can be assigned to particular developers for resolution.

Multiple issue resolutions

Multiple issue resolutions allow developers to indicate what stage an issue is in (see Figure 5 below). These resolutions include “Pending review,” “Assigned,” “Need More Info,” “Working On Issue,” “Testing Issue,” and “Fixed,” among others.

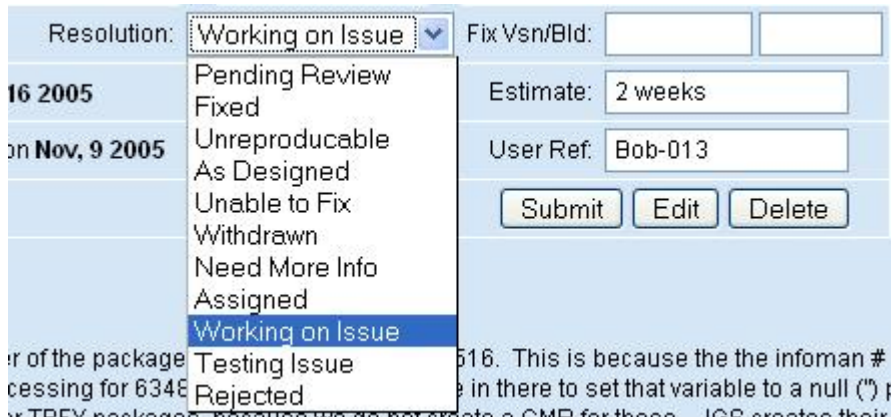


Figure 5: A rich selection of issue resolutions tells users exactly where the issue stands.

Benefits of Resolution/KB

Resolution/KB offers the following benefits.

- **Increased productivity**

As issues and responses are added to **Resolution/KB**, a knowledge base is created that users can search to answer their own questions or to find out if a problem has already been reported. This reduces the amount of time developers have to spend answering the same questions. **Resolution/KB** also serves as a natural place for developers to record how they solved a problem or why they decided not to implement a feature, preserving this knowledge in a searchable form for the future. Developers are also made more productive by having user problems and requests delivered to them by e-mail, and by the ease with which they can respond.

- **A better relationship with end users**

Resolution/KB's automated e-mails, containing full information about each issue, ensure that developers are kept up-to-date about user problems, wishes, and questions, and make it easy for developers to respond by indicating that they are

working on the problem or by requesting more information. This responsiveness increases end-user satisfaction.

- **Increased accountability for developers**

Resolution/KB's automated e-mails also ensure that administrators are kept up-to-date about the progress of issue resolution. This allows them to keep developers on track, increasing the speed at which product defects are fixed, and giving administrators another source of information about whether projects are on schedule.

- **Better targeting of new features in applications**

The ease with which end users can make their desires known allows software designers to target the new features that users really need and want, maximizing the “bang for the buck” you get from developer time.

- **Easy product administration**

Many features of **Resolution/KB** make it an easy tool to administer, including that it is a web-based application (no installation or updates on user workstations); that it allows user self-signup (limiting data entry for administrators), and that it provides for default levels of product access (limiting red tape that administrators have to perform for each new user).

- **Easier collaboration with other organizations**

If your organization or department needs to collaborate with another company (such as an offshore company working on one aspect of a product), how will you share your issue tracking facilities with them without giving them more access than they should have, and without burdening your administrators with details about the other company's human resource issues? **Resolution/KB** makes this kind of collaboration as painless as possible by providing multiple levels of per-product access and by allowing you to delegate administration of the other company's users to the other company's administrators.

Contact Information

The contact person for this proposal:

Thiru Thirupuvanam

Director, TPF Software Inc

8729 Gleneagles Drive

Raleigh, NC USA 27613-5419

Tel: (1) 919-676-5501

Fax: (1) 919-676-5503

E-mail: Thiru@tpfsoftware.com