Item mapping For Customized 360-Degree-Feedback Models

by

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ABSTRACT

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Many organizational consulting firms use the method of 360-Degree-Feedback to assess managers and executives for their clients. Information from this instrument outlines specific development and training needs for the clients' organization. It also provides the consulting firm with data that can be used in research relating to effective organizational processes. Some client organizations require specific feedback, this specificity is provided by the customization of the instrument for the client. While this customization procedure provides the specific information clients need, it interferes with attempts to compare organizational processes across companies or develop standardized norms for the instrument. Item-mapping of these customized models is the necessary link for these research needs. This study was designed to provide an organizational consulting firm with a method of analyzing cross-client 360-Degree-Feedback data from customized models. The sample for this research project is 812 feedback models that are currently used with clients of Personnel Decisions International. Each model contains an average of 200 component items. The individual items contained in each of the customized models are mapped to other research equivalent items using a software program specifically designed for this purpose. The end result is five data sets that will allow the scores

of all of the 360-Degree-Feedback models to be pooled into data sets and analyzed.

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TABLE OF CONTENTS

List of Figures

Page

CHAPTER 1

INTRODUCTION

An organization's future lies in the hands of its management and executive groups. The certain business functions that these groups provide are essential to the organization's survival (Mondy & Noe, 1996). Managers and executives must make important decisions daily that affect the business in numerous ways. Not all managers and executives have the skills and knowledge required for these positions. For every ten managers, between six and seven have significant shortcomings in managerial abilities (Wilhelm, 1990). For these reasons many organizations emphasize training and development programs for their managers and executives (Mondy & Noe, 1996) and are spending billions of dollars on these programs to enhance their employee's performance (Morical, 1999).

The initial component of a training program is to identify the needs of the managers and executives (Goldstien, 1991). This involves conducting a needs assessment to identify specific job components and the skills required to carry them out. The needs assessment should also include corporate and individual goals.

Training needs can be identified by various techniques. Some general organizational processes used to identify specific training needs are job analysis, critical-incidents technique, performance appraisal, and self-assessment (Schultz & Schultz, 1994). Job analysis involves the deciphering of characteristics needed to perform a job successfully. Critical-incident technique focuses on what behaviors are needed to perform daily tasks. The two techniques for individual development are performance appraisals and self-assessment. Performance appraisals document employee weaknesses and lead to recommendations for retraining and development of skill deficiencies (Schultz & Schultz, 1994). Self-assessment is another source of information about skill requirements. The assumption is that the person performing the job has the direct information about which skills are needed to perform the job well. A combination of these two

techniques for individual development can be the most useful method of assessing management and executive development needs. This specific technique is called 360 degree feedback. This assessment tool provides accurate feedback, communication of the critical behaviors for success, and direction for individualized development planning (Morical, 1999).

360 degree feedback, also known as multi-rater feedback, multi-rater assessments, and multiple perspectives ratings, is an organizational development tool focusing on participant data received from the observations of co-workers, peers, and supervisors (Velsor, Leslie, & Fleenor, 1997). The process of 360 degree feedback is characterized by a target manager and his/her peers, subordinates, and supervisors individually completing a questionnaire about that target manager's performance. These questionnaires typically measure such competencies as visionary leadership, strategic business orientation, team leadership, integrity, and customer relations. Specific items that are used to rate the participant are grouped together within these areas. Raters most commonly employ a five point likert scale. The information reported from these ratings can give more accurate information about a target manager's performance than a simple performance review from a supervisor because the feedback or ratings represent a more global perspective of the manager's work.

The data from these questionnaires is compiled and reported by the organization or an external consulting firm, and a trained facilitator is provided to report the results to the participant organization. Although companies use the information provided from these instruments for succession planning, organizational change initiatives, performance appraisal, performance management, individual and group development, or assessment, the only appropriate use for 360 degree feedback data is for management or assessment development (Dalton, 1996). Individual employees also use the feedback to identify their own development needs and tailor a development plan to overcome identified deficiencies (Davis, Skube, Hellervik, Gebelein, & Sherard, 1996).

Data from the instrument that are used in development assessment are presented as scales. There are many different strategies to facilitate the interpretation of scores, including norm comparison, highlighting largest self-rater differences, item level feedback, highlighting high/low scores, comparisons to ideals, job importance, and "do more/do less" feedback (Velsor, Leslie, & Fleenor, 1997). These strategies are important in helping managers understand the feedback given about the scores of their employees.

Highlighting largest self-rater differences is a strategy where the comparisons of self-rater are compared to others' ratings and the largest or most meaningful differences are highlighted. Item-level feedback comparisons can be helpful by giving a manger a lead as to what specific behaviors to do differently rather than knowing how a participant scored in that dimension. For example, the dimension might be "Analyze Issues" and the item for that dimension that the manager scored lowest on was "Make rapid decisions when necessary". In this case, a low score presented for the item would give a clearer picture of which behavior to change than a low score presented for the dimension. Highlighting high/low scores is a strategy that presents a quick overview of a participant's strengths and weaknesses. Not widely used is the comparison to the ideal strategy. This strategy represents the participant's scores being compared to an ideal manager, either a theoretical idea or an ideal provided by the rater or participants. Importance to job or success is a strategy that represents or highlights scores that are deemed as important for the job or long-term success. These importance ratings are usually provided by the managers. Do more/do less feedback is a strategy that is also not widely used. This is used for rating the frequency of a behavior. The information that is not provided by this strategy is how well the behavior was performed.

The most widely used strategy is comparison to norm feedback (Velsor, Leslie, & Fleenor, 1997). The comparison norms are presented as averages for each scale for which feedback is received by the participant. Norms are presented in such a way that the manager or

participant can compare their scores to norms based on specific target groups. These target groups can be based on industry, position, and diverse populations. The comparison norms presented should resemble the participant in regard to position, industry, and population for the comparison to be relevant (Velsor, Leslie, & Fleenor, 1997). For example, if the participant is a middle manager in the health care industry then the appropriate norms would be made up of existing middle management scores in the health care industry. Norm comparison is one way to get information that is specific to an organization's development plans.

Another way for organizations to get more specific information from a 360 degree instrument is by customization. The best option for a multi-rater tool is to have strong models built on this strategic customization (Morical, 1999). Customization of the 360 degree instrument allows the organization to tailor the items on the instrument to represent behaviors and job characteristics that are specific to that organization's development goals, competencies and skills (Velsor, Leslie, & Fleenor, 1997). Since development needs, skill level, and job characteristics change from organization to organization, it is unlikely that one multi-rater instrument will be sufficient to meet the needs of every organization. The organizational differences that create the need for customization are differences in development needs, existing job characteristics, and the skill level of the organization's employees.

Organizations looking to use a multi-rater feedback for a development tool have the option of hiring a consulting firm to develop and administer the tool or having the job done internally by an existing employee. The benefit of having someone internal develop and administer the multi-rater tool is that the internal employee will most likely have a better knowledge of the job, skills, and areas which are to be assessed and developed. The internal employee is able to customize the tool to fit the individual needs of their specific organization.

Consulting organizations are able to customize their own multi-rater tools to meet the needs of their individual clients as well. This adds a market advantage to consulting firms that

customize their multi-rater tools. Therefore consulting firms need to customize the feedback instrument to meet the organization's needs. This customization provides a market advantage for consulting firms that do customize their tools. Customization of this instrument, whether developed by an internal consultant or external vendor, also provides a disadvantage in the area of validity.

Evidence of validity should be a basic aspect of the 360 degree feedback instrument. Determining the validity of a 360 degree feedback instrument involves three areas. These three areas determine whether the instrument measures what it is intended to measure, if what is measured really makes a difference, and whether or not what is measured can change as a result of training (Velsor, Leslie, & Fleenor, 1997). Consulting organizations use comparison studies with multi-rater instruments to provide evidence that their tools are valid. A product review of top 360 degree assessment tools has shown that the validity of standardized multi-rater tools can vary among different instruments while customized tools have little or no validity (Morical, 1999). Because customized models are most often used by a single organization, the proof of validity is missing. There is not enough data provided from a single organization to do large scale validity studies for customized models.

Another validity issue with customized models involves the use of comparison norms as a feedback strategy. For standard multi-rater tools the comparison norms have high validity. Customized multi-rater tools lack validity in their comparison norms because the comparison norms provided are based on the scores from the consulting firm's standard tools. The norms do not represent customized models that the organization used. If the multi-rater tool is customized for an organization the items on that instrument would be different than a standard instrument. The scores of the items on these customized instruments would be based on different items than scores from the standard instruments. Because the items on this customized multi-rater tool are specific to the organization, the scores from a customized instrument cannot give a valid

comparison to those of the standard instrument. This provides a disadvantage to consulting firms that offer customized multi-rater instruments because they are not using valid models when customizing these instruments nor are they able to use valid comparison norms to disseminate the results to the client.

PDI, Personnel Decisions International, is an Industrial Organizational consulting firm. PDI has many different practice areas, one of which is management and executive development. In this area PDI has developed an instrument called the Profiler. The Profiler is a 360-degree-feedback tool used to provide feedback to executives and managers for development planning.

PDI is one of many consulting firms that provide this service to its clients. PDI has managed to stay above the competition by offering clients the use of the Standard Profiler, the Profiler Plus, or the customization of the Profiler. The Standard Profiler and the Profiler Plus are basic in nature and considered PDI's standard 360 degree feedback instruments. Any differences in these two instruments result in the Profiler labeled as customized. PDI will customize the profiler for many of their clients in order to support the clients individual business strategy. PDI also offers norms or comparison benchmarks for their clients to use for facilitating the interpretation of their employees scores. Norms are important for PDI's clients because they communicate to the company what behaviors are important in different industries, competencies, and job skills. Previously PDI has used their Standard Profiler scores and Profiler Plus scores for the use in creation of the comparison norms that they provide to customers. This becomes a problem because the client scores are calculated from a customized model and the comparison norms are calculated from the standard model. The customized model and the standard model scores cannot be compared because the items from both of the models are not the same, so therefore not valid.

Statement of the Problem

PDI is a step ahead of the competition by providing customized Profilers for their clients.

Yet, this customization makes it difficult to get a valid norm base for clients that use the customized models. Because these customized tools are different from the Standard Profiler and other customized models, it is impossible to compare scores from customized models to that of the Standard profiler norm base. PDI needs to continue to strive toward perfecting customization techniques while simultaneously increasing the validity of the norm base for comparison research.

PDI has 812 different Profilers. Each model of the Profiler consists of about 200 plus items. The Profilers consist of a model name, factor name, dimension name, and an item. The model name simply identifies the Profiler from the rest of the models. The factor identifies a set of dimensions targeted toward a broader construct of behavior. The dimension identifies the items that are targeted toward a more specific construct of behavior. For example, Model #5445 has a factor 'Thinking' within this construct are the dimensions 'Analyze Issues' and 'Solve Problems', within the dimension 'Analyze Issues' is the item, 'look beyond symptoms to identify causes of problems'. Most of these 812 models are customized specifically for a client. Customization for PDI means that some or all of the items on a Profiler are different in form and content from the Standard Profiler or the Profiler Plus. For example, the Standard Profiler has a dimension "Make Sound Decisions" which is made up of a set of statements that identify that particular behavior. A customized model might have the same competencies but made up of different statements. These differences in models also could take place at the factor level and at the item level.

Items in the customized models show up in different dimensions and factors in comparison to each other as well as the standard instruments. Yet, a beforehand glance at the models showed that the items themselves were not very different in construct and could be identified as equivalent for these research purposes. At the item level these customized models are very similar to the Standard Profiler and the Profiler Plus. The statements by which various

people rate the participant are similar in construct. For example, one customized model for a certain company has an item, “Efficiently prepare written materials”. This item could be viewed the same as an item on the Standard Profiler, “Prepare written materials efficiently”. The statement is in a different order but it is equivalent in the sense that it measures the same behavior. For these research purposes the dimension and factor groupings of the items are ignored. A diagram of the conceptual model of the Profiler is identified in figure 1.

Figure 1: Profiler Conceptual Model: Illustration of Factor, Dimension, Item relationships.

The similarities of the items of all of the various Profiler models was discussed with the research director of PDI. After some consultation, it was decided that the problem of not being able to research across clients and industries could be alleviated by mapping all of the items of all of the customized Profilers to get a set base of standard items.

After some consultation with the research team and the software development team, it was decided that a computer software program could be developed to link the items together. The current list of models, along with two more sets of data that would identify the companies which use the models, could be run through the computer program and create links between the items. This process would create archetypes or base items to which all of the other items would then be linked.

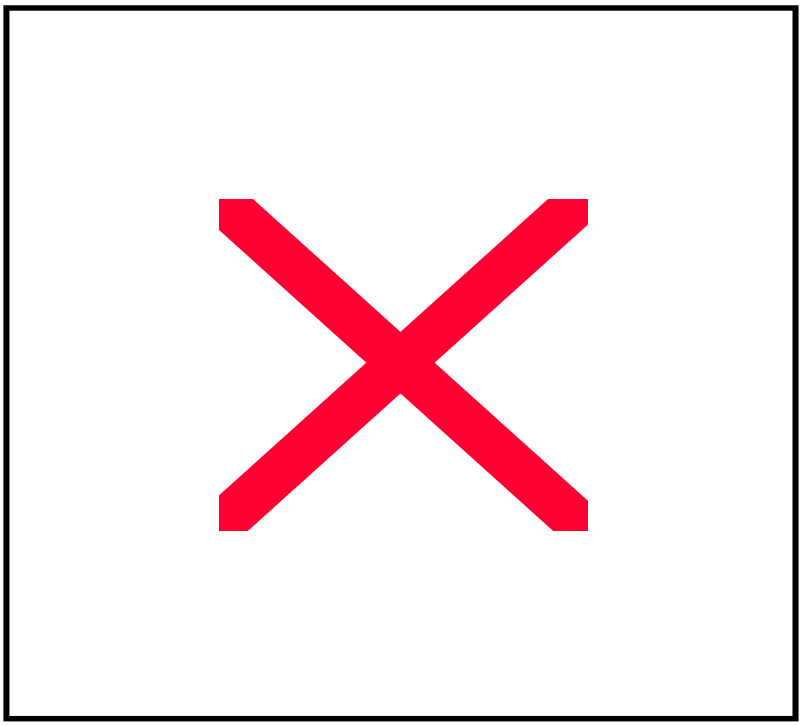
The implications of this study go far beyond the objective of the stated problem. This database of linked items across models and clients provides PDI with the ability to research these comparison norms and Profiler scores across industries, as well as provide the employees in the research department an improved process of retrieving customized data out of the database. Before this database of linked items and clients was developed, the researcher either used standard norms for comparison data or they had to search in the database for the client models that had a similar customized Profiler. With this new database these links are created and the researcher will not have to waste time to find the correct models. The new database will also increase the validity of the comparison research because the scores compared will be based on equivalent items instead of similar Profilers.

This process of mapping items across Profilers begins with the identification of base items to which all other items are to be mapped to. These base items are called archetypes. The Reconciler is a computer software program developed specifically for this purpose. The Reconciler was designed to take three files, made up of information in PDI's database,

manipulate the information by creating links between items, and transform the information into five files suited for use in extracting specific data form PDI's scoring engine database. A diagram of the basic process is identified in figure 2.

Figure2: Reconciler process model: The information used and output created from the software program.

To begin the process, Profiler model information is needed and converted into a format suitable for the software. The list queried from the MR-Model database consists of text including



the model, logical form number, factor, and dimensions of the various Profilers. The Standard Profiler and the Profiler Plus are separated from the larger file to be imported first. An import

process is then used to transport the converted files into the program. These two files are imported first and archetyped in their entirety. This is because the Standard Profiler and the Profiler Plus are models that have been researched and are deemed valid instruments. Any links made to these two models would increase the validity of the linked items and instruments. The rest of the models are imported into the program. The Reconciler's import process will detect items with the exact text as any existing archetype in the program and then link the item to the archetype automatically.

The next step is to associate the models with the various clients that use the models. Again the client information received must be converted into a form that is supported the computer software. The Import of this file creates no links. It is simply a list of client names and identification codes that are used by PDI in the database. The last import is a list containing client name text and a logical form number. This import associates the model to the client name and identification code. This import is used to identify which organizations or clients have used a particular model.

Once all of the imports are completed, the models and their associated links can be manipulated by the user of the computer software. The user may decide that an item should no longer be linked to an archetype, or an archetype should instead be labeled as unique. Client links can also be manipulated within the software. Clients can be manually linked to a particular model or removed from a particular model. When the user has produced a large enough set of archetypes the information created can be exported out of the computer software. The export feature creates five tab delimited export files to be used in establishing a new database. It is this created database which is the product of this research project. It is this database that allows the actual matching and correlating of scores across these item links.

The mapping of the Profilers at the item level would be added to the existing database and provide links between companies and the various linked items. These links would be in the

form of tables in an Oracle database. These tables can then be joined by identical columns to get at the desired information. All of the equivalent items would be linked to the appropriate archetype. The companies that have those equivalent items in their customized profiler would also be linked to these archetypes. These links can then be queried to pull out scores from the database to create a norm base for use as comparison norms and cross-company research. The new norm base created would include mapping all of the Profiler models, including the customized Profilers, the Profiler Plus, and the Standard Profiler. This mapping of models will create a norm base with a high validity, because the norm base would be based on individual items and not a standard set of scores. The norm base would be customized for each customized Profiler.

It was necessary to develop a set of criteria or rules for item equivalence before the item-mapping across Profiler models could begin. Previous research in the area of item equivalence has been done in the area of test equivalence and was used in comparing tests and scores across languages. No previous research on equivalent items in multi-rater assessment tools was found. A pilot study was done to evaluate and develop item-mapping criteria for item-equivalence. Through previous work by another intern at PDI, there were a set of standards or criteria developed for item-equivalence that is accepted at PDI. It was found that this existing criteria would not be sufficient and not result in enough items linked to provide a set base for research. Based on this pilot study new criteria were developed in a pilot mapping project. These criteria are listed in appendix A.

The purpose of this study was to provide Personnel Decisions International, PDI, with a database of linked items, behaviors, and clients of various 360-degree-feedback models for use in analyzing and providing for clients, cross company and industry norms. This was a case study, where results were limited in their application and generalizability, and applicable only to Personnel Decisions International. The research project was to comply with the requirements of

a plan B field problem at the University of Wisconsin-Stout with the researcher in the position for PDI from January 1st, 1999 through July 21st, 1999. .

The specific research goals of this intern agreement were as follows:

1. Manage and complete the Multi-rater mapping and development project.
2. Assist the research team in data definition, gathering, entry, and analysis.
3. Participate in research team planning and support.

The researcher contacted the Director of Human resources for Personnel Decisions International, to discuss the possibility of an internship with PDI. They discussed the a specific problem the research department was having with the customization and comparison norms. A software development team was provided for the project because the development of a software program was essential in the process and final outcome. A consulting relationship was established between the researcher, the research team, and the software development team.

CHAPTER 3

METHODOLOGY

Sample

The sample for this project consisted of 812 models of the 360-degree-feedback models, called Profilers. This sample population included a majority of customized Profilers. Profilers varied in length and items included. Text files of models and client information were provided and formatted for use in the computer program. A list of current model/factor/dimension/items were queried from the MR-Model database and placed in a text file. A list of clients by name and identifier was provided by Operations and placed in a text file. A list containing client name text and model logical form was also provided by Operations and formatted into a text file. A table containing client name and count of assessments was provided by Operations and inserted into the Oracle database.

Apparatus

For the purpose of this research a computer program, the Reconciler, was designed by the Next Generation Software Team. The program was designed to use three import files received from the MR-model database and Operations. These files are in string form formatted as a text file. The program was designed to import these files and create links based on identical items. The base items to which all other equivalent items are linked to, are called archetypes. Items that are not equivalent to any existing archetypes are either created into a new archetype or identified as unique by the program user. Rules for these links are located in appendix A. The copyright for this program is with Personnel Decisions International 1998, Version:1.0#5. Specifics on the use of this software are also included in appendix B.

Procedures

The complete model text file was separated into smaller files for purposes of time management. The Standard Profiler and the Standard Profiler Plus were imported first into the

software program, the Reconciler. All of the items of both of these model were archetyped, meaning that they were to be the base items that later imported items would be linked to.

Following this import, the remainder of the models were imported into the program at an average of 10 models per import. Items were either linked to the identical archetype, delegated within the program as a new archetype, or delegated within the program as unique. The import feature of the computer program would link exact item matches automatically to the appropriate archetype. If all of the items in a model were identified upon import as identical matches than the model would be considered complete within the software. For the incomplete models, the user would delegate the items to be linked to an archetype based on the equivalent criteria provided in appendix A. If the item did not fall under the criteria of equivalence to be linked to an archetype, the user had the choice to create a new archetype out of the item or to mark the item as unique. As stated in the equivalent criteria, an item would be unique if it included the name of the specific client or industry. For example, an item on one customized model "Meet commitments to external customers of Personnel Decisions International" would be labeled as unique because is contained the company's name. Items that did not fall under either of these criteria, labeled as a unique item or linked to an already existing archetype, were identified as new archetypes. Examples of archetype-item links are included in appendix C.

After all of the models were imported and the items were linked, the client text file and the client logical form files were imported into the program. These files linked all of the client names to the appropriate archetype. The client name would be linked to the same archetype that the item from that company's customized model was linked to. With all of the imports completed and all of the items linked or delegated as unique within the computer program an export was performed. Items which were identified as unique by the user were not included in the export function of the software. Unique items were not used in the complete data set because the unique items would not generate any item links, therefore not result in a significant number

of scores for further analysis. The export function of the software uses the information from the imported model and clients files along with the user identified links to archetypes, combines the information, and arranges the information into tab delimited files. The export consists of five text files containing archetypes, associated items, and the associated clients. These five export files were then transferred into the Oracle database by various technical methods.

CHAPTER 4

RESULTS The five tab delimited text files created for establishing the relational database are.

1. The Archetypes (user assigned id, name text)
2. The items (MR-Model id, name text, scoring engine id)
3. The clients (POAS id, name text)
4. Archetype-item links (user assigned id, MR-Model id)
5. Archetype-client links (user assigned id, POAS id)

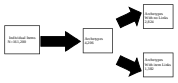
These five files are in column form and easily converted into tables for establishment in

the Oracle database. File one describes the archetypes. Column one of this table is the user assigned id which is a number assigned to the archetyped item by the reconciler program. Column two of this table is the item text of the archetype. File two describes the items. This table is made up of three columns, the MR-model id, the name text, and the scoring engine id. The MR-model id is the item number that is given to the item from the Model import file. The name text represents the text of the linked item. The scoring engine id is the number of the item that identifies the scores that are given to participants for that item. This scoring engine id is used to pull the actual data from the scoring engine, which is the name of the database where the scores are held. File three describes the client table. This table is made up of two columns, the POAS id and the name text. The POAS id represents a alphanumeric identifier for the client text. The client text is the name of the client. File four describes the archetype-item links. This table is made up of the user assigned id of the archetype and the MR-model number of the item that it is linked to. File five describes the archetype-client links. This table consists of the user assigned id of the archetype matched with the POAS id of the client. A table consisting of Client name text and count of participants for that client was also inserted into the database.

Counts of the data from these tables provided the following information. Of the 161,200 items that were imported into the Reconciler program, 4,206 of these items were identified as archetypes. These are the base set of items that the rest of the items were linked to. Of these archetypes, 2,824 were identified with no linked items to the archetype. The rest of the items were successfully linked to those chosen archetypes. These archetypes with no other linked items other than their own item were treated as unique for these research purposes. That leaves 1,382 archetypes to be the base set of items to be used for future research studies.

Figure 3: Flowchart of items from the profiler to the set base of archetypes.

Each of the items has scores from clients associated with it. A count was performed for each of the items ot identify how many scores could be generated for use in later analysis. The average number of scores for each archetype combined with its' equivalent items was 33,682. This yields an extensive number of scores for use in later research.



CHAPTER 5

SUMMARY

The purpose of this field problem was to establish a relational database for Personnel Decisions International, by item-mapping customized 360 degree feedback models. The project resulted in the production of five Oracle tables for use in retrieving specific scores from Profiler data. These tables can be joined and manipulated to enable the researcher to query the data into specific data sets for the researchers' specific purpose.

The results of this field problem have significance for several areas of research. For Personnel Decisions International, this database provides the ability for the user to retrieve data for comparison norms. Comparison norms could be queried from the database by joining tables two and four. This will increase the validity for PDIs' clients that use customized models, because the norms will be based on items that are equivalent and not a similar model, factor or dimension. This relational database also provides the user a method of retrieving data in a more productive fashion. Instead of the user having to search for the specific data, the query may be modified by joining different tables to pull the specific information out of the database.

This database also provides PDI with the ability to retrieve client scores from customized models for use in comparison research. These scores provide a marketing advantage. The scores from the top fortune 500 companies could be used to identify which traits are most prevalent and essential in a successful organization.

For test developers, this relational database provides a starting point for which data can be used to determine item equivalence in the area of multi-rater assessment tools. Multi-rater feedback tools are based on other peoples' opinions of someone else's behavior and cannot be treated with the same item-equivalence tests, where an individual is giving the answer for themselves. There has been in the past extensive of research on item equivalence in the area of individual testing and educational testing. I recommend the same statistical evaluation for this use of item-equivalence. For example, consulting organizations that use equivalent tests, should

have statistical evidence, such as differential item functioning (van der Linden & Hambleton, 1997), item response theory (Ellis, 1989), and logistic regression (Swaminathan & Rogers, 1990) supporting the equivalence of the items. This same statistical evidence is recommended for item- equivalence in multi-rater tools.

Research in this area is recommended before any claims are made to the data groupings produced by this database. A validity study is recommended to test the item-equivalence of the mapped items. This could easily be done with the data provided in the database. This will provide a basis for future research in the area of item-equivalence for Multi-rater assessment tools.

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APPENDIX A

Criteria for item equivalence

APPENDIX B

Reconciler Overview

APPENDIX C

Examples of equivalent items

Instructions:

Rules for mapping items to Archetypes

Much of the previous research equivalent rules do not apply in this situation. The reason being, much of the research has been done in the area of test equivalence. For this project we are looking at multi-rater data. The idea is that the rules change when the rating or scores is from an outside source.

Basic Rule: If a rater could possibly rate a participant differently on the items then it is not research equivalent. Being that the rater is measuring another persons behavior, if items are of the same basic content, the raters will rate the participant the same. So, if the items have the same basic content, they are termed as equivalent.

· To be considered equivalent, items must have similar or identical text. If the two items basically convey the same content and there wording is slightly different they are treated as equivalent. For example, the two following items are equivalent:

Anticipate problems and develop contingency plans
Develop contingency plans for potential problems

· If wording differences are to be considered, the differences must involve synonymous substitutions. The following items are equivalent because the change in the wording does not change the content of the item:

Understand complex concepts and relationships
Grasp complex concepts and relationships

· The substitution of verbs must not alter the scope of the action. For example "design" is probably not the equivalent of "establish" but is probably the equivalent of "develop".

· Items with extra useless adjectives that do not change the basic content of the statement may be linked to the statement without the adjective. For example the following statements are equivalent:

Are accessible to provide assistance and support as necessary
Are accessible to provide assistance and support

· Nouns that do not specifically identify the party of recipients for the behavior, and do not change the basic content of the item may be research equivalent to items with other non-specific nouns. For Example, the following two items are equivalent:

Coordinate work with others
Coordinate work with other groups

· If a different position is substituted in a new item, the items are not equivalent. For example, "managers" are not equivalent to "salespeople".

· If an equivalent title is substituted the items are research equivalent. For example, ("customers" vs. "clients" and "managers" vs. supervisors").

· Items that are about "customers" versus "internal customers" and "external customers" may be equivalent if one item references customers and the other

the other references only "internal customers" or "external customers" than the items are not equivalent.

- If a companies name is in the text the item is never research equivalent.
- Items with examples of the item in (parentheses) may be regarded as equivalent to an item without the example or an item with similar examples. For example, the following items are equivalent:

  Stay informed ofindusuy practices and new developments

  Stay informed of industry practices and new developments (e.g., in the US and worldwide)
- Variations on adjectives in items may be equivalent if the adjective is in the form of a second party action and the basic content of the statement does not change. For example, the following items are equivalent:

  Inspire people to excel

  Inspire people to do their best
- If one sentence is more specific than the other, the item may be research equivalent if the basic content is the same. For example, the following items are equivalent:

  Address prejudice and intolerant behavior

  Address prejudice and intolerant behavior in a productive manner
- If the items look or sound similar but the basic content is different, they may not be equivalent. For example, the following items are not equivalent:

  Talk to people without interrupting

  Talk to people without *interruption*s
- If there is a difference in the strength of the statements, they may not be equivalent. For example, the following items are not equivalent:

  Are regarded as knowledgeable in own field

Reconciler overview

Background

In the current Multi-Rater business area, Questionnaires essentially *represen*t both the *mearurement model* and *thejob model. Ajob model* is the definitional description of which competencies are critical for ajob. A mearurement *model* represents one of many possible instruments to measure against *ajob model.*

Other than the Standard Profiler, different Questionnaires tend to be created for different clients. This makes it difficult to *correla*te scores across the population for questions that mean the same thing from one Questionnaire to another. Essentially the Reconciler application provides a way to separate job models out of many and measurement models. The job model can then be used for research mon effectively.

There are a number of pending research projects which need to correlate questions with all clients using that question. This requires:

- deciding which questions are equivalent
- knowing which client(s) are using the model in which the question appears.

Research needs to identify base items and map all other items to those base items. These base items *an* called *archetypes. Curnntly* there are approximately 15,000 uniquely numbered items. The source chosen for the items is the MR-Model database.

Pn~cess Overview

Import iaformutioa from otbcr swrca to trrd tbe p~ocm

- A list of *modeYfactorldimensionlitems* is queried from the MR-Model database and placed in a text file. This file, or other files containing subsets of the information are imooncd into the **Reconciler.** Typically a subset file with just the standard Profiler model is imported first.
- A list of Clients by name and Identifier is provided by operations (POAS) and imported into **Reconciler.**
  A list containing client name text and model logical form (without version) is also available. This can also be imoorted to provide an initial approximation of client to model.
  Considerable manual reworking of *these relafi~inships* is *required, however, as manyfalse* linkr *are generated.*

Idc~titr cs~tW bch·vio~ ~*chc~pcr)* and ·ui~n clientr

- The user chooses a model, searches for similar archetvoes and assinns each Item to an *archet~voe.* For a standard model. the entire model or Darts of it can be used to create many archetvws at once.
- Various characteristics of each *archervoe* can be modified as needed.
  The user chooses a model and assipns one or more imported Clients to each.
- Note: The model import function of the Reconciler application detects exact text matches between imported items and existing archetypes and their equivalent items. This makes it advantageous to complete a typical model like standard Profiler first and then import the

remaining models. Exact text matches will automatically link to the archetype without manual intervention, removing some mechanical work for the user.

Export the bebrvion illd LI~O~*ted items lad dieats lor me ia rrrurch

At any point in the process, a list of the Archetypes, the associated Items and the associated Clients can be exported for use in doing research. It is the user's choice when and at what state of completion to perform the exports. They can be run at any time to reflect the *curre*nt state of reconciliation.

Roam Admintstratioa items

- The user should save his or her work periodically. This is accomplished with the **FilelSsve** menu option.
- A backup of the database file should be taken after each day's work, or prior to doing an import. If undesired results are obtained from the import it is then easy to recover back to the previous state.

Import Measurement Models (Questionnaires)

In order to reconcile similar Items, Measurement Model information needs to be converted to form that supports the reconciliation process.

A list of modeYfactor/dimension/items is queried from the MR-Model database and placed in a text file.
Typically a subset file with just the standard Profiler model is also separated out and imported first.
The import process is selected through the **FilelImport** menu options. The desired import file is selectable on the *resultin*g dialog. Note that the other imports are also launched from this same dialog. A checkbox on each import allows a particular import to be enabled or disabled.

The import process detects Items which have the exact same text as existing Archetypes or their equivalents. These are then linked to the Archetype automatically during the import process. This relationship is visible in the User Interface and may be modified through that mechanism. This process provides the user with a head start in detecting obvious similarities. Note that this implies a multi-stage process. An initial import is done followed by some reconciliation, followed by another import. Additional imports link to the Archetypes discovered during the previous stages of reconciliation.

Import Clients

In order to associate models with Clients, Client information needs to be converted to a form that suppoas the reconciliation process.

- A text file list of Clients by name and Identifier is provided by operations (POAS).
- The import process is selected through the **FilelImport** menu options. The desired import file is selectable on the resulting dialog. Note that the other imports am also launched from this same dialog. A checkbox on each import allows a particular import to be enabled or disabled.

Note that the complete client list can be imported immediately, there is no advantage to delaying

import.

Import Clients to Logical Form Link

In order to facilitate the Client to Model association, import a list Client names versus the logical form number only, not including version or any other attributes. Although ambiguous on both sides, this is the best automated information currently known to match clients and models. This can also be imported to provide an initial approximation of client to model. *Considerable manua*l *reworking of these relatioinships* is *required, however as manyfalse links are generated.*

- A text file list containing client name text versus model logical form (without version) is available.
- The import process is selected through the **FilelImport** menu options. The desired import file is selectable on the *resultin*g dialog. Note that the other imports are also launched from this same dialog. A checkbox on each import allows a particular import to be enabled or disabled.

Caution: do not re-run tbls imwrt after removinn the spurious links between clients and models, Doine so will re-ost9blish all the spurious links, It is recommended that this ~rocess. if used at all, *is* done durlnn second import of models and not used aeain,

Link Measurement Items to Archetypes

This function provides a way to examine a link Items in the measurement model to new or existing archetypes. The measurement model is displayed in the outline view (either on the left or top pane of the main screen depending on the view selected **(OptionslPreferenrrslsplit HorizontPlly)** . In the process, the user identifies Items of the model to create a new Archetypes or to link to existing Archetypes. Additionally, some Archetypes may be entirely unique to a particular Client. These can be denoted as unique either by using the unique link button or checking the unique checkbox on the Archetype Manager dialog.

- New - this item generates a new and initially identical archetype, An icon designating this Item as linked appears in the outline view. This same icon also may appear at higher grouping levels (dimension/factor/model) as all the elements of that group *an* linked.
- **Unique** - same as New but has the *unique* attribute set. A different icon is used to distinguish *unique* from normal links. Archetypes denoted *unique* and their equivalent items will not appear in the export list.
- **Link** - the selected Item (top or left pane) is linked to the selected Archetype (bottom or right pane). Again the linked icon is presented with the Item.
- **Unlink** -the selected item (top or left pane) is unlinked from its Archetype. The linked icon is removed from the Item.

Note: only the text for saved archetypes and their equivalent items are searched by the search function, In o~der for text to be **searched, the text must be associated with *an* archetype and it must have been saved** (FilelSave menu option),

Manage an Archetype

An Archetype represents the best example of something, in this case ajob competency. This dialog allows the characteristics and relationships of the archetype to be edined. This dialog can be invoked

from the edit button on the lower right/center bottom of the main window for a selected archetype in **the search results pane.** It can also be displayed by double clicking a linked Item (displaying an icon) in the model outline.

- Name - the definitional text for this archetype. May be editted as desired.
- **Id** - *user* assigned identifier. This should be unique from all other archetype identifiers. Note **that the** system does **not guarantee *this* uniqueness.**
- Unique - the *unique* attribute checkbox.
- **Items** - a list of all *measurement* Items which have been assigned as equivalent to this archetype.
- **Clients** - a list of all clients linked to this archetype, This relationship is determined by virtue of the equivalent items and the clients linked to the models in which the items occur.
- Set Npne - replace the Name text above with the text of the selected item in the list.
- Remove - remove the selected Item in the list as an equivalent. game effect as the Unlink button.

Search for an Archetype

One of the most critical parts of the reconciliation process is finding similar texts and making a judgement whether the item text can be *considered* equivalent to the archetype. Thus the search function is the lynchpin of the entire process.

- Search text - enter the text or expression to be searched for among the archetype names and their equivalents.
- Search - execute the search
- **Explain** - describe in narrative form the search expression *entered* in the Search text field.

Associate Clients to Measurement Models

There is no unambiguous linkage in the current system between a Measurement Model and the clients who have used it. For each Measurement Model, it is necessary to provide this association in order for reconciliation to be achieved.

- Client association takes place for the measurement model displayed in the outline view.
- The client selection list is opened using the **Clients** button on the bottom left or middle center of the main window. The list is presented in two panes, the left containing clients of the *current*ly visible model, and all available clients on the left..
- Clients may be added or removed from the left pane using the ~< or >r buttons.

Note that the first time the client list is invoked in a particular session, there will be a slight delay. There am approximately 2000 customers to load. However, subsequent requests will be much more rapid.

Select Measurement Model

linked to an archetype), The right contains an additional search capability. Models can be searching on the logic~lform *number* (not including version or other qualifiers) or the nome of the Qucstionnairr.
A model from either pane can be selected by double clicking it or single clicking and clicking the OK button. A title field at the top of the dialog provides a visual *confumation* of which model is selected.

Export Archtypes

When the reconciliation process has produced a set of useful archetypes, the archetypes and related information must be exported. The actual matching and *comlating* of scores to the models is done outside of *nconciler.*

The export function is selected using the EllelExport dialog.
Five tab delimited text files are *create*d which *an* suitable for establishing a relational database for querying. These art:

I. The archetypes (user assigned id, name text)
2. The items (h~R_Model id, name text, Scoring Engine Id) only those linked to the archetypes above.
3. The clients (POAS id, name text) only those linked to the archetypes above.
4. Archetype - Item links (archetype user assigned id, MR~ulodel id)
5. Archetype - Client links (archetype user assigned id, POAS id)

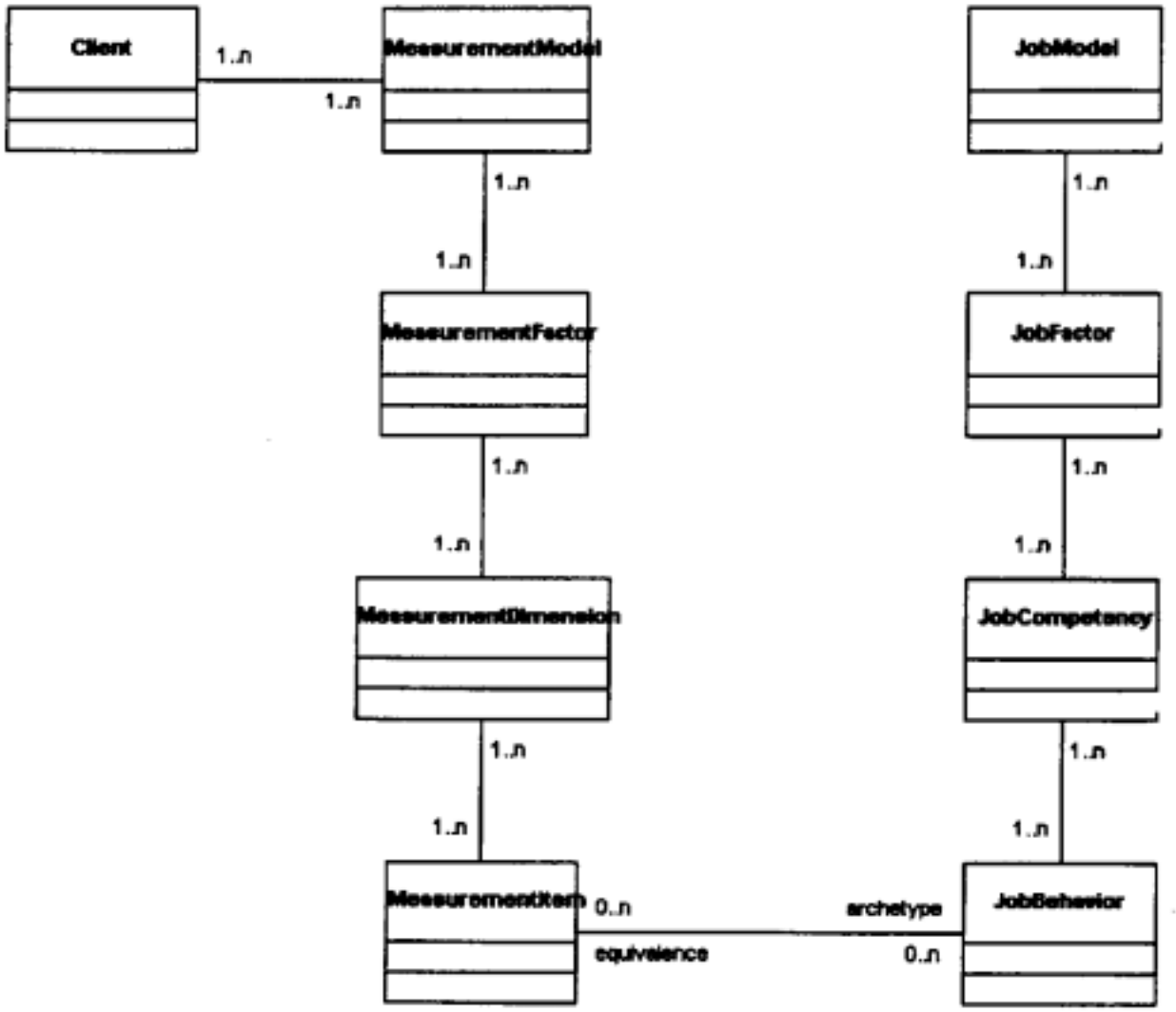
Archtype All

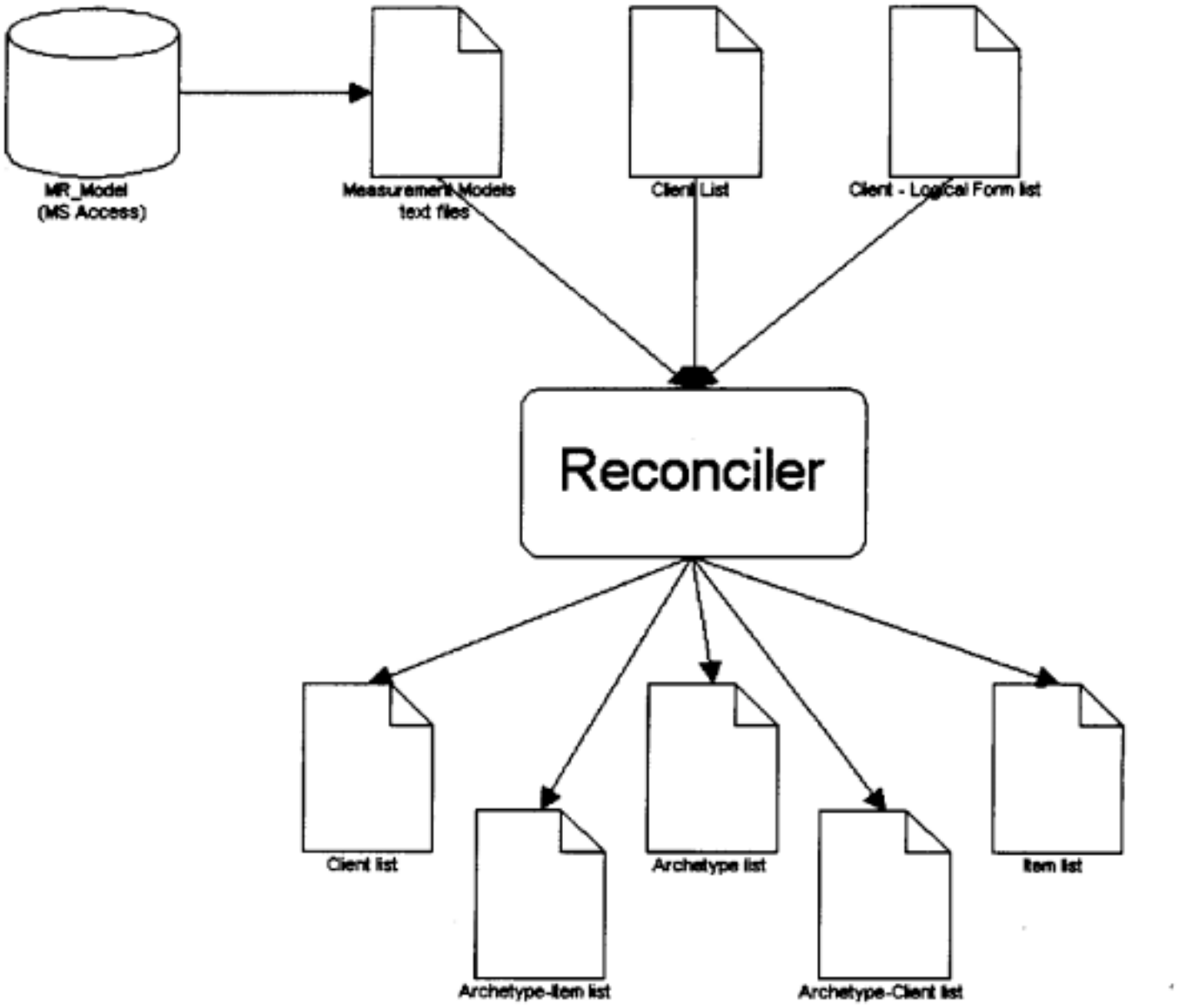
It is expected that some of the basic models like the standard Profiler will largely become the archetypes for subsequent models. A convenience function has been provided to expedite this: Any level of the model (modeYfactor/dimension) can be selected. When the archetype all function is performed ajob model and archetypes are created to mirror the selected measurement model components. The selected groups are shown to have the linked icons. After saving, their item texts are available to be searched just as if each had been done individually.

The archetype all function is selected using the Sperria1IArchetype **All** menu option.

Note that archetype all does not link to any existing archetypes, it only creates new **archetypes. Therefore it is only suitable in** a few **circumstnnces,** probably with one or two of **the initial models.**

Reconciler Conceptual Model




MR_Model
(MS Access)
Measurement Models
text files
Client List
Client - Logical Form list
Reconciler
Client list
Archetype-Item list
Archetype list
Archetype-Client list
Item list

Reconciler User Interface

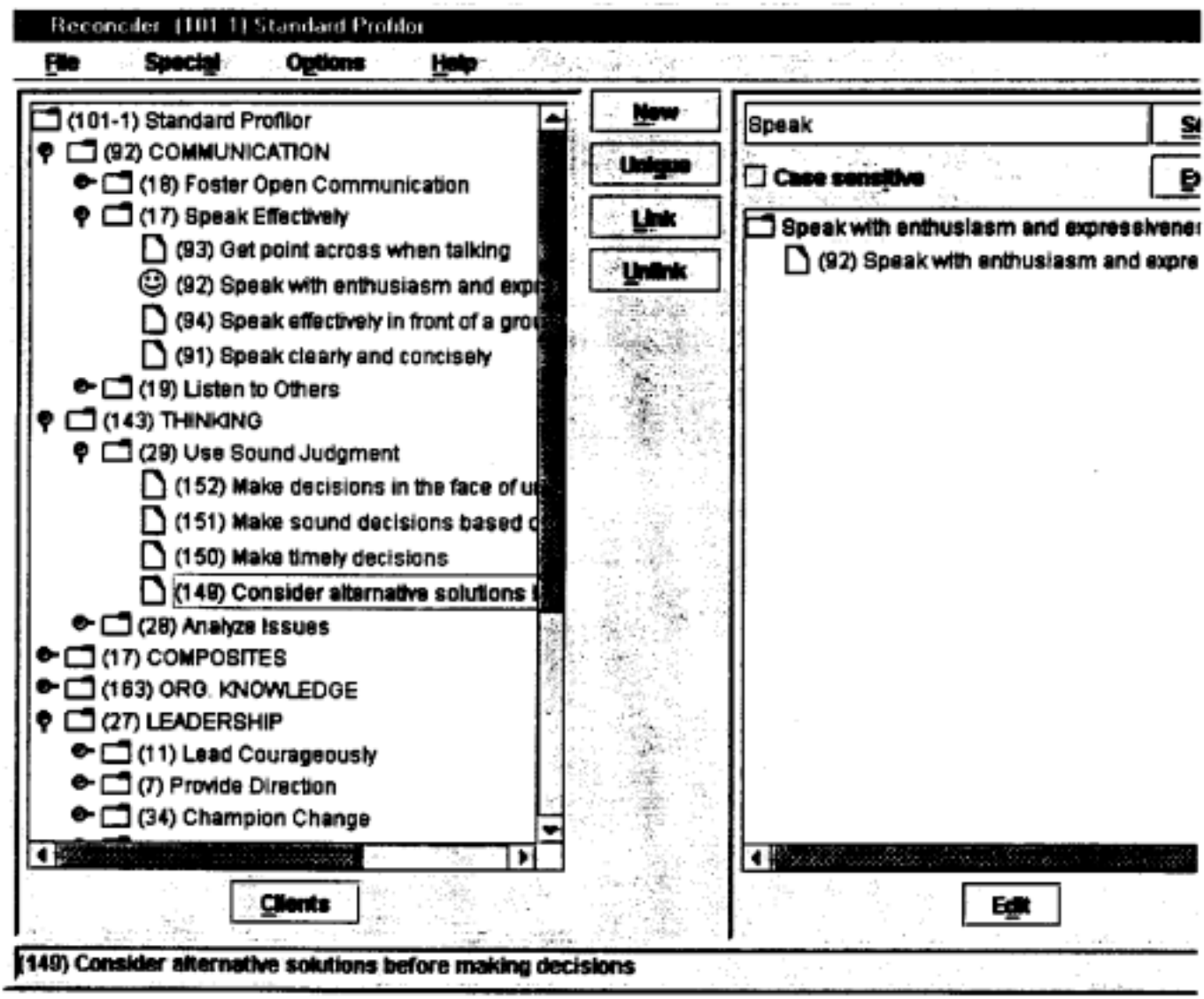
This document is intended to serve as part of the functional requirements for the Reconciler application.

For information about the version of and changes to this document look h~·

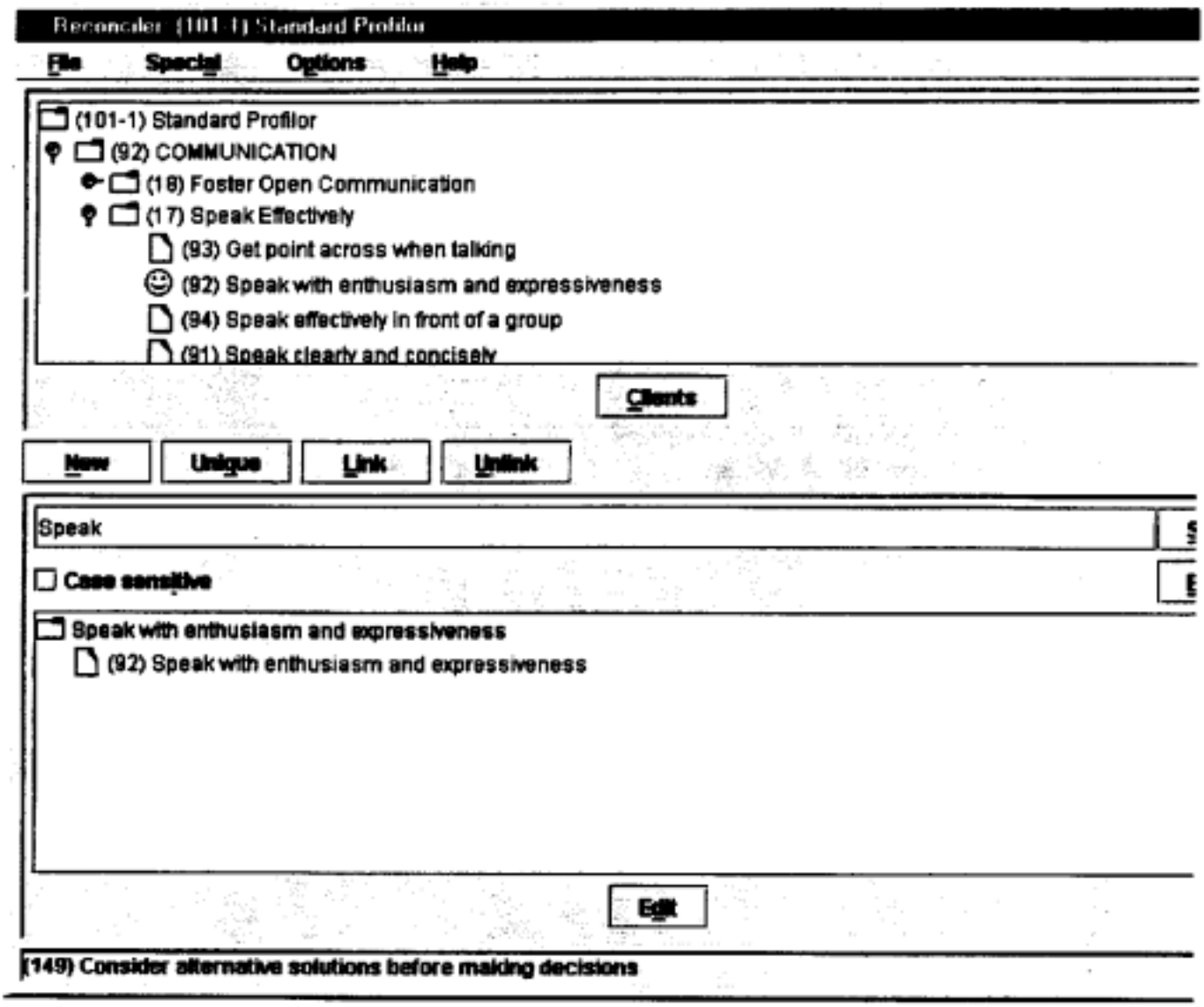
Main screen

Purpo~e: Associating items in a measurement model with archetypes (a.k.a. essential behaviors, etc.).

srreenshot:



The main window of the Reconciler can be horizontally split (in Options|Preferences).



Control summary:

Control/Attribute	Type	Initial state	Notes
Clients	Push button	Disabled	Becomes enabled when a model is selected
New	Push button	Disabled	Becomes enabled when an item is selected
Unique	Push button	Disabled	Becomes enabled when an item is selected
Link	Push button	Disabled	Becomes enabled when an item and an archetype is selected
Unlink	Push button	Disabled	Becomes enabled when an archetyped item is selected
Search	Push button	Enabled	-

Explain	button	Enabled	-
Edit	Push button	Disabled	-
Case sensitive	Check box	Enabled	-

Control/Attribute	Type	Initial value	Valid values	Notes
Left pane	Tree	Empty	A measurement model	Single selection
Right pane	Tree	Empty	A list of archetypes	Single selection
Status bar	Label	Empty	A text string	Can be turned off in the Preferences menu

Action summary:

- *New:* Promote the item selected in the model (left pane) to an archetype.
- *Ilniqve:* Like 'New' but additionally sets the 'unique' attribute on the created archetype.
  Link: Link the item selected in the model (left pane) to the selected archetype (right pane).
- *Lmlink:* Unlinks the item selected in the model (Left pane).
- *Clients.*- Brings up the Client association dialop.
- *Search:* Search through all archetypes and their associated items for the specified text and display matches in the right pane.
- *Edit:* Displays the ArchetvDe manaper for the selected archetype.
- *ETploin:* Exolain the semantics of the current search *expression*.
- *FilelOpen:* Show the Open model dialoe.
  Filellmpore Show the Imoort dialoe.
- *FilelExpore* Show *the* Exwrt dialoe.
- *FilelSaver* Save all objects that have changed since last save.
- *FilclExit:* Close the application.
- *SpcciallArchctype ad:* Recursively archetype the selected node.
  OptionslPr~ferences: Enables/disables status bar and horizontal split of main window
- *OptionslUI Style:* Selects UI style. Defaults to system default.
- *OptionslLocolcr* Selects locale. Defaults to system default.
- *HelplAboutr* Show Reconciler about.
- *HelplHelp:* Show Reconciler helo.

Error renditions:

None.

Comments:

Items in the model marked with a **O** indicates an archetyped item, and Q indicates an item that is linked to a unique archetype.

If a non-leaf node is marked with a **O** it indicates that all it's nodes are marked as well.

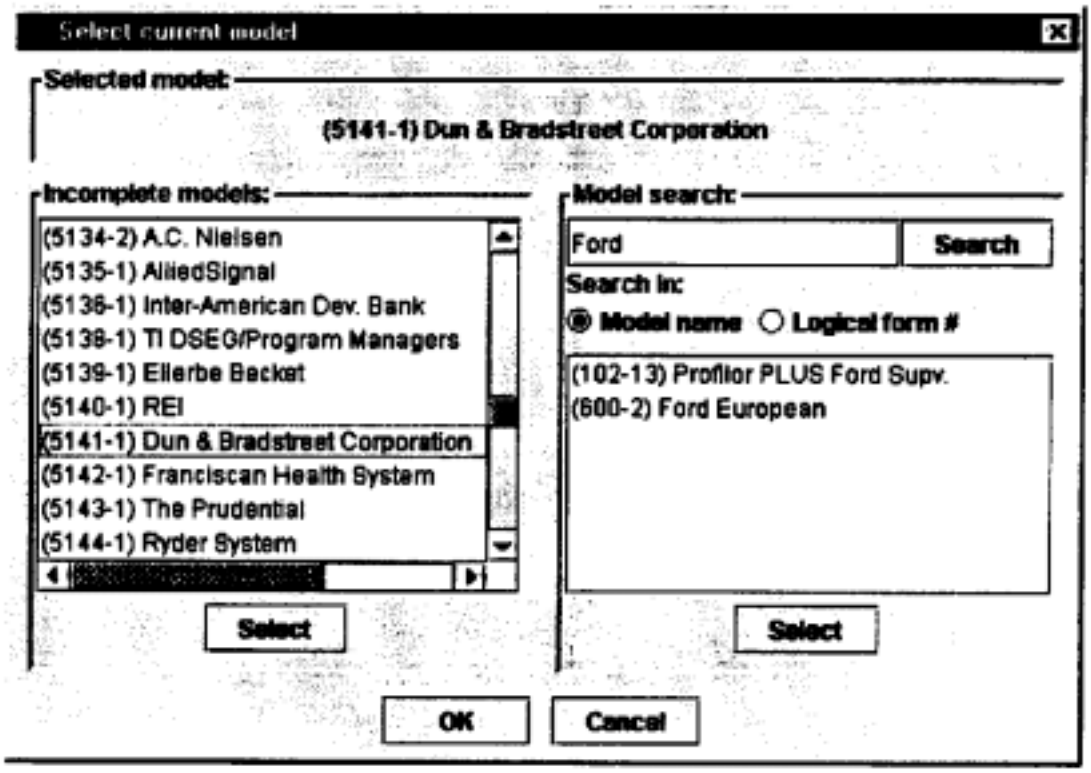
A double click on an archetyped item (in the left pane) will bring up the Archtt~oe manaeer for the archetype the item is linked to.

The status bar will show the full name of the currently selected measurement model element. This feature may not be needed when the main window is split horizontally, in which case the status bar can be turned off.

Model open **dialog**

Purpose: Selecting the current measurement model to work on.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Notes
Search	Push button	Enabled	-
Select	Push button	(see note)	Enabled if the list in not empty
Model name	Radio button	Selected	-
Logical Form #	Radio button	Unselected	-
OK	Push button	Disabled	-
Cancel	Push button	Enabled	-

Control/Attribute	Type	Initial value	Valid values	Notes
Left list	List	List of incomplete models	Measurement models	Single selection
Right list	List	Empty	Measurement models	Single selection
Search field	Edit	Empty	A search expression	-
Selected model	Label	Empty	A text string	-

Action summary:

- *Select:* Selects the highlighted model (in the 'Incomplete' and'Search' lists respectively).
- *Search:* Search through the models for a string in either the model name or the logical form number, depending on the state of the radio buttons.
- *OKr* Sets the selected model as the *curre*nt working model and returns to the Main screen.
- *Cancel:* Returns to the Main screen without changing the *curre*nt working model.

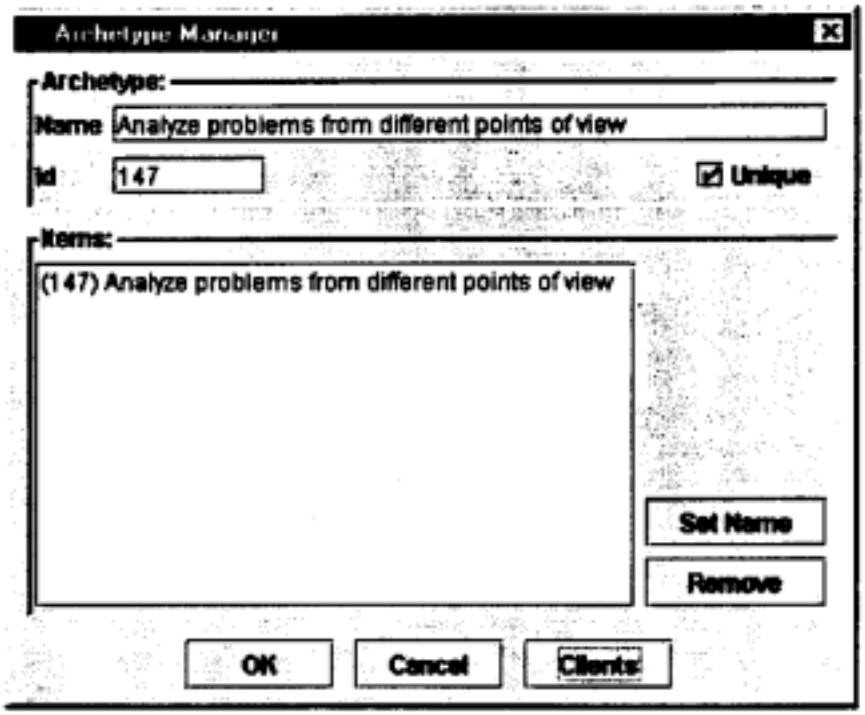
Error conditions:

None.

Archetype manager

purpose: Manage archetypes.

Sereeashot:



Control summary:

Control/Attribute	Type	Initial state	Notes
Set name	Push button	Disabled	Becomes enabled when an item is selected
Remove	Push button	Disabled	Becomes enabled when an item is selected
Clients	Push button	Enabled	-
OK	Push button	Enabled	-
Cancel	Push button	Enabled	-
Unique	Check box	(see note)	Checked if archetype is 'unique'

Control/Attribute	Type	Initial value	Valid values	Notes
List	List	List of items belonging to archetype	Item	Multiple selection. 'Set name' requires single selection.

Name	Edit	Name of the archetype	String	-
Id	Edit	Id of the archetype	String	-

Action summary:

· *Set* name.- Set the archetype name to that of the selected item in the list.
· *Remove:* Remove (unlink) the selected item from the archetype.
· *Ilnique:* Mark/Unmark the archetype as unique.
· *Clients:* Show a list of all E~i~ltS for this archetype .
· *OKI* Accept the changes to the archetype and return to the Main screen.
CrurcclrDiscard any changes to the archetype and return to the Main screen.

Error conditions:

None.

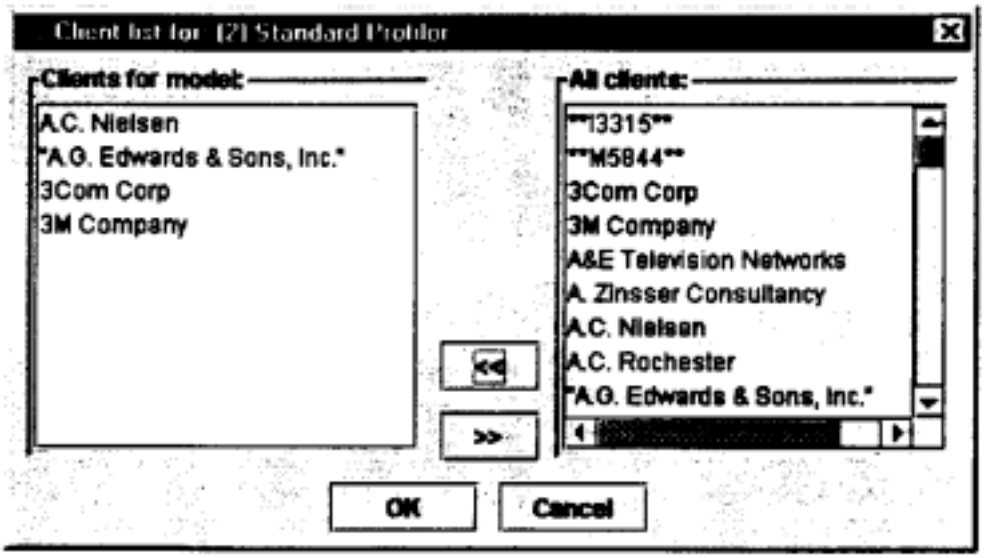
Comments:

It is possible to edit the archetype name and id directly in the relevant edit box.

Client association dialog

Purpose: Associating clients with a given measurement model.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Notes
<<	Push button	Enabled	-
>>	Push button	Enabled	-
OK	Push button	Enabled	-
Cancel	Push button	Enabled	-

Control/Attribute	Type	Initial value	Valid values	Notes

Left list	List	List of clients for model	Client	Multiple selection
Right list	List	List of all clients	Client	Multiple selection

<<*:* Add selected client(s) from the list of all clients to List of clients for the current model.

~~*:* Remove selected client(s) from the fist of clients for the current model.

· *aK:* Accept the changes to the client list and return to the Main screen.

· *Cancel:* Discard any changes to the client list and return to the Main screen.

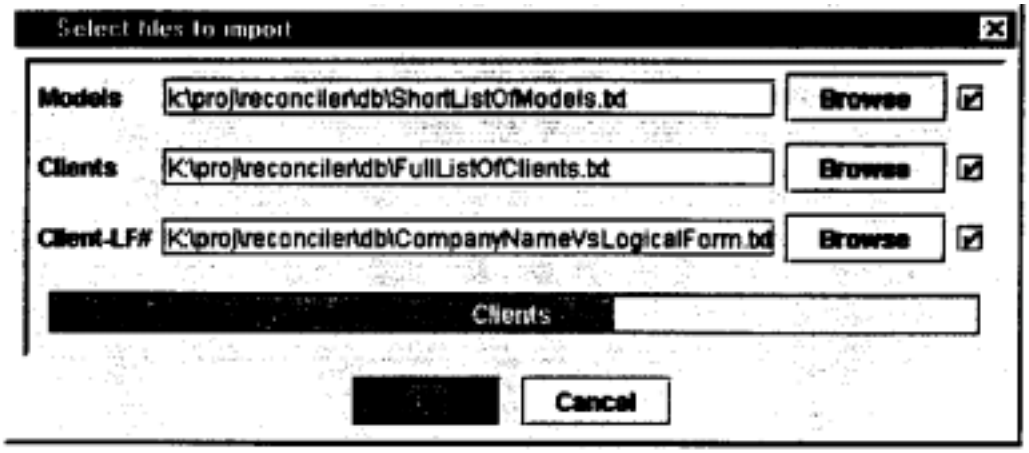
Error colrditiolrs:

None.

Import dialog

purpose: Import *measuremen*t model data into the Reconciler.

Screeasbot:



Control summary:

Control/Attribute	Type	Initial state	Notes
Browse	Push button	Enabled	-
Check	Check box	(see note)	'Models' enabled, the other two disabled
OK	Push button	Enabled	-
Cancel	Push button	Enabled	-

Control/Attribute	Type	Initial value	Valid values	Notes
Models	Edit	Empty (see note)	Filename	Shows filename from properties if defined
Clients	Edit	Empty (see note)	Filename	Shows filename from properties if defined
Clients-LF	Edit	Empty (see note)	Filename	Shows filename from properties if defined
Status bar	Progress	Empty	Completion percentage	-

Action summary:

- *OKt* Import data from the specified files and return to the Main screen.
- *Crmcel:* Cancel the import and return to the Main screen.
  Browse: Show Find file dialog.

Error conditions:

If a filename is invalid (file does not exist) the invalid imoort file dialog is shown.

If an error occurs during *impon* the Error durine imoort dialog is shown, and the entire import is cancelled.

Comments:

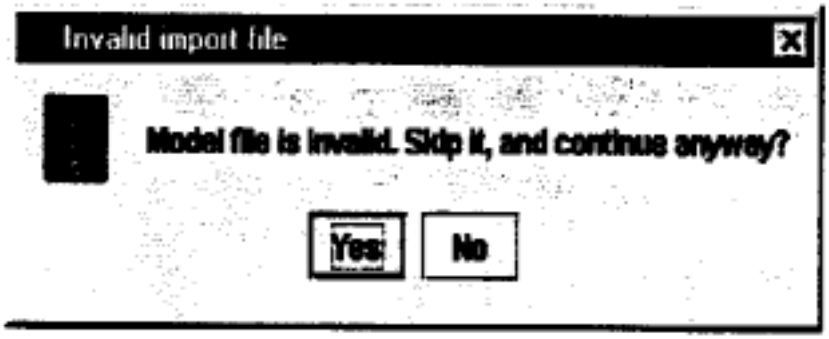
If the import is successful the Model Ooen dialog is displayed.

If the import was canceled while running the objects already imported will show up in the model. In other words, the entire import is not **treated** as a transaction.

Invalid import file dialog

Rupose: To get direction from the user if import should continue even though an invalid import file was encountered.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Notes
Yes	Push button	Enabled	-
No	Push button	Enabled	-

Action sumnnry:

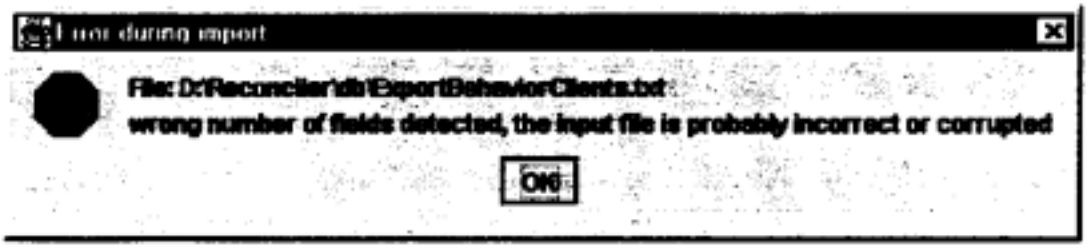
- *Yes:* Continue import.
- *No:* Abort *import*.

Error conditions:

None.

purpose: To inform the user that an error *occurr*ed during import.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Notes
OK	Push button	Enabled	-

Action summary:

OK: Return to the Main *semen.*

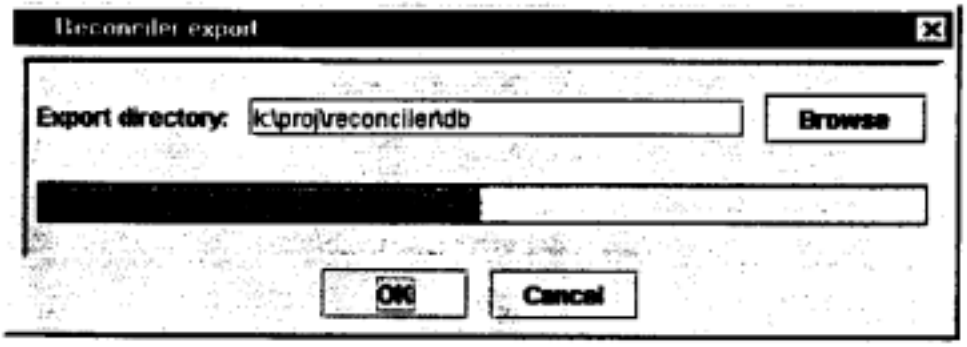
Error conditions:

None.

Export dialog

Purpose: Export measurement model data to text files.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Notes
Browse	Push button	Enabled	-
OK	Push button	Enabled	-
Cancel	Push button	Enabled	-

Control/Attribute	Type	Initial value	Valid values	Notes
Export directory	Edit	Empty (see note)	Directory	Shows output directory from properties if defined

Status bar	Progress	Empty	Completion percentage	-

Action summary:

· *OK:* Export data to the Specified directory and *retur*n to the Main screen.
· *Cnncel:* Cancel the export and return to the Main screen.
Browse: Show Find file dialog(allowing only directories to be selected).

Error conditions:

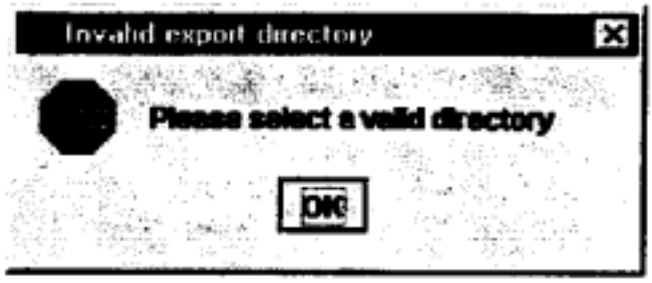
If export directory is invalid the Invalid exoob directory dialog is shown.

ff~c;l~odr Oecw dvi~g dK clporr ~h E~LPL~dne~LPP~ dialog is shavn. aad Ih~ entire w;p~n is

Invalid export directory dialog

Purpose: To inform the user that the selected export directory is invalid.

SrreenPhot:



Control summary:

Control/Attribute	Type	Initial state	Notes
OK	Push button	Enabled	-

Action summary:

OKReturn to Uc~ort dialoe..

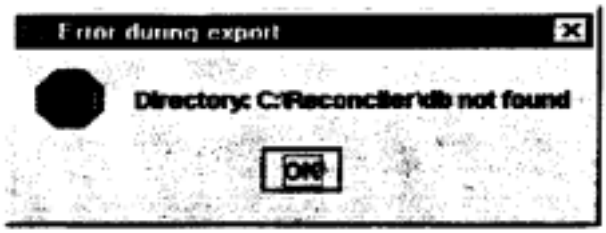
Error conditions:

None.

Error daring export dialog

Purpose: To inform the user that an error n
error occurred during the export.

Screensbot:



Control summary:

Control/Attribute	Type	Initial state	Notes
OK	Push button	Enabled	-

Action summary:

OK: Cancel expon and retun to the main screen..

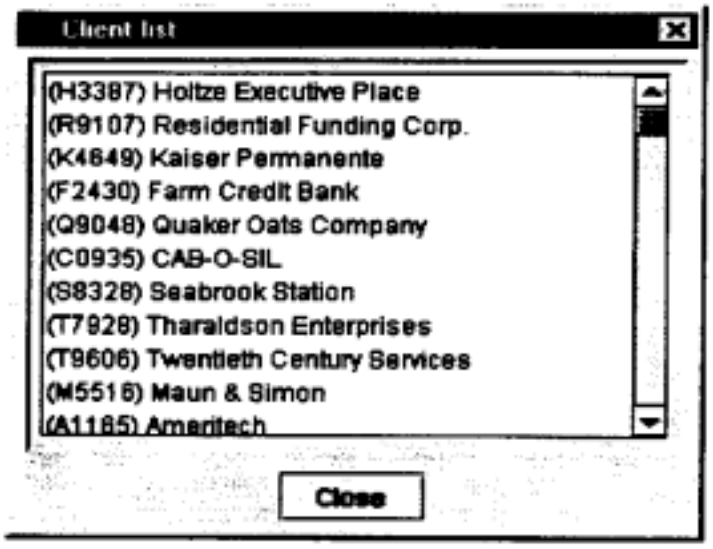
Error conditions:

None.

Client list dialog

Rupose: Show a list of clients.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Initial value	Valid values	Notes
Close	Push button	Enabled	N/A	N/A	-
Client list	List	N/A	List of clients	Client	-

Action summary:

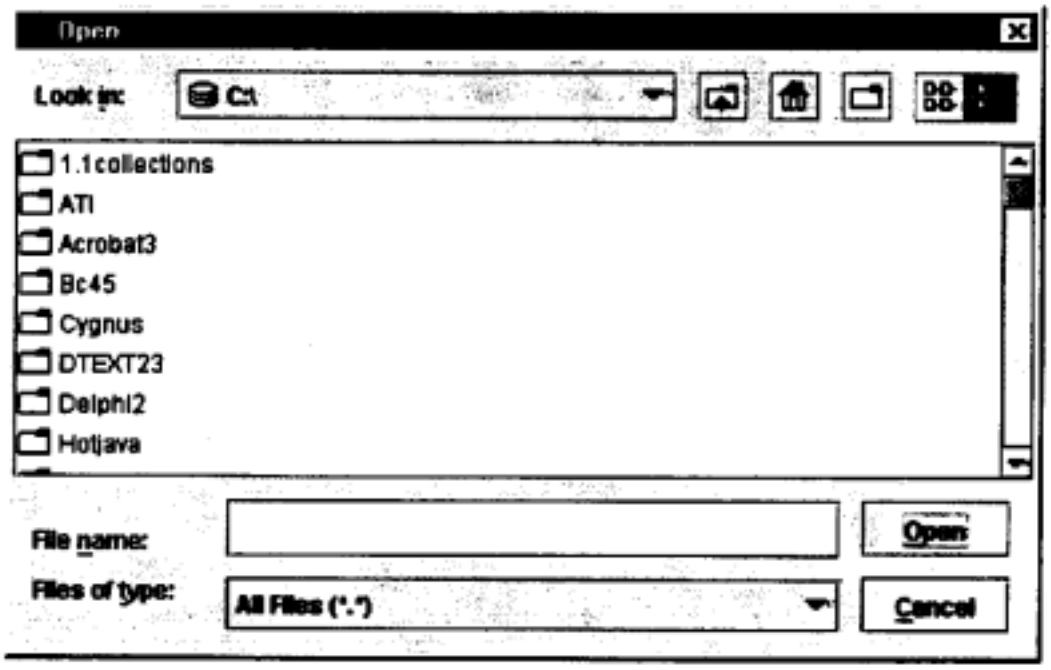
***Error* conditions:**

None.

File locator dialog

purpose: Locate a file.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Notes
Open	Push button	Enabled	-
Cancel	Push button	Enabled	-
Up one level	Push button	Enabled	-
Home	Push button	Enabled	-
Create directory	Push button	Enabled	-

Control/Attribute	Type	Initial value	Valid values	Notes
Look in	Drop down	Default directory	Directory	-
Files of type	Drop down	Default file type	File type	-
Files of type	Drop down	Default file type	File type	-
File list	List	Listing of current directory	File name	-

Action summary:

- *Open:* Selects the file in the file name edit control.
- *Cancel:* Cancel operation and closes window.

Create directory: Creates new directory in the current directory.

Error conditions:

None.

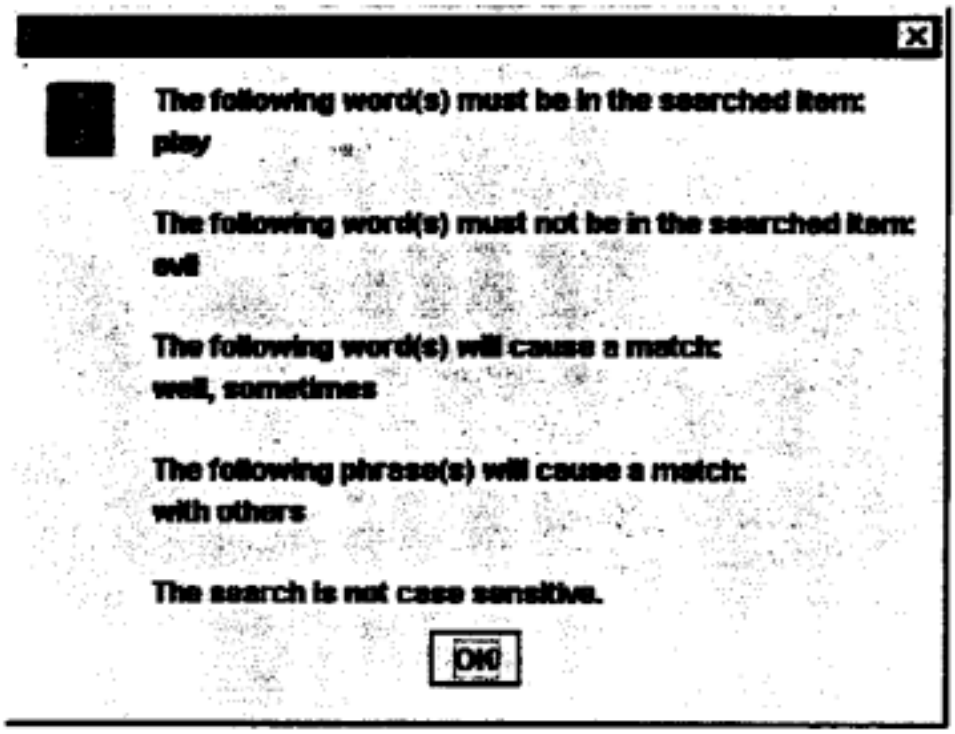
Notes:

This is a system defined dialog (not part of the application).

Search explanation

Purpose: Explain the current search string.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Notes
OK	Push button	Enabled	-

Action summary:

OK: Dismiss the search explanation dialog.

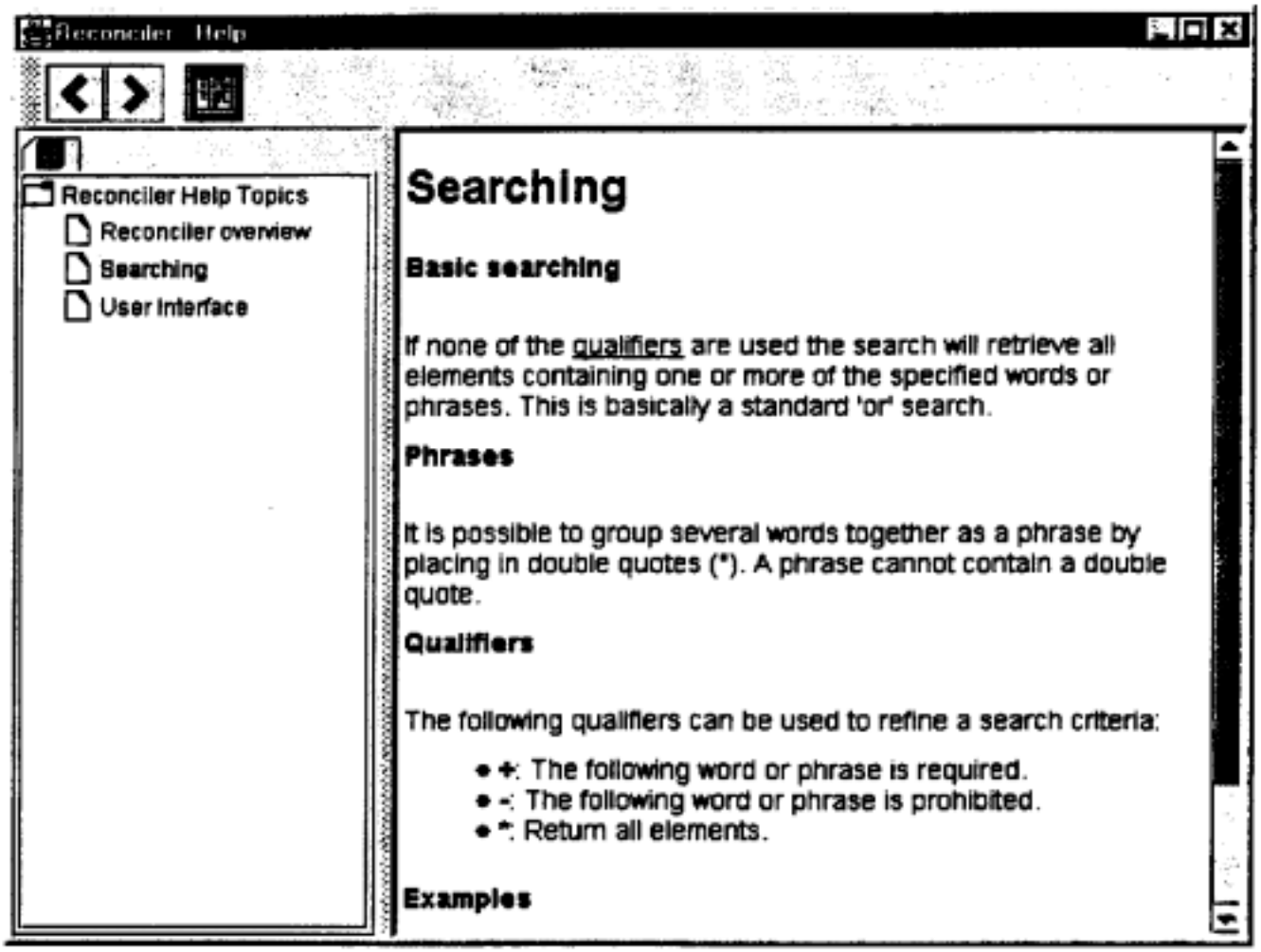
Error *conditions:*

None.

Reconciler help

Purpose: This window is opened from the Reconciler Window by choosing the menu option HelplHelp. This windows main purpose is to provide information on how to use the application.

Screenshot:



Control summary:

Control/Attribute	Type	Initial state	Notes
<	Push button	Disabled	-
>	Push button	Disabled	-
Index toggle	Toggle	On	-

Action summpry:

- *<:* Go to previous page.
- *>:* Go to next page.
- *Index toggle:* Toggle index on/off.

Error conditions: None.

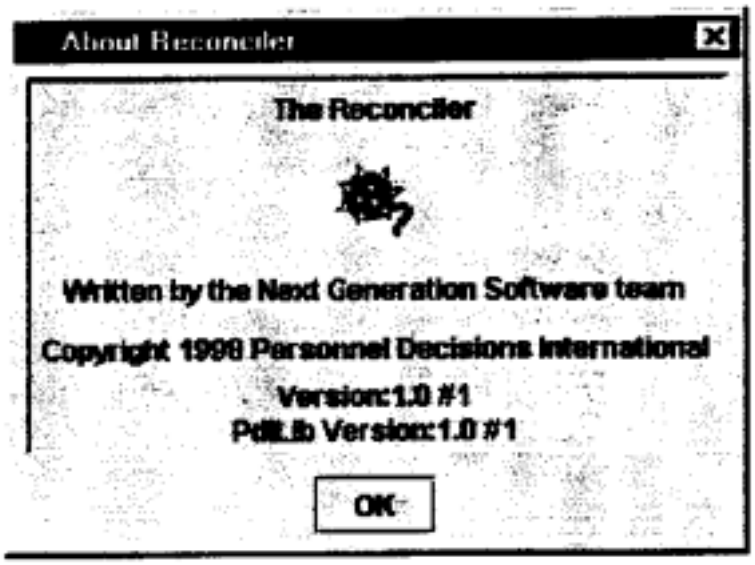
Notes: This screen is managed by the java help system.

About

Purpose: The purpose of this dialog is to provide miscellaneous information about the application

such as version and build numbers.

Screensho



Control summary:

Control/Attribute	Type	Initial state	Notes
OK	Push button	Enabled	-

Action summnry:

OK: Dismiss the about dialog.

Error conditions:

None.
Release: $Name: $
~Date: 1999-02-26 12:52:58-06$
%Revision: 1.13%

CHANGELOG :

$Log: reconciler.html.v S
Revision 1.13 1999-02-26 12:52:58-06 pers
Added import a. export error dialogs.
Clarified import dialog check boxes initial state.

Revision 1.12 1999-02-25 13:02:50-06 pers
Updated document to match reality (DefLog Id 5. 12, 13).

Revision 1.11 1999-02-24 13:55:a7-06 pers
Added ReconcilerHelg related tags to source document.

Revision 1.10 1999-02-24 10:36:40-06 pers
Export dialog is now using a progress bar rather than a counter.

Revision 1.9 1999-02-17 *09:53:22-06* pers
Added 'Invalid export directory' section.
Clarified meaning of 'Cancel' in Import a

in Import and Export dialogs.

Revision l.B 1999-02-15 09:43:42-06 pers
Made CHANOELOG visible i in document.

Revision 1.7 1999-02-15 09:35:25-06 pers
Added 'Export dialog' section.

Revision 1.6 1994-02-08 11:50:59-06 pers
Adding release name and log information.

Searching

Basic searching

If none of the aualifiers are used the search will retrieve all elements containing one or more of the specified words or phrases. This is basically a standard'or' search.

Phrases

It is possible to group several words together as a phrase by placing in double quotes ("). A phrase cannot contain a double quote.

Qualifiers

The following qualifiers can be used to reftne a search criteria:

+: The following word or phrase is required.
: The following word or phrase is prohibited.
*: Return all elements.

Examples

To search for all elements taht contains the phrase "plays well", does not contain the word'bully', and may contain the words 'others' and'friends' use the following search criteria:
+"plays well" -bully others friends

ARCHETYPEMonitor

Monitor of others and redirect efforts when goals are not being met	grass of others and redire
work with others	ate work with other groups/p
lactations for ass	clear expectations for delega
It~grate planning efforts across groups	Itegrate planning efforts across wor
ranslate business strategies into clear objectives	Translate business strategies into clea
Identity specific action steps and accountabilities	Identify specific action plans and acc
Prepare realistic estimates of budget, staff, and other resources	Prepare raalistic estimates of budget
Anticipate problems and develop solutions	Anticipate problems and develop ane
Convey a sense of urgency when appropriate	Demonstrate a sense of urgency whe
Put top priority on getting results	Put high priority on attaining results
Persist in the face of obstacles	Persist when confronted with obstacl
Set high personal standards of performance	Set high standards of personal perfor
13 initiate activities without being asked	Initiate activities without being asked
from different points of view	Analyze issues from different points
15iMake decisions in the face of	Make decisions under conditions of u
IslConsider altematives before makino decisions	Consider different solutions before m
t7lAm regarded as an	Regarded as an expert
1BIKeep up to data on	Keep current on professionavlechnic
~SIKnow thei	Know the job (i.e., Unit Operations)
informed about industry practices and new	Keep up to date about industry practi
2tIBring cross-disciplinary knowledge forth on issues and	Bring crsss-iscipllnary knowledge to
how the business is run	Know how the business is run
Interact with people openly and directly	interact openly and directly with peo
Clarify what people say to ensure understanding	Clarify what people are saying to ens
Listen to people without interrupting	Listen without interrupting
Listen willinalv to concems	Listen willincllv to concems