CIRILAB INC

TRIGGER RESOLUTION THEORY™ & CIRILAB

LEVERAGING DISCUSSION BOARD CONTENT TO IMPROVE WEBSITE VALUE

AUTHOR: ARNOLD VILLENEUVE, VICE PRESIDENT, CIRILAB INC.

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

TABLE OF CONTENTS

the Trigger Resolution Theory™ & Cirilab 3

Thematic Entity Extraction Produces a Knowledge Signature 3

A Knowledge Map™ Facilitates Collection Navigation 6

Be Careful What You Ask For! 7

Thematic Resonance™ within Discussion Boards 7

Cirilab's Technology In Action With LLS Discussion Boards 11

Topic Threads Are Not Linear Discussions 12

Where is the real value within Resolution Posts? 13

Inverse Resolution Order Analysis 13

Leveraging Discussion Board Topic Thread Knowledge Signatures 18

Thematic Based Discovery Provides Better Results 18

Going Forward 21

Summary 22

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

Thematic Resonance™

LEVERAGING HIDDEN VALUE IN DISCUSSION BOARDS

THE TRIGGER RESOLUTION THEORY™ & CIRILAB

Dr. Charles Mauro of Mauro New Media has developed the hypothesis that promotes the fact that Discussion Boards can provide highly valuable information in a very short period of time by leveraging the concepts of Social Networking and Human Experience Filtering. He calls the hypothesis the Trigger / Resolution Theory™.

The concept of Trigger / Resolution Theory™ within Discussion Boards details the idea that responses to an initial question can be highly focused in the content value that they provide and thus help the person asking the question find an answer much quicker than if they had to research, review, analyze and distil the collective of information themselves. The initial question is the Trigger and the responses are the Resolutions to the question.

Dr. Mauro was searching for a way that could quickly help him validate his hypothesis and turned to Cirilab Inc. for a solution. Cirilab Inc. produces knowledge generation software that locates and leverages the thematic expressions within a single document or a collection of documents. The documents can be anywhere including in a folder, a website, a Blog, an email message, or even a Discussion Board.

In working with the Leukemia and Lymphoma Society in New York, one of the leading Cancer websites in the world, Dr. Mauro discovered that the Discussion Boards on the website contributed a significant amount to the traffic and interest on the website by its Visitors. LLS.org wanted to know why the Discussion Boards were so popular with Visitors and how insight into its use could be leveraged to create a better website. Hence, the Trigger Resolution Theory™ was conceived.

Dr. Mauro contacted Cirilab Inc., a leader in “thematic extraction” and gave us a challenge: help demonstrate the Trigger Resolution Theory™ using the LLS.org website’s Discussion Board Forums. Cirilab welcomed the opportunity to demonstrate its technology in such a public and important forum, that being Cancer research and patient assistance.

However, before we demonstrate how we assisted Dr. Mauro with his hypothesis, we need to provide a brief overview of our technology, how it works, and why it is relevant to the Trigger Resolution Theory™.

THEMATIC ENTITY EXTRACTION PRODUCES A KNOWLEDGE SIGNATURE

Cirilab’s technology has two components:

* Knowledge Generation Engine™

* Knowledge Interfaces™

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

The Knowledge Generation Engine™ essentially reads a document and generates a Knowledge Signature™ of the document. The Knowledge Signature is the thematic expression of the document. The following table contains a fixed (6-2-2) Knowledge Signature of the US Constitution.

United States Citizens Abridge Vote Senate Votes Vice-president **Congress** Legislation Enforce Exercise Senators Appoint Electors **House** Members Ballot Two-thirds Majority Vice president	Major Theme Minor Theme Sub-Minor Theme Sub-Minor Theme

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

- Duties
- **Representatives**
  - Powers
    - Discharge
    - Written declaration
  - Bill
    - Thirds
    - Reconsider
- **Power**
  - Execution
    - Officer thereof
    - Government
  - Transmits
    - President pro tempore
    - Session
- **President**
  - Declaration
    - Acting president
    - Assembling
  - Transmit
    - Lists
    - Certify

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

Once the Knowledge Signature™ of a document is created there are many benefits that can be derived from it:

* create a Synopsis version of the original document (first major theme paragraph)

* create a Detailed Summary version of the original document (first paragraph for all themes)

* create a Paragraph Detail version (find every paragraph that contains a theme)

* compare a document's Knowledge Signature to other documents (Discovery)

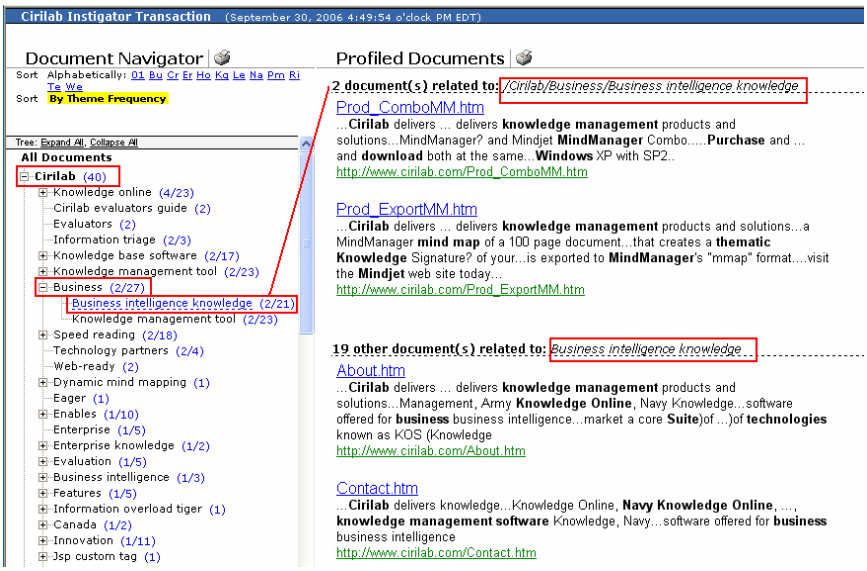
* groups Knowledge Signatures together to create a dynamic thematic taxonomy of a collection (Knowledge Map™)

* generate graphical thematic mind maps of a document or collection of documents

A Knowledge Signature™ is like a thematic digital fingerprint of a document. The closer the thematic digital fingerprints are among a set of documents the more thematically similar they are in content.

A KNOWLEDGE MAP™ FACILITATES COLLECTION NAVIGATION

When you gather together a collection of information to perform research it can often be quite challenging to find similar "thematic structures" across the document set. Cirilab addresses this challenge by aggregating all of the Knowledge Signatures of every document into one amalgamated "thematic taxonomy" called a Knowledge Map. The Knowledge Map of a collection of information allows the researcher to quickly navigate the collection via the themes that are important to them. As they navigate the Knowledge Map hierarchical structure the resulting displayed documents are reduced to only those that contain the themes of interest.



All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

By now you should have a good understanding of the concepts of the following:

* Cirilab's Knowledge Generation Engine™ generates a thematically weighted Knowledge Signature™ of a document

* The Knowledge Signature™ of documents can be compared to each other in order to establish the thematic similarity between them

Now, how can we apply this to the Discussion Boards at LLS?

BE CAREFUL WHAT YOU ASK FOR!

The first principal of the Trigger Resolution Theory™ is that people find solutions in the answers to their question. However, does that necessarily mean that the answers have similar thematic content to the question in order to find a resolution? If the question and the answers have a high degree of thematic similarity, what does it mean? And if they do not, what does that indicate?

To find the answer to this question and help Dr. Mauro further investigate the Trigger Resolution Theory™, we conducted an experiment using an actual Topic Thread from the LLS Discussion Board. A Topic Thread is an entire discussion starting from the question the participant asks followed by the answers other participants post in the chronological order they were posted.

THEMATIC RESONANCE™ WITHIN DISCUSSION BOARDS

An example of Thematic Resonance™ in this context, from our perspective, is the process of taking an initial concept, like the Trigger Question in a Topic Thread and then examining how similar or dissimilar the thematic content is between it and the answers that were provided. We put together a little demonstration of "Thematic Resonance™ to highlight how our core technology works and might be applied to the Trigger Resolution Theory™.

We used the following LLS Topic Thread to conduct our rather unscientific study.

http://ubb-lls.leukemia-lymphoma.org/ubb/Forum1/HTML/000318.html

In this Topic Thread you can clearly see that the initial post is the question (Trigger) and that it is followed by many answers (Resolution). We then separated the Trigger Post from the Resolution Posts into two separate documents. The Trigger Post document only contains the initial question and the Resolution Posts document contains all of the answers in the chronological order they were entered. We also saved the combined Question and Answers in to a third document called Trigger_Resolution. We then generated a Knowledge Signature™ for the Trigger document, one for the Resolution document, and one for the combined Trigger_Resolution document.

The following table compares the Trigger and Resolution Knowledge Signatures only.

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

Trigger K-Sig	Resolution K-Sig
Posting Internet conducting research Postings Past blood tests Atleast According Greatful Gut renching Cancer Shock Reading	Treatment Diagnosis Diseases Cancer Lymphoma Treatments Cells Patients Leukemia Bone marrow Acute Advocacy Treating Advocacy groups Life Friends Dream Illness Plans Health Pray everyday Disease

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

	Progression Agents Opens Treating patients Drug development Health care Blood cell Abnormalities Qualitative abnormalities Features Bone marrow failure Cell Wbcs Lives Increased premium Paying Longer lives Insurance companies Hopefully help

You will of course notice that the Knowledge Signature for the Question is small and the one for the Answers is much larger. In this example we had configured the Knowledge Generation Engine™ to generate a Knowledge Signature™ of 6-2-2 (6 major themes, 2 minor themes, and 2 sub-minor themes) however it was unable to do so for the Question as it only contained a few

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

paragraphs. The Resolution document however had more than sufficient content with which to generate a full Knowledge Signature™.

Now that we have a Knowledge Signature for all three documents (Trigger, Resolution, and the combined Trigger_Resolution) we are in a position where we can compare them to each other to determine the level of Thematic Resonance™ between them. Cirilab's Discovery technology provides a facility to allow you to use a complete document as a query against any of the popular Search Engines or against information that has already been internally indexed by Cirilab's own software. Each time we generate a Knowledge Signature of a document we can then compare newly acquired documents against all of the previously processed ones.

In the following example, I used the original Trigger file as a Cirilab Discovery query to see which Knowledge Signature™ profiles would match with the Trigger's Knowledge Signature and to what percentage the similarity would be.

In the above figure you see that the **File: Trigger.txt,** which is the original Trigger content, was used as the Cirilab Discover input query. This is also the same content that was used to create the LLS/Trigger Profile. Note that the original document used for the query and the LLS/Trigger profile is considered 100% similar because the Knowledge Signatures™ are in fact identical. They should be identical because the same text was used to create both.

Next, you see the Trigger.txt file being compared to a Knowledge Signature Profile that contains both the Trigger text and the Resolution documents (LLS/Trigger_Resolution_Files document). The LLS/Trigger_Resolution_Files Profile is constructed from the Knowledge Signature of the two individual files into one Profile Taxonomy and is said to be 29% thematically similar in nature to the original Trigger.txt file. One would expect some degree of similarity because the original Trigger file one of the two files used to build the combined LLS/Trigger_Resolution_Files Knowledge Signature profile. In this case, given that the Resolution (answers) portion of that profile is so much larger than the Trigger portion (question), it stands to reason that the Resolution Knowledge Signature has a larger weighting and the Trigger Knowledge Signature a lesser weighting in terms of comparing it to the overall LLS/Trigger_Resolution_Files Profile signature.

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

The LLS/Trigger_Resolution Knowledge Signature Profile is contracted from one single file that contains both the Trigger and Resolution in the chronological order that they were entered within the Topic Thread. This is how the Topic Thread postings are actually displayed on the LLS.ORG website. When the Knowledge Signature™ is generated for this single file, the initial Trigger question post has an even lesser weighting than it does when it is treated as a single file within a Knowledge Signature Profile. Hence, the lower Thematic Resonance™ when it is compared to the LLS/Trigger_Resolution Knowledge Signature.

Note: We point out the above two examples because it has a significant impact on the decision to generate Knowledge Signatures by separating the Trigger from the Resolutions within a Topic Thread into individual files within a Profile for analysis or by keeping then within one Topic Thread file. By separating the Trigger and Resolutions into two separate files and then generating one single Knowledge Signature Profile a more thematically weighted profile is derived. This approach will allow for a better application of the Knowledge Signature Profile later in helping Visitors find information on the website.

Technically, if an automated process could be created to extract and separate the Trigger and Resolution posts from each topic thread, one could, through a Find Duplicates approach, generate the "percentage of similarity" figures for each topic thread. This would answer the question of "how thematically similar is the Resolution to the Trigger across an entire Discussion Board Forum?" Such an approach would allow new participants to quickly find Topic Threads that already have tried to answer a question thematically similar to theirs.

CIRILAB'S TECHNOLOGY IN ACTION WITH LLS DISCUSSION BOARDS

As a first pass at exploring the LLS.ORG website Discussion Board, we have created a Knowledge Map of each Forum (32 in total). The challenge is to determine how we can best leverage Cirilab's technology to prove your Discussion Board Trigger and Resolution Theory and leverage the insight to create a more effective Visitor experience.

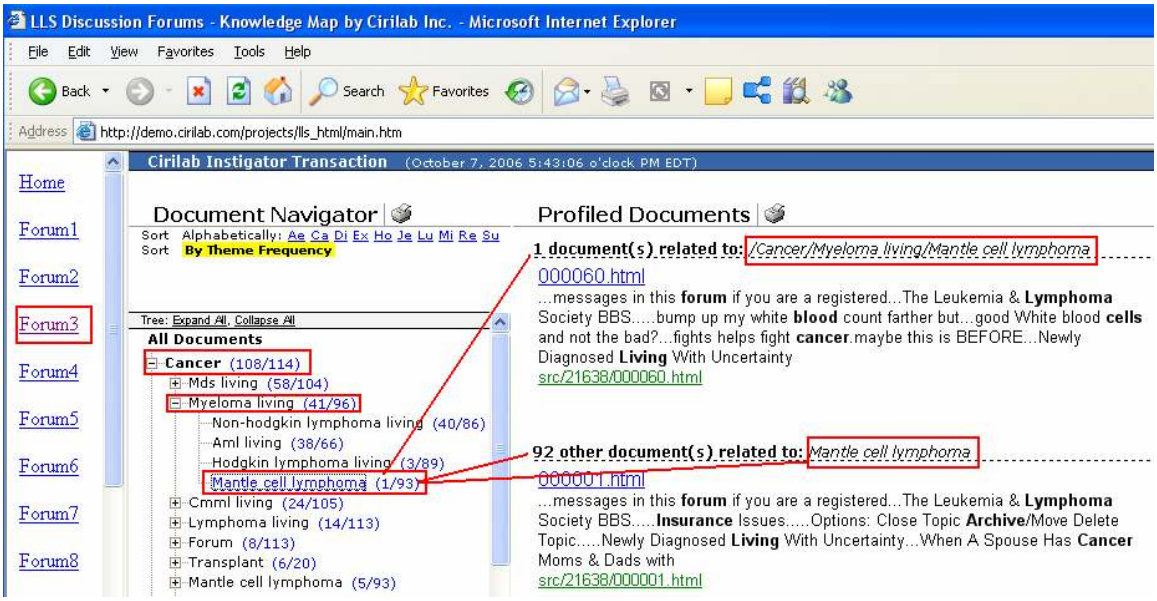
http://demo.cirilab.com/projects/lls_html/main.htm

The Knowledge Map for each Discussion Board Forum allows one to navigate the Forum's Topic Threads based on thematic content within them. For example, within a single Forum, one could locate all of the Topic Threads that have similar themes within them. If a Forum as 2,000 Topic Threads this is a very efficient way of finding related content for easier comparison and analysis by a researcher. These Knowledge Maps are based on the standard chronological posting of the Topic Thread question followed by answers in the order in which they were entered.

For example, in Forum3, there are 115 Topic Threads at the time of analysis. The theme "Cancer" is the Main Theme within 108 Topic Threads whereas "Cancer" is a Major or Minor theme across 114 of the 115 total Topic Threads. When we drill down through the Thematic Taxonomy (Document Navigator) of the collection, by clicking on the + (Open) symbol to the left of "Cancer", we see a list of themes within the context of "Cancer". "Myeloma living" is a Major theme in 41 Topic Threads within the context of "Cancer". If we continue with this exercise and click on the + (Open) symbol to the left of "Myeloma living" and then select "Mantel cell lymphoma" we see that there is one document that has this as its Major theme and 91 others that have it as a Minor there. As a research, you have now been presented with every Topic Thread that has "Mantel cell lymphoma" as a theme within the contest of "Myeloma living" and

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

subsequently within the context of “Cancer”, as well as every Topic Thread that has “Mantel cell lymphoma” as a Minor theme on its own.



The Knowledge Map of a Forum will allow researchers and analyst to explore the exchanges taking place between participants based on the “thematic content”. It will also allow them to quickly locate all of the discussion occurring around a particular theme and identify who the common participants are.

TOPIC THREADS ARE NOT LINEAR DISCUSSIONS

As we began to explore the Knowledge Maps of various Forums and review individual Topic Threads for comparison to what we were discovering in out software output, we discovered some very interesting trends or idiosyncrasies of how participants communicate within a Topic Thread. By analyzing various Topic Threads we found that in some cases entirely new discussions start up between the Resolution participants themselves while the Trigger participant is long gone and no longer participating in the discussion. Such events, such as was the case with the example Topic Thread selected for this case study (Forum1/000318.htm), can have a significant weighting affect on the thematic Knowledge Signature™ that is created for the Resolution Posts. It also highlights the fact that the Trigger question themes may in fact not be reflected in the Resolution Posts answers to the degree one would think might be the case (I have an answer but it just might not be the one you are looking for).

Having observed and stated the above, it does not change the accuracy and value of the thematic Knowledge Signature of a Topic Thread. In fact, I believe it probably enhances it because we can deliver more relevant content to Discussion Board participants as the Topic Thread’s thematic content changes over time with new Resolution posts.

Given that Topic Threads are not always linear in nature, when taking into consideration with respect to the Trigger and Resolution Theory™ and how Cirilab’s technology can demonstrate it’s applicability there are a couple of observations we can make at this time. The Knowledge Signature is the thematic representation of a Topic Thread. The Topic Thread is the Trigger Post as well as all of the Resolution Posts. The beginning of a document has more thematic weighting

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

in a Knowledge Signature and the Trigger Post is always at the beginning, so by default it's content has a greater import. This theory speaks to the "newspaper article" approach to writing and how the "important stuff" is always considered to be at the beginning of the article. Cirilab's Knowledge Generation Engine™ currently works on the "Newspaper article" approach and gives higher thematic weighting to initial content in a document.

The Knowledge Signature will represent the thematically weighted content of the Topic Thread and may represent more of the Resolution portion of the Topic Thread than the Trigger given the fact that there may be many answer responses to a single trigger question (proportional thematic weighting).

WHERE IS THE REAL VALUE WITHIN RESOLUTION POSTS?

When one compares different document formats, say a Thesis, Newspaper article, Report, Treatise, Contract, or any other type of document that one can think of, one can argue that the "real important information" is not always at the beginning of the document but rather somewhere else like perhaps at the end! With respect to a Topic Thread, one can imagine that the value of the Resolution content portion becomes more valuable as the discussion is continued and added to by more participants.

The logic of this way of thinking is that existing participants have had several opportunities to refine their answer posts over time and the longer the Topic Thread exists the more new participants get to bring additional insight and value to the discussion. The other aspect that is important according to Dr. Mauro is of the contribution of "distilled knowledge" that participants have gained through their own experience and research over time. The Trigger post participant gains significantly from this "distilled knowledge" because they are the benefactors of rapid insight that the other participants bring to the discussion, a concept which is at the heart of his Trigger Resolution Theory™.

If one accepts this view then it could be argued that the major "resolution value" within a Topic Thread would be closer to the latter section of the Topic Thread once many participants have added their "distilled knowledge" to it and had a chance to further backup their statements / findings with additional "response posts" to other participants re-entry questions. So what if we reversed the chronological order of the Resolution Posts and created a new Knowledge Signature from it? What would the affect be on the Knowledge Signature when re-compared to the original Trigger post question?

INVERSE RESOLUTION ORDER ANALYSIS

So we did just that! We have found with this one test below something very interesting. Cirilab's software currently establishes a higher weighting to early content within a document and less so to the latter sections. In the example below, we took the Resolution document (that only contains Resolution answers to the Trigger question within a Topic Thread) and reversed the chronological order within which the posts were originally made (last becomes first and first becomes last). If in fact we are correct that there is more Resolution value in the latter portion of the Resolution posts then one would ascertain that the Knowledge Signature of the Inverse Resolution Order document should be closer to the original Trigger Post (a higher Thematic Resonance percentage). At least that is the thinking.

Here are the Knowledge Signatures of the sample documents. The first Knowledge Signature is of the Trigger Post by itself. The second Knowledge Signature is of only the

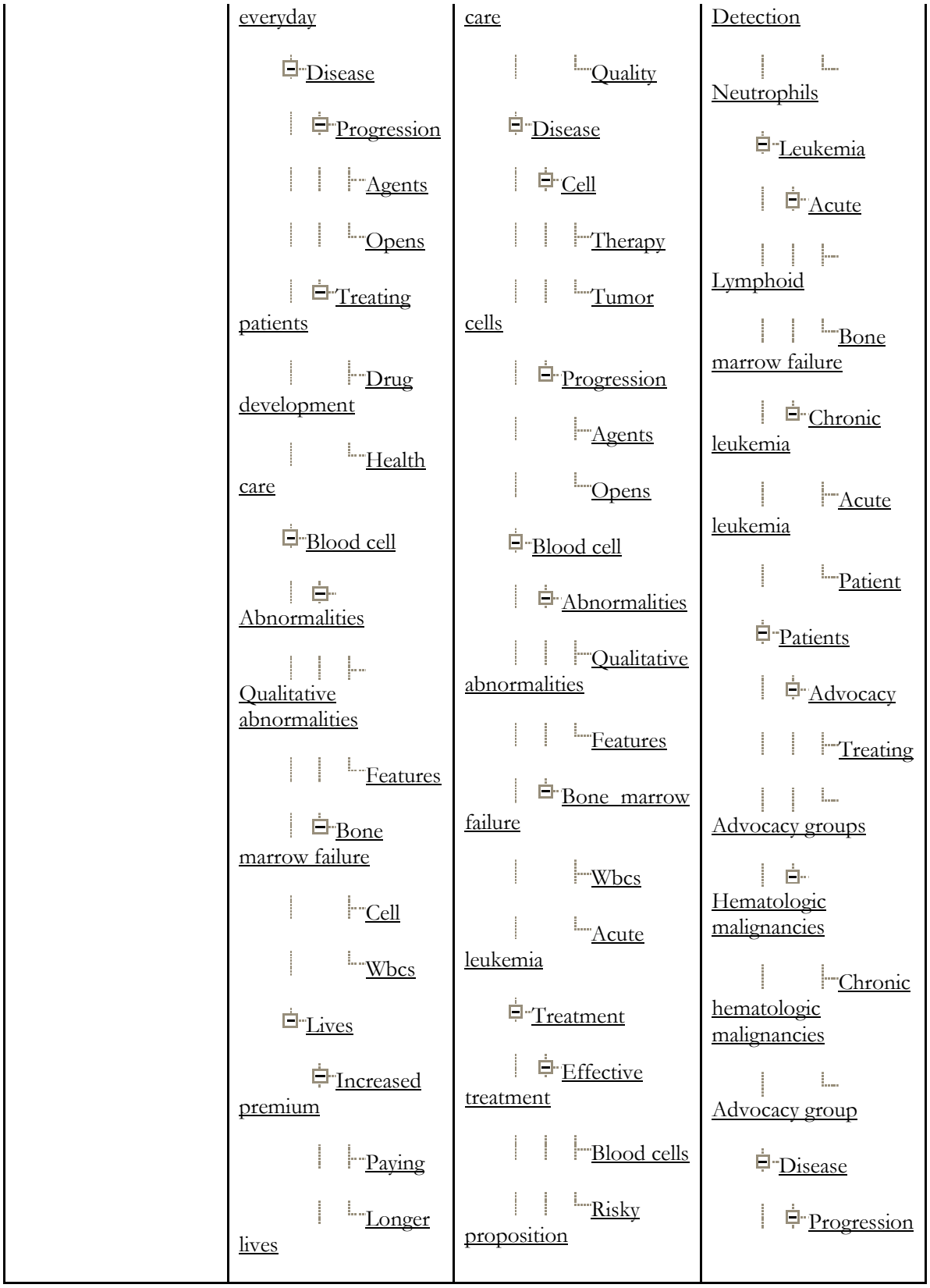
All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

Resolution Posts in their original chronological order. The third is a Knowledge Signature is of the Resolution Posts that have been reversed chronologically in order of entry. And finally the fourth is of the original Topic Thread Trigger and Resolution Posts as entered in chronological order.

From earlier discussion, please remember that Cirilab's Knowledge Generation Engine gives a preferential thematic weighting to the earlier section of the document based on the concept that the "important stuff" usually comes earlier in the document, a fact which may not be the case here. For example, if we split a document into a Knowledge Signature of 6-2-2 that means that a document is first divided into 6 Major sections and that we extract the major Themes from these six sections with the first section theme being given the most weight. This fact will be important later on when we reverse the order of the Resolution posts. We then repeat the process within each Major theme "cube" of the document to derive two Minor theme "cubes", and then we do that again within each of these to arrive at two Sub-Minor theme "cubes". The result is a 6-2-2 Knowledge Signature. When the order of the information in the document is reversed it has a direct affect on the Knowledge Signature.

Trigger	Resolution	Resolution_Revers_ Responses	Trigger and Resolution
Posting Internet conducting research Postings Past blood tests Atleast According Greatful Gut renching Cancer Shock Reading	Patients Leukemia Bone marrow Acute Advocacy Treating Advocacy groups Life Friends Dream Illness Plans Health Pray	Lymphoma Leukemia Diagnosis Cancer Cells Bone marrow Chemo Patients Marker Treatments Cd38 marker Progressing Health	Treatment Diagnosis Diseases Cancer Lymphoma Treatments Cells Blood Blood cell Bone marrow Abnormalities Hematology

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006



All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

	Insurance companies Hopefully help	Chemo treatment Doctors Acute Agent orange Cycle Money Guidelines Posting Agent orange exposure Indy	Agents Opens Treating patients Drug development Health care Posting Syndrome Rare Distinctive skeletal problems Cycle Money Guidelines

What we discovered from analyzing this one Topic Thread the first time is as follows:

- the original Trigger Post person stopped participating within the first 25% of the message posts

- new discussions were created and evolved after the Trigger originator was no longer involved in the discussion

- the Resolution posts were not necessarily thematically similar to the original Trigger post (which is to be expected)

We then reversed the order of the Resolution Posts within a new file (Resolution_Revers_Responces) and added it to the collection. We then reprocessed the collection of information and made the following observation:

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

* When the Resolution Posts are reordered in reverse order of posting date and then reprocessed for a new thematic Knowledge Signature, it turns out that based on the way our software works that the reversed order of the Resolution Post had a greater thematic relevance to the original Trigger Post by more than double when compared to the original Resolution Post chronological order.

In the above figure, the original Trigger Post Knowledge Signature is submitted as the query against the following Knowledge Map Profiles:

* Trigger (original Trigger post question)

* Trigger and Resolution as separate files within a single Knowledge Signature Profile

* Trigger Resolution (original Topic Thread in original chronological order in one file)

* Resolution_Revers_Responces (reverse ordered Resolution portion of the Topic Thread Resolution Posts)

* Resolution (original Topic Thread Resolution Posts only in chronological order)

You can observe how our software is stating that the Knowledge Signature of the reverse order of the Resolution Posts has a higher thematic relevancy raking to the original Trigger Post question than the original chronological order of the Resolution Posts.

What does this tell us? In our view is reflects that fact that the longer a Discussion Board thread is extended and added to that the most valuable section of the content is near latter part.

Why is this? We believe it is because a greater number of people have had an opportunity to add more valuable insight into the discussion over a longer period of time.

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

Obviously this case study is merely an "unscientific observational" one at this point with out substantive mathematical statistic to backup our findings. However, we believe that the findings do give cause for a much greater study into the application of our technology in the area of Trigger Resolution Theory™ as proposed by Dr. Mauro.

We do believe however that demonstrating that the latter parts of a Discussion Board Topic Thread in this one averaged example do indeed demonstrate that there is a "Thematic Resonance™" between the Trigger and the Resolutions within a Topic Thread. In our view, the more important question is the following one:

How does an organization leverage their Discussion Board content in order to gain insight into what their Customers / Clients are thinking and leverage that within the context of their website's content and Visitor experience? Answering this question will provide an organization with a significant competitive advantage and increase their ability to provide a more valuable service to their clients (website visitor experience).

So how do we leverage the Thematic Resonance within a Trigger Resolution based Topic Thread? Keep reading!

LEVERAGING DISCUSSION BOARD TOPIC THREAD KNOWLEDGE SIGNATURES

What if we could take the initial Trigger question that a Forum participant initially posts, and before any other participants even have a chance to provide a Resolution answer, deliver to them highly similar thematic Topic Threads for them to review?

What is we could take the initial Trigger question that a Forum participant initially posts, and before any other participants even have a chance to provide a Resolution answer, direct them to other Discussion Board participants whose previous posts have a high degree of "Thematic Resonance™" with their initial question so that the participant asking the question could get immediate access to the information and possibly even the participants?

What if we could thematically refine the website content presented to Discussion Board participants as the Topic Thread content evolves over time?

What if we could help the participant find content on other "trusted" websites based on the thematic content of their question or of the entire Topic Thread?

What if we could help the Discussion Board participant sooner by helping them find the right information and the right people the first time they visit the website?

What if…..

THEMATIC BASED DISCOVERY PROVIDES BETTER RESULTS

After conducting the comparison of Knowledge Signatures of Trigger and Resolutions we decided to look into how we could leverage their value within an existing website to improve the Visitor experience. We took the Trigger Post and created a query from it and submitted it as a "Cirilab compound query" to MSN, Google, Yahoo and Gigablast. Here are the results:

http://demo.cirilab.com/projects/LLS_Google_Disco/index.htm

http://demo.cirilab.com/projects/LLS_MSN_Disco/index.htm

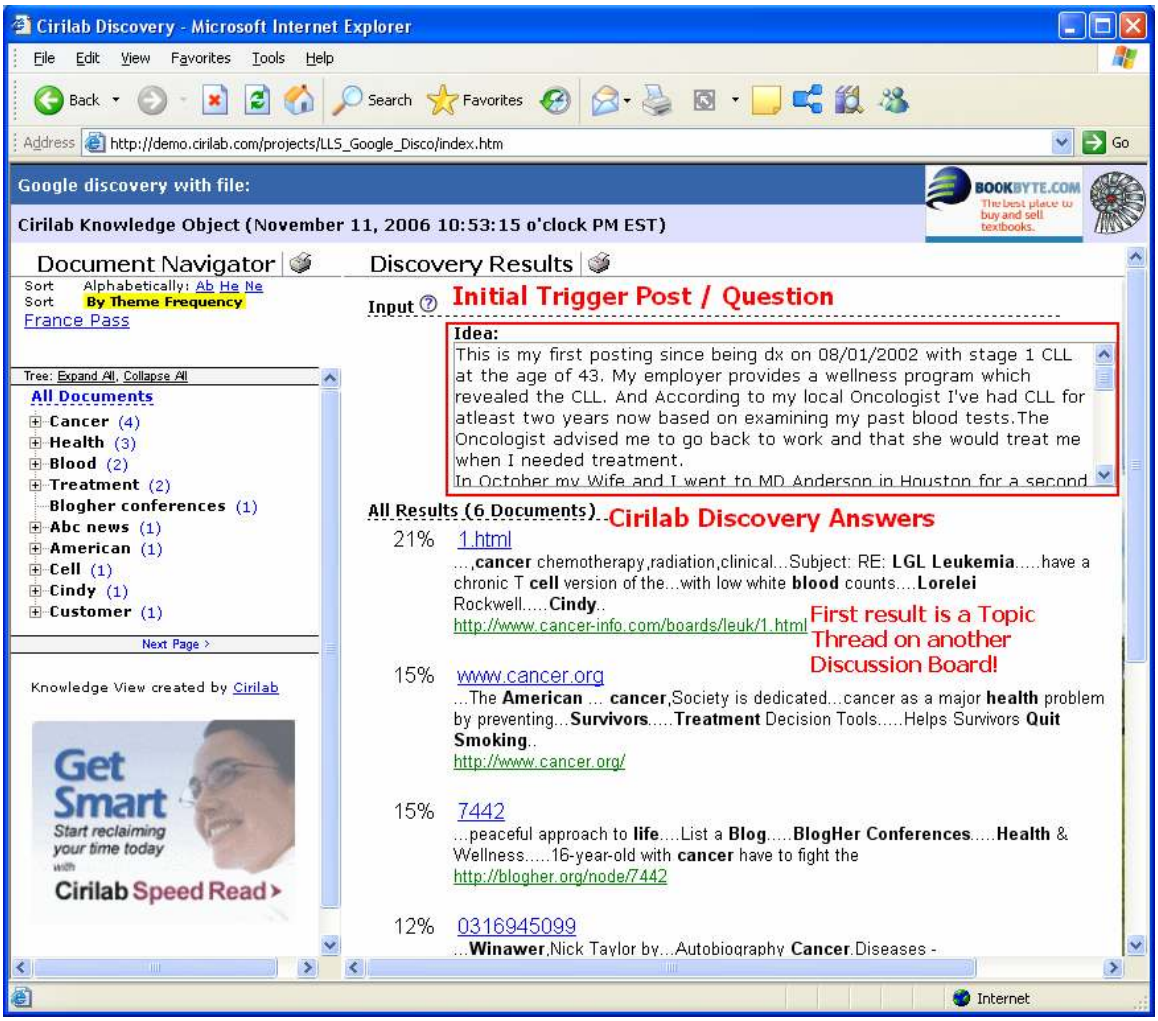
All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

http://demo.cirilab.com/projects/LLS_Yahoo_Disco/index.htm

http://demo.cirilab.com/projects/LLS_Gigablast_Disco/index.htm

Let's review the Google based Cirilab Discovery first. When you click on the above LLS_Google_Disco URL you will be presented with a Cirilab Discovery Knowledge Map. The Cirilab Discovery Knowledge Map is created from the results of a multiple Google search that would not be possible to enter on a Google search page. Over 24 queries are generated in this example and 240 URL results are returned for analysis. A Knowledge Signature is produced for each of the returning results until the highest Thematic Resonance™ is found among them and up to 10 are selected. From these top 10 thematically similar results a Knowledge Map is created. The Discovery Knowledge Map allows the Visitor to explore the results based on a range of themes that were contained in the original Trigger question and not just one Key Word.

The simple answer to the above process is that the Visitor is delivered results that are more relevant to what they are expressing an interest in, and these results can be delivered sooner and from a divers range of trusted content suppliers or restricted to your own website.



All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

The Cirilab Discovery feature here is meant to demonstrate that content with a high thematic content similarity can be found and provided to the Visitor. Obviously we would not want the Visitor to have to take any action to create these Discovery Knowledge Maps. So, working in the background a Knowledge Signature of the Trigger question could be dynamically created and a query could be generated and the results returned to the Visitor. They could also be provided with an advanced search option button that would allow them to initiate the process.

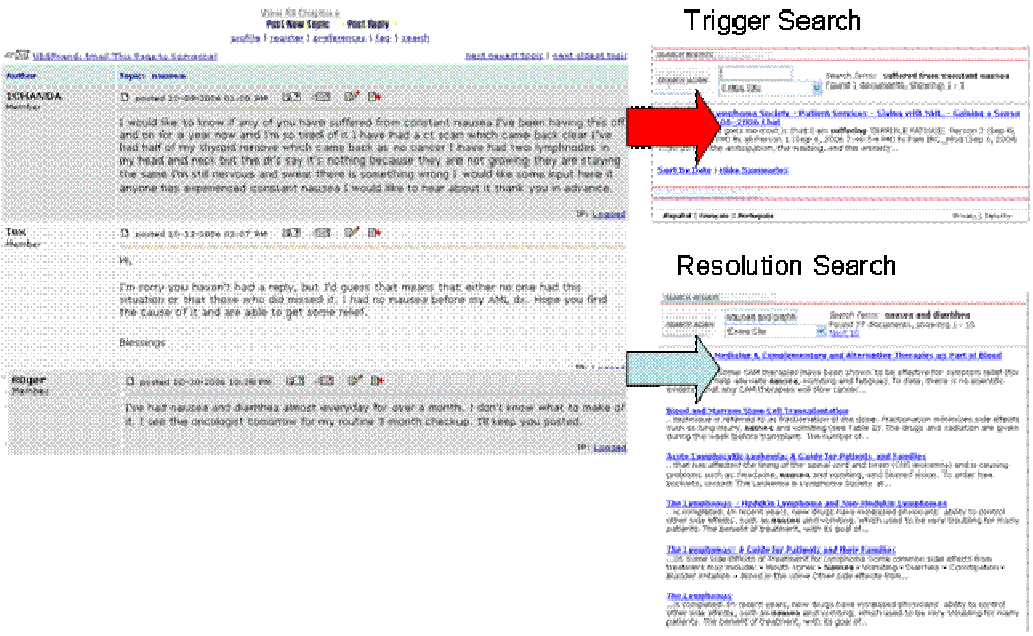
If you look down the Profiled Documents within the LLS_Google_Disco URL results you will find one that is at 10% Thematic Resonance™ with the original Trigger post. The document is 000318.htm. If you click on the green URL link you will find that it is indeed the Topic Thread from the original LLS Discussion Board Forum in question. More important to observe however is that the Cirilab Knowledge Signature Discovery process located four highly relevant links that are associated with the same thematic content as the initial Trigger post. And that helps people find valuable information faster and presents in a way that allows them to explore it based on their interests.

The main themes in the above example that we want you to take away from the demonstration are that highly relevant content, posts, and participant knowledge can be delivered to Discussion Board participants and it can be done in an automated and behind the scenes manner. The result is that valuable and relevant information and knowledgeable people can be guided to the Visitor within minutes of their posting a question.

Benefit 1: Deliver website content to the Discussion Board participant instead of them having to search for it.

One of the benefits of focusing on Discussion Boards as the focal point of a website's activity is that we can deliver highly relevant content to Topic Thread participants using Knowledge Signature comparison of a Topic Thread and / or Website Content.

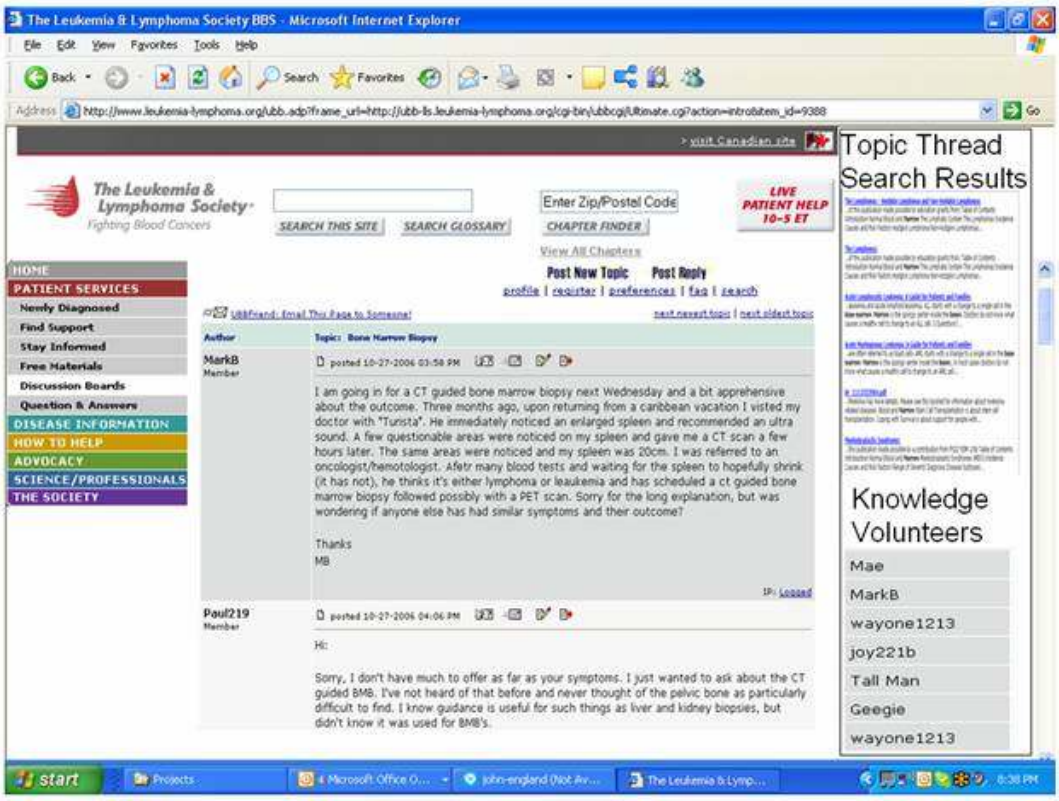
Search Results Driven by Thematic Content of Trigger and Resolution



All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

Benefit 2: Drive Discussion Board participants to Knowledge Experts.

In this scenario we would create a Knowledge Signature for all of the Discussion Board participants based on their unique handle and the comments they have provided. This is actually what Knowledge Maps are all about – help people find experts based on the questions you have! When a Topic Thread starts to develop we would create a Knowledge Signature for it and compare it to all of the Knowledge Signatures of all of the Discussion Board participants. We could then return the Top 5 that are most similar to the Topic Thread discussion at hand. This would help people get in contact with other people that have a high degree of similarity to their question or to the Topic Thread discussion.



GOING FORWARD

Here are some thoughts for going forward:

Knowledge Map Profile Comparison: We can compare Knowledge Map Profiles with each other. This will tell us which Discussion Board Forum Profiles are most similar. Perhaps the participant is in the wrong Forum for the question they are asking and this approach could direct them to a more appropriate Forum for their question.

Split Trigger and Resolution Topic Thread Sections and create Profiles of each: In this approach we could manually separate the Trigger Post from the Resolution Posts and create a Knowledge Signature of each. We would then compare the Trigger Post Profile with the

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

Resolution Post Profile in order to determine how thematically similar the "answers" are to the "question". People ask questions and those questions contain a certain thematic content. However, the answers they get back may be entirely different. This process will confirm the Thematic Resonance™ of Trigger Questions and Resolution Answers for future analysis and evaluation.

Group all Trigger Posts and all Resolution Answers from a Topic Thread into two separate Profiles: Compare them for Thematic Resonance™. This process will tell us if Trigger Questions across the Topic Thread are indeed similar to the Resolution Answers in those other Topic Threads.

Create a Knowledge Signature for every document on the website: So that it can be compared with inbound Trigger questions and Topic Thread Knowledge Signatures and subsequently deliver highly similar content to the Topic Thread participants.

Create a Knowledge Signature Profile for each Discussion Board participant: So that their "distilled knowledge" can be matched to individual Trigger questions and entire Topic Threads. **This will allow us to bring people together that have common interests.**

SUMMARY

We believe that this initial un-scientific case study demonstrates the following:

* that the concept of Trigger Resolution Theory™ within Discussion Boards for helping participants quickly locate highly valuable content is in fact demonstrable and evident by their popularity within websites

* that the longer a Topic Thread continues the more the Resolution answers contain content similar to the initial question post

* that the Trigger Knowledge Signature alone can be leveraged to locate website content and Discussion Board participants with highly relevant and valuable "distilled knowledge", and that the same is true for the entire Topic Thread

* that highly relevant information can be delivered to the Visitor in real time when they first visit the website in order to enhance their initial experience, but more importantly, to help them find valuable information to help them in their quest

All of these benefits can be directly attributed back to the ability to create a Knowledge Signature of the initial Topic Thread question as well as the combined answers. The Trigger Resolution Theory™ hypothesis put forward by Dr. Mauro is supported by the fact that initial website Visitors seek answers mainly through the Discussion Boards of major websites and through the Social Network and Distilled Knowledge of the Participants and subsequently achieve high value from the interchange that takes place, and more often than not find the answers to their questions.

What we have tried to accomplish in this report is demonstrate the concept of Thematic Resonance™ within a Topic Thread of a Discussion Board Forum in order to provide some validation to the Trigger Resolution Theory™. Perhaps the most revealing aspect of this short

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006

study is the high degree of value of the Resolution posts as the Topic Thread gets longer and more participants get involved. More importantly in our view however is the ability that Knowledge Signatures provide to drive information and experts to website Visitors based on the Thematic nature of their initial question and subsequent answers.

Arnold Villeneuve

Vice President

www.cirilab.com

613-833-0984

Arnold.Villeneuve@cirilab.com

All Right Reserved. This document is Copyrighted. No replication in any form is permitted. Cirilab Inc. November 2006