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**Title:** Bluefluence

**Subtitle:** AIM Technical Support's Social Business Implementation

**Highlights**

- Bluefluence is the ability of an IBMer to exert influence in the technical and social business space, with focus on client technical support, to enable self-help, lower complaints and reduce resolution time or prevent additional service requests.
- The goal of Bluefluence is to provide insight into how AIM Technical Support is capable of being influential and effective with respect to creating content that is relevant and promotable to its clients.
- Bluefluence is a normalized summation of four weighted categories of metrics, each comprising ¼ of the total Bluefluence score.
- The AIM team has devised methods for you to use in measuring the impact of your Bluefluence, including ways to understand its return on investment (ROI).

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**Bluefluence: Maintaining IBM's technical support presence through social media**

The world became smaller with the Internet and has become even smaller still with the introduction of social media. IBM must embrace these changes and ensure that it is leading this wave to ensure its clients continue to view it as an organization composed of leaders and visionaries. In today's world, Clients do not want to wait for solutions, they are looking for immediate and fast responses.

The line from the movie "Field of Dreams" that stated, "build it and they will come" no longer applies. IBM needs to adapt to the changing landscape of its clients' needs. The increased prevalence of smart phones and social applications required the creation of more meaningful forms of content, tailored for mobile and social platforms. The company must move toward recognizing people who are sharing their influence and expertise in a way that helps IBM meet its clients' expectations. In order to achieve these goals, IBM's 2015 [corporate roadmap](#) encourages IBMers to deepen their social footprints.

- **Bluefluence** is the ability of an IBMer to exert influence in the technical and social business space, with particular focus on client technical support.

Bluefluence involves creating and promoting content that is relevant to external clients to enable self-help, avoid critical situations and complaints and reduce time to resolve or prevent service requests. Bluefluence is also about transforming an organization into a social business, thereby enabling collaboration and operational efficiency. Bluefluence views contribution in a positive light and should not be used as a means for negative feedback.

Historically, software technical support has been a reactive business. When clients called in with a problem IBM reacted to resolve the problem. But with all the complexities of currently offered solutions, it can no longer afford to remain reactive. IBM must become proactive, and to a certain extent, already has.

There are many ways to prevent software technical support issues from happening. Sharing knowledge through content and expanding the visibility and value of that knowledge is one. This document will focus on content promotion in the social business space. Technical content should be created and promoted, but not consistently across all areas of the supported business. This is not to imply that other aspects of technical support are not proactive. Other support activities include engaging with development to improve serviceability and diagnostic tools for IBM offerings, and driving defect reporting and resolution for inclusion into future releases.

Enhancements to tools used to service and diagnose IBM products and components and create and maintain technical content have made IBMers more productive. As IBMers learn which content is relevant to clients, they can continue to create similar content, as well as promote current content.

If you think about it, any time a client needs to open a request for service, IBM has been presented with an opportunity to extend its influence to prevent similar issues from occurring. In the content management space, it has the opportunity to prevent this or at least reduce the time it takes to resolve a service request, provided the relevant content exists.

The client base is changing and the way that they want support is changing. For example, phones today can do things that IBM does not currently support in its infrastructure. In 1994 IBM acquired Lotus®. That began its transition from Office Vision VM to Lotus Notes® and Sametime®. Some people were resistant to the change, but in the end it turned out to be for the better and made IBM more efficient, transforming the way IBMers do their jobs on a daily basis. IBM needs to continue this evolution and become an essential part of clients' solutions because their perceptions determine whether or not IBM gets their business. Bluefluence is needed so that IBM can continue distinguishing itself as the premiere global software client technical support company.

### **From promotion to prevention: Why writing content is not enough**

You may be wondering, how did AIM Technical Support decide to venture into social media? To answer that requires a bit of history. The Knowledge Engineering (KE) team was created to assist the support organization with the management of its technical content. AIM Technical Support did not create all the content, because in the majority of cases, the support organization was closest to the technical content and the resolutions arose from solving client issues. Instead, AIM Technical Support acted as “shepherds”, and moved the content through the system so that it was published on the web and made available to clients.

In the spring of 2009, Google indexing issues resulted in a decline in technical support content accesses on IBM.com. The AIM Knowledge Engineers rallied to the cause and drove a content promotion strategy that made a foray into the previously untapped social media arena.

The Knowledge Engineers had a hunch which proved to be true. Using social media channels to promote content would enable clients arriving at said content through Google to find it easier and faster. These engineers understood that social media allows IBMers to be more active in taking content to clients — as opposed to the passive method of publishing first and hoping clients could find it when they needed it.

The Knowledge Engineers' initial effort saw the creation of AIM accounts on three well-known social media channels: Twitter, developerWorks, and Facebook. The purpose of these social channels was not to offer support, but to promote currently existing, published technical content, as well as the use and value of available “electronic support”, also known as eSupport, tools to clients. There is an important distinction to make. This is **not** the same as the AIM technical support infrastructure. IBM has a highly secure problem management system which houses private customer data. By the very nature of being social, it's public knowledge, so the AIM team attempts to provide mechanisms to help clients help themselves before they have to open a service request. This is meant to complement an already implemented technical support infrastructure. There are no plans to provide support from Twitter or Facebook.

The goal of Bluefluence is to provide insight into how AIM Technical Support is capable of being influential and effective with respect to creating content that is relevant and promotable to its clients. With Bluefluence as the overall concept and strategy in the social support content promotion space, AIM Technical Support uses it to apply, measure and drive actions that will ultimately show clients that it is essential to their business.

### Putting ideas into practice: How to measure your Bluefluence score

How can you and your business unit evaluate your degree of Bluefluence compliance, or Bluefluence scores? To begin with, Bluefluence is a normalized summation of four weighted categories of metrics, each comprising ¼ of your total Bluefluence score. AIM Technical Support originally developed this using a DB2® database, Cognos® Business Framework and Cognos Viewer and Report Studio. The formula is as follows:

$$\begin{aligned} \text{Bluefluence} = & \frac{1}{4} (\text{Pipeline Efficiency}) + \\ & \frac{1}{4} (\text{Quality}) + \\ & \frac{1}{4} (\text{Relevancy}) + \\ & \frac{1}{4} (\text{Promotion}) \end{aligned}$$

#### Pipeline Efficiency

Pipeline Efficiency refers to how quickly your contributions are moving through the creation and publishing system. It is based on the number of new pieces of content and the time it takes to publish them, as well as the number of pieces of republished or modified content, and the time it takes to publish them. The goal for first published and republished content is to create and maintain it in a timely manner. You will get credit for having published it, but that credit lessens over time.

$$\text{Pipeline Efficiency} = 2 (\text{First Publish Score}) + \text{Republish Score}$$

where

*First Publish Score = # First Publishes + ( (Goal for FP – Average Time to Publish) / Goal for FP ) \* Average Number of First Publishes for the division)*

and

*Republish Score = # Republishes + ( (Goal for RP – Average Time to republish) / Goal for RP ) \* Average Number of republishes for the division*

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The first time content is published it is twice as important as when it is republished. Placing this value encourages the continual pipeline for new content.

### **Quality**

“Your work is your signature, sign it with excellence.” — Charles F. Nash, Sr

Each piece of AIM’s technical content provides the ability for client to rate whether or not it was useful to them in achieving their goal, and allows them to provide comments or direct feedback. This is called Document Level Feedback (DLF). You should capture the percentage of times that clients answer yes to the Goal Achievement question for rating. This is strictly related to the piece of content itself and is not a client satisfaction score. IBM has other means for determining overall client satisfaction. DLFs are submitted for individual documents and must be collected and analyzed, which allows the determination of quality in the following manner:

*Quality = ¼ (Sum of owned documents \* (Goal Achievement<sup>3</sup>)) +  
¾ (Sum of originated documents \* (Goal Achievement<sup>3</sup>))*

This can be normalized in two ways. First, Goal Achievement is three times more important than just the number of submissions. Under this normalization, someone whose goal achievements were 100% for six submissions would rank higher than someone whose 50 submissions were 50%. Secondly, normalize for owner and originator factors of ¼ and ¾ , respectively. The idea behind owner and originator is to prevent skew. For example, if the author of popular and highly rated content retires or changes jobs, then the content ownership is reassigned. The new owner may have considerably less experience. Therefore, that ownership was worth ¼ of the score because as the owner, you are updating and maintaining the content. However, if you originated the content, then you get ¾ of the score. If you originated and maintained ownership of a piece of content, you would get the complete score.

### **Relevancy**

Relevancy refers to whether or not content is useful to clients. Does it address the needs or issues they are experiencing? The AIM team specifically wanted a way to encourage people to create content with the client in mind. AIM defines relevancy based on the number of service requests that reference a particular piece of content, and the total web accesses for that content.

Owner and originator factors a content value factor. The content value factor is based on content type. For example, a must gather document, which provides the checklist of information that **must** be gathered in order to diagnose and resolve a service request, typically gets a lot more accesses and is referenced in many service requests. Another piece of content, such as a trouble shooting technote, may or may not have the same level of activity as a must gather. This is accounted for with the following formula:

*Relevancy = PMR Reference Score + Access Score*

where

*PMR Reference Score = (1/4 (Sum owned content referenced in PMRs) \*  
content value factor ) +  
(3/4 (Sum originated content referenced in PMRs) \*  
content value factor )*

and

*Access Score = (1/4 (Sum owned content accesses) \* content value factor) +  
(3/4 (Sum originated content accesses) \* content value factor)*

### **Promotion**

How often has your content been tweeted and retweeted? This means it is not only important to create content, it is important to create content that is promotable and relevant. Since you know who the document owner and originators are, you can if the document that has been retweeted. Again, the below formula normalizes for owner and originator factors of 1/4 and 3/4, respectively.

*Promotion = 1/4 (Sum owned content tweeted) + 3/4 (Sum originated content tweeted)*

Right now this just includes content posted on Twitter, and the goal is to incorporate promotional data from additional channels you iterate and evolve the measurement.

### **Real-world support results**

The AIM team has devised methods for you to use in measuring the impact of your Bluefluence, including ways to understand its return on investment (ROI). Understanding this involves going back to the main purpose of creating and promoting content — that is to avoid critical situations, service request resolution time, or prevent new request entirely.

### **Service request facilitation**

To analyze the impact of content for reducing time to resolution and hours per problem, the AIM team took a random sampling of about 20,000 service requests (SRs) that were opened and closed between January 1, 2012 and May 31, 2012. The team looked at the overall hours per problem (HPP) and time to resolution (TTR) of the sample set. Then AIM broke down the SRs into a few more categories based on the types of content that were referenced in them.

	All SRs		Must gathers		All other content references		No references non-defects		No references and defects	
Closed month	Average HPP	Average TTR	Average HPP	Average TTR	Average HPP	Average TTR	Average HPP	Average TTR	Average HPP	Average TTR
Jan-12	4.7	6	7.0	9	6.0	7	5.5	4	11.3	8
Feb-12	5.5	10	7.6	14	7.5	11	9.6	4	14.9	6
Mar-12	7.0	15	9.3	17	9.4	16	13.7	6	21.4	8
Apr-12	8.6	17	13.3	22	10.9	17	16.6	7	27.4	10
May-12	8.8	19	11.4	26	10.7	21	16.3	9	36.6	9
Total average of sampling	6.9	13	9.7	18	8.9	14	12.3	6	22.3	8

All PMRs (problem management reports) include PMRs with no HPP, which are typically opened by dial home functions to request updates, thus the overall lowest HPP. Must gathers are used to diagnose the problem in the service requests and one or more must gathers may be referenced in a given SR. Especially if the problem is complex, then you will see that the HPP and TTR for these SRs are typically higher than the overall SR HPP and TTR. All other content references refers to any piece of content that is not a must gather but is reference in the SR. It can include but is not limited to, technotes, flashes and alerts. The Average HPP and TTR in these are lower than the must gathers. For SRs that reference a defect number but are not flagged as a defect themselves, the HPP increases but the TTR decreases. These are typically intensely focused SRs which are resolved quickly. Finally, for the SRs that are actually defect, the HPP is the highest but the TTR is only slightly higher than the previous category and lower than must gathers and all other references. These are typically intensely focused SRs which then turn into a defect and the SR is closed and then the defect processing system takes over from there. So aside from seeing how promoting content contributes to lessened HPP and TTR, there is an additional metric.

### Promotional impact metric

Ultimately, the goal of promoting content through social channels is to get clients back to IBM's content, generating additional page views or web accesses on that content. Ideally, accessing content online enables clients to self-resolve issues and therefore avoiding PMRs or SRs.

But how do you measure that?

The AIM team noticed that to determine the impact that social media (namely, Twitter) has on the team's content, simply tracking click-through data from Twitter or Bitly was not sufficient. AIM has found that for content items that have an access history, promoting them on Twitter will increase the future number of their accesses anywhere from five and ten percent, which is much higher than the number of click-throughs than the team gets from Twitter. For content that does not have an access history, this number is substantially higher, as compared with new content that does not get promoted on Twitter. As a result of this analysis, AIM realized the need for a promotional impact metric (PIM) that would calculate the overall impact that social media is having on the team's content. In other words, this metric can be stated as the percentage of web accesses to the team's content that can be attributed to social media. It encompasses all the different ways that social promotion could direct a user to a piece of content, including click-throughs, retweets, reindexing and increased search engine visibility. The PIM formula only includes data from the social media channel Twitter at the moment.

## **Enabling infrastructure**

Bluefluence is based on content creation and the promotion of that content. As such, here are enabling processes and best practices surrounding those efforts.

### **Process**

IBM's remote technical support process, by virtual of the fact of its existence, provides the procedural infrastructure from which content is generated. At a high level, the remote technical support process could be summed up in the following steps:

1. Client encounters problem with an IBM product.
2. Client opens a PMR or SR with IBM.
3. IBM Support resolves client problem.
4. Client closes PMR or SR.
5. IBM Support creates technical content based on PMR.

The content creation or publishing process for new content could be summed up as follows:

1. A PMR or SR is closed.
2. IBM Support uses the current content management system tooling to create the content.
3. The content is reviewed for grammatical and technical accuracy.
4. The content is made public.

And for updating existing content, use steps two through four.

### **Best practices**

Several best practices have naturally emerged as a result of working through the Bluefluence concept definition and measurement framework organization. Failure to consider these could result in a poorly perceived social presence.

1. Search engines are your biggest followers: When creating content, keep in mind techniques for ensuring that your content organically ranks high in search results. Similarly, promoting existing and newly created content will allow it to achieve a higher ranking.
2. Promote wisely: Precisely because promoting content will effectively increase its search ranking, have a care to ensure only promotion of relevant and useful content. Do not just retweet, add something of value. Do not assume your client knows why the item that is being retweeted is relevant and useful.
3. Incorporate feedback: When a client suggests improvements to content, make every effort to understand it and incorporate it. It will be apparent to clients if the same old content is promoted without any modifications.
4. Actively seek to broaden your social network: Proactively connecting with others in your company as well as business partners can amplify the message.
5. Use available social tooling: The AIM team specifically managed the Bluefluence project's work efforts using Lotus Connections. Additionally, the team used Cognos to develop the delivery mechanism of the data as well as the algorithms of the measurements. This enabled them to collaborate effectively considering that of the six team members were spread across four different timezones.

### **Next steps**

These measurements are an iterative process. As IBM expands to new social media channels,

metrics must be incorporated into the promotion category. As implied in the section on promotional impact metrics, the PIM will also iteratively adapt to adding new channel promotion data. Additionally, as terminology and measurements evolve, the AIM team will look toward levying appropriate requirements against applicable tools.

The team also has an invention disclosure currently in search status for adding the element of content creation to internet influence. They were also just recognized with an Outstanding Technical Achievement Award for Bluefluence.

### About the authors

**Kelley Anders, PMP** is a senior software engineer and project manager in the AIM technical Support Organization. She has held numerous positions over her 18 year tenure with IBM — ranging from support representative, to support manager, to quality manager as well as technical lead for several SWG and Enterprise projects. She has currently reached her first IBM Patent Plateau, holding five patents and is professionally interested in data analysis and metrics.

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**Trudy Hewitt, PMP** has held positions in project, program and operations management, in addition to people management positions in the support organization since joining IBM in 2000. She currently manages the AIM Knowledge Engineering team. Trudy is a PMI Certified Project Manager, Stanford Certified Project Manager and has reached her fourth IBM Patent Plateau.

**Matt Hillary** is a software engineer for the AIM Knowledge Engineering team, developing content-related applications, tools, and metrics. Matt joined IBM initially in 2006 and transitioned to a full-time role after obtaining his Master's degree (in Computer Science) in 2009. He has designed and developed numerous applications and tools for AIM and SWG support, and is currently on his third IBM Patent Plateau.

**Lee Jacobson** joined IBM in 2003 as a Knowledge Engineer for WebSphere® Application Server. He currently is the Teamlead for the AIM Knowledge Engineering Team. Lee's other interests include tooling development and Cognos Business Intelligence.

**Luc Leblanc** joined IBM in 1995 and is currently a Knowledge Engineer in the AIM Technical Support Organization. Luc has held various positions within IBM including, technical support specialist, systems analyst and database manager, and information development team lead. Luc's current interests include metrics analysis social media with particular emphasis on Twitter and blogging.

### Related resources

Recording of presentation:

[http://pokgsa.ibm.com/gsa/pokgsa/home/k/e/kelleyb/web/public/WSW/2012Archive/WSW\\_9\\_26.wmv](http://pokgsa.ibm.com/gsa/pokgsa/home/k/e/kelleyb/web/public/WSW/2012Archive/WSW_9_26.wmv)

Presentation materials:

<http://pokgsa.ibm.com/gsa/pokgsa/home/k/e/kelleyb/web/public/WSW/2012Archive/AIMSocBizStratBluefluence.pdf>



Lotus Connections Community:

[https://w3-](https://w3-connections.ibm.com/wikis/home?lang=en#!/wiki/Wb984e8019010_4686_8ebd_56213d4abf4f/page/Bluefluence)

[connections.ibm.com/wikis/home?lang=en#!/wiki/Wb984e8019010\\_4686\\_8ebd\\_56213d4abf4f/page/Bluefluence](https://w3-connections.ibm.com/wikis/home?lang=en#!/wiki/Wb984e8019010_4686_8ebd_56213d4abf4f/page/Bluefluence)

Blog articles:

<https://w3-connections.ibm.com/blogs/25daa07c-83bf-491d-bc12-0b5c97effc7b/entry/bluefluence?lang=en>

[https://w3-connections.ibm.com/blogs/55befb8d-ffda-465b-afec-1edb263746d1/entry/what\\_s\\_your\\_bluefluence?lang=en](https://w3-connections.ibm.com/blogs/55befb8d-ffda-465b-afec-1edb263746d1/entry/what_s_your_bluefluence?lang=en)

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