

Winter 2014

# ORGANIZATION DEVELOPMENT JOURNAL



VOLUME 32 • NUMBER 4

Special Issue

“OD in the Digital Age”

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- Collaborative Bandwidth: Creating Better Virtual Meetings
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ISSN Number 0889-6402:  
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# Collaborative Bandwidth: Creating Better Virtual Meetings

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## Abstract

Groups are seeking ways to collaborate effectively at a distance but are hindered by decreased engagement and effectiveness in virtual meetings. This paper introduces the concept of collaborative bandwidth—the number and capacity of channels available to support group work—and suggests that it is key to successful online collaboration. We propose that graphic facilitation, which has been shown to increase engagement and effectiveness in face-to-face meetings, can also increase collaborative bandwidth in virtual meetings.

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Graphic facilitation emerged in the 1970s as the practice of capturing a permanent, in-the-moment record of group work on large sheets of paper using archetypal templates and visual language (Ball, 1998). The visual displays created by the graphic facilitator allow groups to grasp the larger context while exploring details and differing viewpoints, make connections between ideas that were voiced at different times, compare options, and come to decisions in an open and collaborative way. An illustration of a graphically facilitated meeting

appears in Figure 1.

The graphic facilitator can work alone or in partnership with another facilitator. In the latter case, the graphic facilitator is referred to as a graphic recorder. In either situation, there is a core set of best practices that guides how the graphic facilitator works (Sibbet, 2006):

- *The group should be able to see what is being recorded.* This builds trust between the group and the graphic facilitator and sets the expectation that the visual display is there for

Figure 1. *Illustration of Graphic Facilitation (Sibbet, 2010, p. x)*



the group's use.

- *The recording should capture the exact words spoken in the room.* Not every single word is captured, but the words that do appear are the speaker's own. This also builds trust in the facilitator and enables people to bond with the visual display.
- *Imagery is used in support of the group process.* Any images used should add to the group's understanding rather than simply decorate the chart.
- *Each recording remains in the meeting space once it is complete.* This allows the group to refer to previous conversations and agreements as long as the meeting is in session.
- *The graphic recorder uses visual language to create the display.* Using visual language does not mean that the chart is entirely pictures without words. As Horn (1998) points out, visual language is composed of imagery, words, and deliberate organization of information in a way that assists in communication of ideas.
- *The visual displays are created at a large scale.* Typical charts are 4' by 8' (1.2m x 2.4m) in size. This presents the group's ideas at human scale, making them easier to interact with, and helps the facilitator tap into

the freedom of expression needed to work visually (Sibbet, 2006; Valenza & Adkins, 2009).

When graphic facilitation was first practiced, virtual meetings were almost unheard of. Telephone conferences were more expensive and far less common than they are now, and people tended to work with colleagues located near them. Today, of course, that has all changed, and it is now quite usual to meet with people who are in different cities, time zones, and countries (Cooney, 2011). In fact, the number of virtual meetings grows yearly, and continued growth is predicted (Chipkin, 2013; Leadership Strategies, 2013; Liu, 2010; Meeting Professionals International [MPI], 2014).

Even as virtual meetings are becoming standard practice, research reveals that they are often much less engaging and effective than face-to-face gatherings. People are less efficient, productive, and creative, and retention is adversely affected in virtual as compared to face-to-face meetings. Commonly cited factors include a tendency on the part of attendees to multitask, decreased interactivity, a lack of visual cues, the reduced influence of the facilitator, problems with the technology used to mediate communications, and the challenge of maintaining momentum (Cooney, 2011; Hatch, 2013; Morgan, 2012; Strom, 2010; Young, 2009).

All of these factors can be traced to not being in the same physical space with others. There is some quality of a face-to-face meeting that is lost during a virtual meeting—somehow it becomes more difficult to do collaborative and creative work. We propose that the missing quality is collaborative bandwidth: the diminished number and capacity of available communication channels.

In face-to-face meetings, graphic facilitation has been shown to have a positive effect on the very characteristics of virtual meetings that are most compromised. People in graphically facilitated meetings are more engaged, get more work done, are more creative, and retain more of the meeting's content than when graphic facilitation is not being used (Ball, 1998; Mullen & Thompson, 2013; Sibbet, 2006; Tyler, Valek, & Rowland, 2005). Applying graphic facilitation as an approach in virtual meetings, then, may make them more effective. The challenge is how to translate a paper-based, face-to-face practice into an online one.

This paper addresses the use of virtual graphic facilitation to increase effectiveness and engagement in remote meetings. First we present a model of graphic facilitation in face-to-face settings and briefly explore its effects on meetings. Then we shift our focus to virtual meetings, explore the characteristic of working in groups that is missed when working remotely, and introduce the concept

of collaborative bandwidth to explain that missing quality. We present a model of virtual graphic facilitation and examine its effect on collaborative bandwidth. We then describe some use cases for virtual graphic facilitation and conclude with a look at what the future might hold for this blend of the visual and the virtual.

### **Understanding Graphic Facilitation**

Graphic facilitation involves three, sometimes four, components: the graphic facilitator, the participants, and the visual display; or the traditional facilitator, the graphic recorder, the participants, and the visual display. The visual display can be considered almost as a presence in the room because of the way the participants and graphic facilitator interact with it. The model illustrated in Figure 2 describes the relationships among the components as well as the actions and skills involved and derives from a study of three previous models of graphic facilitation (Agerbeck, 2012; Grove, n.d.; Sibbet, 2006).

The three central segments contain the graphic facilitator, the participants, and the visual display. Information flows back and forth between them, as indicated by the three small inner arrows. As in any meeting, the facilitator and the participants interact with each other. However, each also interacts with the visual display: the graphic facilitator creates it and uses it as a facilitation tool, and the participants

interpret, reflect on, and sometimes add directly to it. The boundaries between the three segments are highly permeable, as indicated by the dashed lines. Anyone may speak and be heard, and the visual display is approachable (and capable of being modified) by everyone in the room.

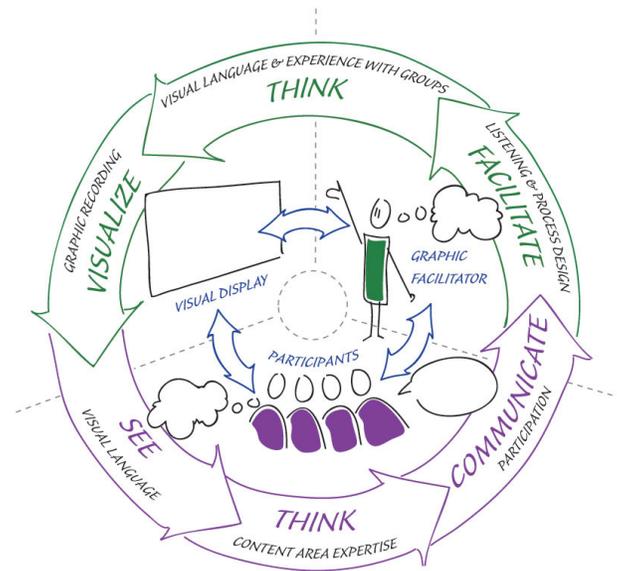
The outer circle of arrows represents the actions taken and the skills that support them. The participants see the display and draw on their understanding of visual language to interpret it. Blended with their own content area expertise, the visual display informs the participants' thinking, which they communicate through speaking, writing, drawing, or other means. The graphic facilitator uses listening and process design skills to take in the participants' ideas and facilitate their interactions, and so on. Naturally, in a real meeting this process is not a neat cycle.

Note that the illustration in Figure 2 features a graphic facilitator. In the case where a traditional facilitator works with a graphic recorder, there is an additional segment between the facilitator and the visual display that is occupied by the graphic recorder.

The interactions among the participants, the facilitator(s), and the visual display involve nonverbal cues, verbal exchanges, visual elements, and written messages. The communications that take place over these different channels are

mediated by the graphic facilitator and captured in the visual display. Recognizing the interplay among the graphic facilitator, the participants, and the visual display, as well as the channels that support it, is critical to understanding the impact of graphic facilitation on meetings.

Figure 2. A model of graphic facilitation.



### Graphic Facilitation Changes Meetings

Graphically facilitated groups are more actively engaged, more efficient, more creative, and able to retain more information during working sessions than those who are not. Sibbet (2006) also observes that understanding and alignment are more easily reached in graphically facilitated groups. By examining each of the qualities enhanced by graphic facilitation, a fuller picture of its effect on meetings emerges.

**Engagement** increases as participants experience the unfolding visual imagery on the chart.

Participants constantly compare what they said or heard with what they see, paying close attention to both modes. Agerbeck (2012) and Grove (2011) both note the powerful, engaging effect of feeling heard. The visual record openly acknowledges each speaker, draws fuller contribution from participants, opens a space for quieter people to contribute safely, and allows speakers to listen more fully to others knowing that they themselves have been heard.

**Efficiency** increases as participants quickly see where they are aligned and where they are disjointed. People speak up more quickly when there is an area of disagreement because they can see where the gap exists (Bailey, 2011). Researchers at the Wharton School of Business found that visual language aids decision-making, shortens meetings, and promotes group consensus (cited in Horn, 1998).

The use of visual imagery and visual language has been shown to contribute to **creative thinking** (Gaines & Shaw, 1993; Mullen & Thompson, 2013; Telling, 2010). The visual display inspires participants to use visual language to explore new ideas in the moment when they otherwise might not, tapping into their creativity (Mullen & Thompson, 2013).

Pictures added to words dramatically increase **retention** (Medina, 2008). The visual display combines pictures and words into a single, coherent image of the entire conversation. Those who watch

the displays being created retain a strong group memory of the session. Participants who were present can use that display, or a photograph of it, to accurately recall and repeat what was talked about in the meeting long afterwards.

**Understanding** rapidly increases when ideas are drawn out—both literally and figuratively—by a graphic facilitator. Large visual displays support participants as they make sense of data, come to understand relationships, and grasp complex systems. Ideas that are separated in time are juxtaposed in space and can be pointed to, touched, and interacted with as though they were tangible objects. Capturing the whole problem space in a single large visual display allows individuals to understand the issue as a whole rather than becoming mired in the details (Ball, 1998; Horn, 1998).

When everyone walks away with a common picture, the likelihood of **alignment** is also very high. The Grove (2011) notes that group members in graphically facilitated sessions feel a strong sense of commitment to decisions they take together. The public nature of the recording helps to ensure high validity and it is easy to compare options because they appear side-by-side on the visual display.

These benefits of graphic facilitation in face-to-face meetings are well understood by the businesses, associations, schools, government

agencies, community service groups, and other organizations that have employed this technique for more than four decades. However, as global collaboration has increased, many organizations have turned to meeting remotely. Such meetings are often characterized by bullet-point slides, text-heavy documents, or worse, no visuals at all. As previously noted, engagement, efficiency, creativity, and retention often decrease.

Yet most of the positive aspects of graphic facilitation are equally available in remote meetings—and the effect on productivity and engagement can be dramatic. Before we examine how, let us take a look at what happens when groups try to perform collaborative, creative work in a virtual setting.

### **Virtual Meetings**

For the purposes of this discussion, a virtual meeting is any meeting of three or more people who are joining from different locations and whose communication is therefore mediated by technology (Young, 2009). In particular, we are interested in meetings where a collaborative and creative activity is taking place, such as strategic visioning or the initial stages of project planning, and where there is some kind of shared visual display for participants.

The supporting technology may be a single platform for voice and visuals, such as a web conferencing system, or it may consist of several

tools, such as a telephone conference for voice and a screen sharing application for visuals. Other tools to support virtual collaborative work may also be used, but voice and shared visuals are the minimum requirements.

A variation on the virtual meeting is the hybrid meeting, in which co-located participants interact with remotely located participants (Sox, Kline, & Crews, 2014). Hybrid meetings present special challenges and opportunities, not all of which are addressed here.

### **Why Do Virtual Meetings Matter?**

One of the most obvious and compelling reasons to opt for a virtual meeting is the savings in cost, time, and hassle attached to traveling to meetings (Strom, 2010). Participants can be brought together on shorter notice and they lose less work time to traveling. Virtual meetings may also be seen as competitive, edgy, and attractive, especially to younger employees (MPI, 2014; Sox et al., 2014).

Many people appreciate having the option of meeting virtually. At the same time, remote participants frequently complain that virtual meetings are not an enjoyable or effective way to accomplish many of their intended objectives (Leadership Strategies, 2013; Sox et al., 2014; Young, 2009). There remains some aspect of virtual meetings that makes them less satisfying than gathering face-to-face, despite their convenience

and other advantages.

### The Missing Component

A number of researchers have looked into the question of what makes virtual meetings so unsatisfying. Cooney (2011, p. 26) observes that virtual meetings “lack the immediacy of an in-person meeting, which is a powerful thing to lose.” But how is “immediacy” created, and how is it defined or measured? Sox et al. (2014, p. 246) note that “there are still critical components missing from [virtual] meetings that can only be found in F2F [face-to-face] meetings.” But what exactly are those components, and what happens when they are lacking? Two hypotheses may begin to fill in the picture: the theory of media richness proposed by Daft and Lengel (1984), and that of media naturalness proposed by Kock (2005). Each hypothesis looks at various media used for communication, including face-to-face, video, telephone, instant messaging, email, personal and impersonal written documents, numerical documents, and virtual reality.

**Media richness.** The rich media or rich information theory places communication media

along a continuum of richness, with face-to-face being the most rich and numerical documents the least rich, as shown in Figure 3. Richness of a given medium is determined by four factors: the medium’s ability to carry nonverbal cues, the rapidity of feedback it enables, its transmittal of the personality of the communicator, and its ability to support natural language. The rich media theory is designed to guide or explain choices about when to use different communication media for collaborative tasks. Richer media are more suited to reducing uncertainty (the lack of sufficient information) and equivocality (the lack of a common understanding or context); therefore, collaborative tasks that require low uncertainty and low equivocality would necessitate richer communication media in order to be successful (Daft & Lengel, 1984; Daft & Lengel, 1986).

**Media naturalness.** Kock (2005) defines five qualities of natural communication—co-location, synchronicity, facial expressions, body language, and speech—which are enabled or suppressed to different degrees by various electronic communication media. Face-to-face is a completely

Figure 3. Media richness (after Daft & Lengel, 1986).

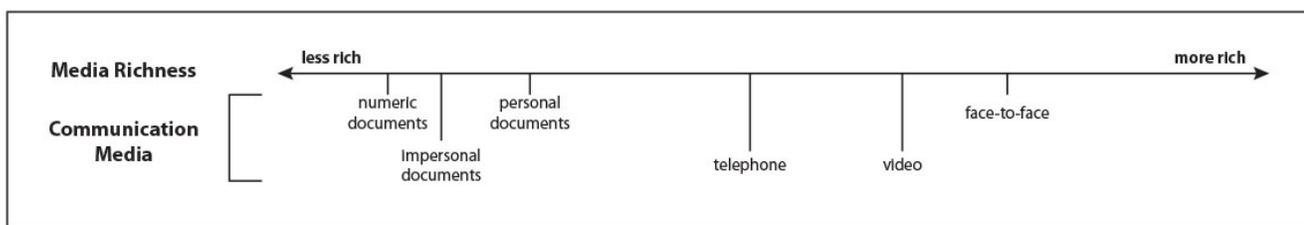
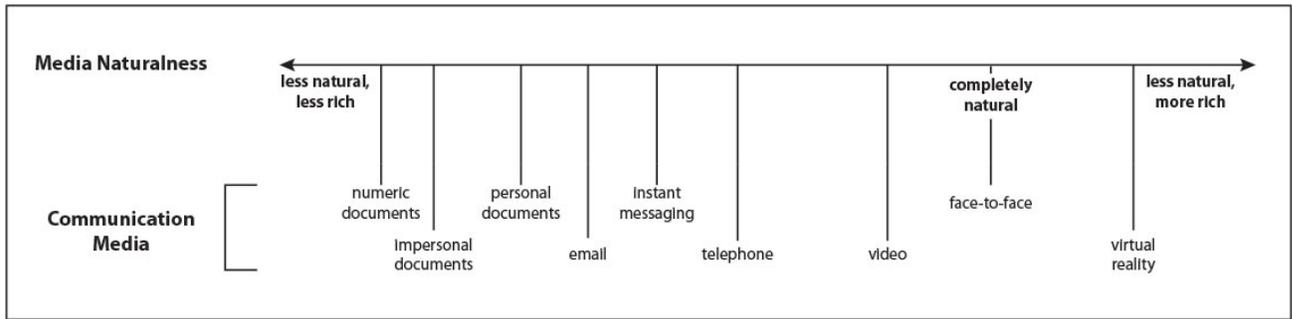


Figure 4. Media naturalness (after Kock, 2005).



natural communication medium, whereas video, telephone, instant messaging, and email are, as well as being less rich than face-to-face communication, increasingly less natural, as shown in Figure 4. Virtual reality, while richer than face-to-face in Kock’s view, is also less natural. Virtual reality refers here to three-dimensional, immersive virtual worlds such as Second Life and should not be confused with virtual meetings.

The less natural a medium, the greater the cognitive effort required to interpret a message delivered in that medium, and the greater the possibility of ambiguity. Communication media that are less natural than face-to-face—the way humans are biologically wired to communicate, according to Kock—also give rise to less physiological arousal, i.e., they feel dull and uninteresting.

These two hypotheses posit that the communication media commonly available in virtual meetings are less rich and less natural, less suited to reducing uncertainty and equivocality, and less interesting than face-to-face communication. Both theories recognize that some collaborative

activities need to be supported by richer or more natural communication media than others, but this is still not the whole story. Even if we match the activities with communication media that should support them, something still feels amiss in virtual meetings—something is still lacking.

### Collaborative Bandwidth

We suggest that the ‘immediacy’ that is lost according to Cooney (2011) is actually an essential quality for working with a group. It is an elusive factor of collaboration, and it goes beyond the richness or naturalness of communication media; it is a critical quality we have difficulty naming, although we certainly know when it is there and when it is not. It is a quality we call *collaborative bandwidth*.

### Defining Collaborative Bandwidth

When people convene a meeting for collaborative work, there are several “languages,” or channels, they can access to communicate with one another. These channels are not the same as the communication media described above. The communication media convey messages, but the messages are encoded in

one or more of these ‘languages’ or channels. For example, a person can encode what they want to say using the written channel, and then transmit it by email, instant messaging, or another medium that supports messages encoded in that language.

In a typical face-to-face setting, common channels are nonverbal, verbal, written (natural language), written (formal language), and visual (shown). Table 1 describes each of these channels.

Table 1. *Communication channels in a typical face-to-face meeting.*

| Channel Name               | Examples                                                                 |
|----------------------------|--------------------------------------------------------------------------|
| Nonverbal                  | Body language, gestures, facial expressions                              |
| Verbal                     | Spoken language, tone of voice                                           |
| Written (Natural Language) | Conversation, letters or memos addressed to individuals                  |
| Written (Formal Language)  | Contracts, form letters, mass communications, marketing materials        |
| Visual (Shown)             | Presentations, slides, posters, sketches, drawings, objects, photographs |

The channels available in a meeting constitute that medium’s *collaborative bandwidth*. Bandwidth, in electronics terminology, refers to the number of frequencies within a given band used for transmitting a signal. More colloquially, bandwidth can also refer to the energy or mental capacity required to deal with a situation. Collaborative bandwidth can thus be defined as the number of channels available to support collaborative group work and the capacity of those channels to enable communication in the service of that work. The available channels in a given communication medium indicate the relative

amount of collaborative bandwidth offered by that medium.

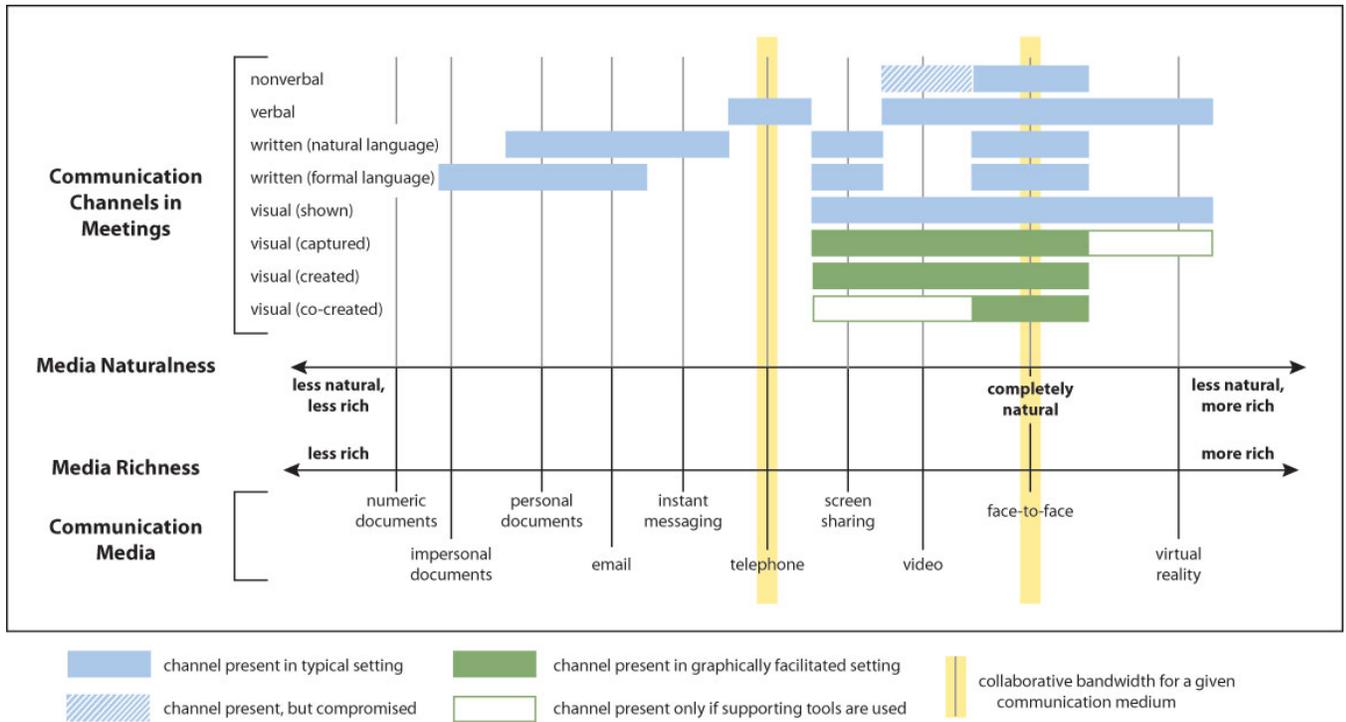
Face-to-face meetings, with five channels available, enjoy a large amount of collaborative bandwidth. In a graphically facilitated face-to-face meeting, the number of available channels is almost doubled by the addition of the visual (captured), visual (created), and visual (co-created) channels, as explained in Table 2. The presence and skill of the graphic facilitator either supplies each channel or expedites the use of that channel.

Table 2. *Communication channels in a graphically facilitated face-to-face meeting.*

| Channel Name               | Examples                                                                           |
|----------------------------|------------------------------------------------------------------------------------|
| Nonverbal                  | Body language, gestures, facial expressions                                        |
| Verbal                     | Spoken language, tone of voice                                                     |
| Written (Natural Language) | Conversation, letters or memos addressed to individuals                            |
| Written (Formal Language)  | Contracts, form letters, mass communications, marketing materials                  |
| Visual (Shown)             | Presentations, slides, posters, sketches, drawings, objects, photographs           |
| Visual (Captured)          | Graphic recording                                                                  |
| Visual (Created)           | Graphic facilitation                                                               |
| Visual (Co-Created)        | Group work using graphic templates, flipcharts, whiteboards, or other shared tools |

To compare the collaborative bandwidth of the face-to-face medium with that of other media, the communication channels can be mapped onto the graphs of media richness and media naturalness. The channels that intersect with a given medium indicate the amount of collaborative bandwidth available in that medium. The yellow-shaded areas

Figure 5. Relative collaborative bandwidth of different communication media.



of Figure 5, for example, compare the collaborative bandwidth of the face-to-face medium with that of the telephone.

In face-to-face settings, especially graphically facilitated sessions, the potential collaborative bandwidth is very high, and information moves easily around the room. Not all channels are necessary or effective all the time, but having them available widens the options. Participants are intuitively aware of the abundance of collaborative bandwidth in the room available for communicating with others. This contributes to the feeling of ‘immediacy that we experience in face-to-face meetings.

When meetings move to virtual settings, those

channels get compressed and less information flows among the participants. Imagine a teleconference where participants use only a voice connection with no support for visual information. The collaborative bandwidth is limited to one single channel: verbal communication (see Figure 5). This is fine for some purposes, such as exchanging pieces of concrete information, but the available collaborative bandwidth is not sufficient to support highly collaborative work such as creating a five-year strategic vision. If we try to accomplish this kind of work without enough collaborative bandwidth, we feel frustrated, misunderstood, unheard, confused, and ineffective. We sense something is missing—something necessary to do our work well.

## **Collaborative Bandwidth and Virtual Work**

Right now, the technology commonly available for web meetings cannot provide the same collaborative bandwidth as being in one room with the right people. In a typical virtual meeting, we lose high-fidelity nonverbal communication. We lose the visual (captured) channel, which provides the ability to easily write and draw what is being said and organize it visually; and the visual (created) channel, which enables graphic facilitators to reflect the group's work in a visual display. We lose the visual (co-created) channel, which grants the ability to build things together—to create sketches, prototypes, or quick two- or three-dimensional models.

Different tools for remote collaboration support different channels of communication to greater or lesser degrees. For example, sophisticated video telepresence tools can almost restore the nonverbal channel by creating the illusion that remote participants are all in the same room. Other tools support high-fidelity audio, screen sharing for drawing, or simulated collaborative sticky-note boards. No single tool, or even combination of tools, can as yet provide uncompromised access to all the channels of communication—and therefore to the amount of collaborative bandwidth—that we experience when we are truly co-located. In addition, the better a tool is at recreating a channel

of communication at a distance, the more expensive it tends to be, both in actual cost and in terms of the effort required to support, maintain, and use it.

If we accept the collaborative bandwidth limits imposed by virtual communication media it becomes apparent that no matter what we choose, the capacity for collaborative work diminishes in a virtual meeting. What might be gained in virtual work if we could bring back some of the missing collaborative bandwidth?

### **Graphic Facilitation in Virtual Meetings**

While graphic facilitation is typically practiced using markers and paper, it can certainly be translated into virtual settings. With the additional communication channels it brings, some of the missing immediacy—the collaborative bandwidth—is restored, and engagement, effectiveness, creativity, and retention increase. Graphic facilitation used in remote meetings is commonly called virtual graphic facilitation to distinguish it from face-to-face applications.

The use of graphic facilitation in a remote meeting is similar in many ways to its use in a face-to-face one. The virtual graphic facilitator uses drawing software to create visual displays while guiding the process with the group. Each person can see the display on his or her own computer. The graphic facilitator captures the exact words spoken, employs visual language to record and organize

the conversation, and uses the visual display to assist the process just as she would in a face-to-face setting. Instead of looking at static slides or watching someone type meeting minutes in a word processor, the group sees their conversation come to life on the screen in visual language and responds as they would to a large-scale paper display.

### **Virtual Graphic Facilitation: A Model**

The basic structure of graphic facilitation illustrated in Figure 2 also applies to virtual graphic facilitation. The differences appear in the boundaries between the three key segments and in the visual display itself, as shown in Figure 6. There are more boundaries in a virtual setting because each participant site is its own segment, and they are less permeable. Instead of seeing the same physical and paper-based visual display, each person sees the digital display on his or her own computer, with all the possible equipment-imposed variations that entails.

As with face-to-face graphic facilitation, if a traditional facilitator works with a remote graphic recorder, an additional segment is added to the inner circle between the facilitator and the visual display.

There are some key differences in the practice of virtual graphic facilitation. It is generally only possible to show one visual display at a time, which makes it difficult to refer to previously completed displays while the group works. In most virtual

configurations, participants cannot mark on the displays themselves, and template-based small-group work is problematic. This deprives the group of the visual (co-created) communication channel and impedes activities such as rapid brainstorming onto sticky notes, dot voting, and group drawing. The graphic facilitator can employ additional online collaboration tools to enable these activities, but the transition is usually not smooth. A further challenge is that the increased cognitive load imposed on the facilitator as a result of using virtual tools can slow the overall pace of the meeting.

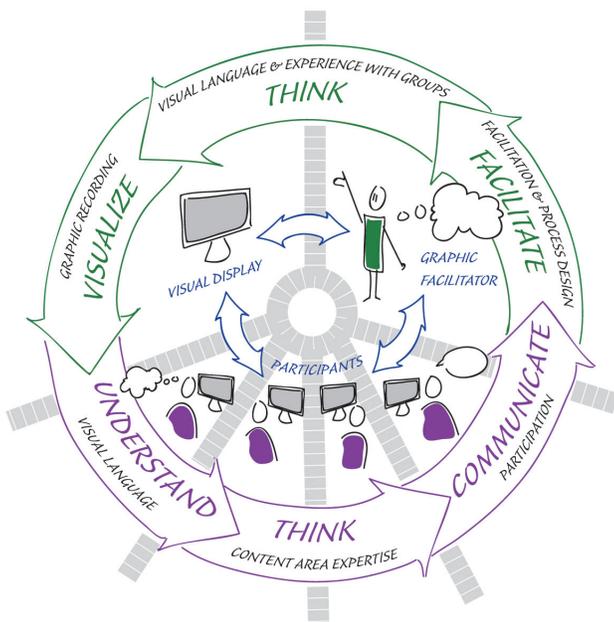
The effect of working at a very large scale is also lost in virtual settings. The display size is limited by the size of the participants' and graphic recorder's screens. This defect is mitigated somewhat because each participant has a clear view of the work on his or her own computer—sometimes clearer than a co-located participant might have, if the room were large and the display posted at a distance.

### **Virtual Graphic Facilitation Changes Meetings**

We know that collaborative bandwidth is compressed in any virtual meeting: the nonverbal channel is compromised or lost, and the verbal is at least a little compromised. Written (formal) and written (informal) channels may be available but are of limited utility for collaborative, creative work. The visual (shown) channel is still present for sharing presentations and other visual information.

However, in a graphically facilitated virtual meeting, the visual (captured), visual (created), and possibly visual (co-created) channels are present. In the same way that face-to-face graphic facilitation increases the collaborative bandwidth in a co-located meeting, virtual graphic facilitation nearly doubles the collaborative bandwidth of a remote meeting—and the effect of restoring access to those missing channels is striking.

Figure 6. A model of virtual graphic facilitation.



In our practice, we have seen firsthand that virtual graphic facilitation can make remote meetings more engaging and efficient, increase creativity and retention, reduce multitasking, make it easier to achieve meeting outcomes, and reduce the perceived agony of meeting online. The data below derive from post-engagement surveys and conversations with clients.

Graphic facilitation increases **engagement** in virtual meetings in much the same way as in face-to-face meetings (Sibbet, 2006). Participants watch the visual record appear and compare what they see with what they said or heard. They become invested in whether the display is “right,” especially if they themselves have just spoken. This effect is felt because of presence of the visual (created) channel.

Horn (1998) notes that the use of visual language shortens meeting time by 24% (p. 234), making it ideal for increasing **efficiency** in remote meetings. Virtual graphic facilitation adds the visual (captured) channel and confers some of the same efficiency benefits as in face-to-face: immediate confirmation that a speaker has been heard and understood, rapid repair of misunderstandings, and embodiment of the ephemeral verbal channel in a shared display.

Using online tools to support visual collaboration taps into participants’ imagination and allows free play for **creativity**. Imagine attending an online meeting where you expected to do nothing but listen and talk—but then you are given an opportunity to write on sticky notes, collaboratively arrange them into clusters, or sketch your ideas so others can see. The visual (co-created) channel is a powerful enabler of creative thinking.

Watching the display being created has the same effect on **retention** of meeting content whether the meeting is virtual or face-to-face. Many participants

find that the visual record is more accessible than typed minutes and contains more detail than a summary slide deck. In a series of meetings, a brief review of previously created charts as each meeting begins is enough to refresh everyone's memory quickly and effectively. The visual (shown), visual (captured), and visual (created) channels support activities related to retention.

Graphic facilitation invites active contribution, reducing the temptation to **multitask**. In situations where participants are called away or distracted momentarily, the visual record can help reorient them smoothly when they return, reducing the cost of their temporary absence. The visual (created) and visual (co-created) channels come into play here.

A best practice of graphic facilitation is to create a visual display of the meeting's intended **outcomes** at the start of each meeting. Participants instantly understand what is to be accomplished, any disagreement about purpose is handled up front, and the display can be revisited to mark progress during the course of the meeting. Using this technique, which draws on the visual (shown) and visual (created) channels, helps keep a group focused on desired outcomes and allows them to correct their course if needed (Sibbet, 2006).

We are all familiar with the perceived **agony** of web meetings. Virtual graphic facilitation alleviates this feeling because being engaged, being creative,

feeling effective and efficient, and actively working toward known outcomes all negate the agony of wasting time, not being heard, and missing that key quality of working together with others: the rich collaborative bandwidth we enjoy when face-to-face.

### **Use Cases for Virtual Graphic Facilitation**

The following use cases illustrate some ways to employ virtual graphic facilitation. They are specific examples of how we have used graphic facilitation in remote settings to increase engagement, efficiency, creativity, and retention in different types of meetings.

#### **Use Case: Remote Graphic Recording**

*Bring in a remote graphic recorder to document a large face-to-face meeting or conference or series of online sessions.*

**Description.** Traditional graphic recording can be impractical in face-to-face settings when the number of participants is so great that most of them would not be able to read the visual display no matter where it was placed. An alternative is to bring in a remote graphic recorder, who listens to the sessions over the telephone and creates the visual display on a computer. Everyone is able to see the visual record while it is being created, and it is ready to share online almost as soon as the presentation is finished. The same technique can be applied in online-only settings.

**Case study: Remote recorder, face-to-face audience.** In November 2013, we remotely graphically recorded the plenary sessions for Learning 2013, an annual face-to-face gathering of more than 1,600 training, learning, and performance professionals. The California-based graphic recorder listened to the live sessions over the telephone and shared her screen in a web conference. At the Orlando end, the web conference was projected onto huge screens behind the speakers so that attendees could watch the visual display being created.

**Case study: Remote recorder, remote audience.** Earlier that year, EDUCAUSE hosted a three-day series of online sessions entitled *Beyond MOOCs*. The graphic recorder joined the sessions remotely, shared her screen, and created visual displays that were seen in real time by more than 600 remote attendees.

**Results.** In both cases, participants found the graphic recordings engaging during the sessions and useful afterwards for recalling what had transpired. They shared the visual records on social media channels, referred to them when describing the sessions, and used them in post-conference blog summaries. The charts were posted in the archives for both events.

#### Tips for Success

- Ensure access to clear audio for the graphic recorder.

- Ensure robust Internet connection at both sites.
- Confirm arrangements with speakers beforehand to avoid any surprises.
- Hold a detailed technical rehearsal at least a day before the event.

#### Use Case: Blended Virtual and Face-to-face Sessions

*Add virtual sessions to a face-to-face strategic visioning retreat to bring in remote team members.*

**Description.** With today's teams spread across the globe, it is not always possible to get everyone in the same room. Options such as leaving the remote participants out of the discussion until after the fact, bringing them in via video conference in the middle of the night, or changing the entire meeting to an online platform are unsatisfying for everyone. Instead, remote participants can be actively involved in the same process the larger group is experiencing by hosting carefully timed virtual sessions just for them as part of the overall process.

**Case study.** In 2014, we graphically facilitated a two-day strategic visioning session for the training department of a large software company. The meeting was structured as a face-to-face event for the thirty US-based participants, but a further dozen team members were stationed in Europe and Asia. The meeting's budget and timing made it impractical for the global team members to be

there in person, but leadership still wanted them as involved as possible with the departmental vision and strategy.

We created a blended solution to address the significant challenge of actively involving the remote participants. The first day, the US-based team worked through the first part of the strategic visioning process. At the end of the day, a smaller team convened a web meeting with their colleagues in Asia. We referred to digital photographs of the day's charts while describing the process and output. As remote team members voiced their thoughts and ideas, they were captured on the digital photos using a graphics tablet. After the 90-minute web meeting, copies of the annotated displays were sent to the Asian group and also to the European group, who had not yet participated.

In the morning of the second day the small team repeated the web meeting with the European group, adding their ideas to the mix. As a final step, the additions from both global groups were transferred to the original paper displays just before the in-person attendees arrived. When the group reconvened, we walked them through their colleagues' additions before continuing the process.

**Results.** This blended approach gave the remote team members a window into the work that was being done, as well as a way to contribute during the process. The remote teams could see the steps that

the larger group had taken to arrive at their current state of thinking and found it easy to contribute. Both remote teams reported feeling more engaged in the process as a result of seeing their own work captured on the same displays as their colleagues' work.

The timing of the two remote meetings allowed us to efficiently incorporate the remote teams' thoughts while the strategic vision was still being developed. The schedule makes for two very long days for the planning team and facilitator(s), but the payoff in terms of increased engagement, inclusion of remote team members, and efficiency is well worth the extra time.

### **Tips for Success**

- Have all the equipment set up, tested, and ready to go well before the first virtual session.
- Photograph the displays throughout the day rather than trying to capture them all at the end.
- Import the photos into a drawing program so the graphic recorder can annotate them.
- Ensure good audio and a robust internet connection at both sites.

### **Use Case: Virtual Graphic Facilitation**

*Use virtual graphic facilitation to keep a new, distributed leadership team on track throughout the year.*

**Description.** After a face-to-face team kickoff

meeting, ongoing check-ins will help distributed team members deepen their relationships and stay on track with team goals and strategies for the year. The kickoff provides a high-collaborative bandwidth setting for initial trust building and goal setting, while virtual graphic facilitation keeps the momentum going over the long term.

**Case study.** A services company recently consolidated its training and development department, formerly split among the different arms of the organization. The leaders of each area became a single unified team, mostly co-located but with three members sited in other parts of the country. After a two-day team kickoff retreat, the team opted for half-day quarterly remote meetings to continue team building while working on the goals they had set.

Each four-hour meeting included a review of the strategy, updates on progress, and conversations about significant team issues. Everyone connected from their own computers and the graphic facilitator shared her screen. Relevant chart images from the initial meeting and later images from previous quarterly meetings, were displayed and annotated as needed. Any annotated and fresh visual records were sent out immediately after the meeting along with a list of action items and their owners.

**Results.** The team found that they used the visual records more often, and differently, than they

typically used typed minutes. They were able to recall more of the meeting's content when using the visual records and appreciated being able to share the displays with their direct reports to communicate decisions and action items.

Initially, the team was concerned about becoming weary and distracted in a four-hour remote meeting, but they found the visual recording very engaging. They noted that it helped them work efficiently by capturing sidebars and sustaining focus. They also reported feeling more creative after the remote meetings: one person was even inspired to design a visual solution to a shared team problem.

#### **Tips for Success**

- Use a visual agenda and return to it when shifting segments to build a sense of the structure of the meeting and a feeling of progress.
- Vary the content or activities of each segment to maintain interest.
- Breaks are essential in long remote meetings—each four-hour session included two fifteen-minute breaks. Place a timer on the shared screen to help participants return on time.
- Distribute copies of meeting charts promptly after each meeting.

#### **Looking Ahead**

New as it is, the landscape of virtual graphic

facilitation is already changing. As paper-based graphic facilitation gains popularity and new tools for online collaboration continue to emerge, it is only natural that more practitioners will begin combining the two approaches. Although current technology is intimidating to many practitioners, the barriers to entry will eventually fall away as they did for email, the world wide web, and personal videoconferencing.

**Short term.** The low-hanging fruit is to build visual templates for collaborative work into online tools. Visual templates for frequent, repeated tasks help groups remain consistent and efficient, providing structure for the facilitator and participants. The addition of templates to collaborative online tools makes it possible for many facilitators to begin using visual approaches online.

**Mid term.** Virtual graphic facilitators are looking for a hardware solution that is as large, robust, and easy to use as a graphics tablet and computer, yet is as portable and approachable as the iPad—and that can join and run web conferences. Another promising approach employs smart phone apps to capture and transmit real-time paper or whiteboard-based note taking, which requires no unusual equipment at all.

**Long term.** Easy online collaboration tools are harder to realize, but incredibly powerful for

creative work. Some combination of hardware and software that allows a fidelity of writing and drawing similar to paper or graphics tablet, but that also allows all participants to contribute to the display without special equipment, will be a game-changer.

Like its face-to-face counterpart, virtual graphic facilitation improves efficiency, engagement, creativity, and retention in meetings involving collaborative and creative work. By restoring channels of communication that are otherwise lost in remote meetings, virtual graphic facilitation increases collaborative bandwidth, the elusive quality of face-to-face meetings that is often lacking in virtual gatherings. Even in its simplest applications, virtual graphic recording can make remote meetings more efficient, more effective, and not least of all, more enjoyable.



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