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Best Visual Presentation – Observations from the Award Committee*

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In 2003, the Association for Institutional Research (AIR) initiated the Best Visual Presentation (BVP) award to acknowledge the contributions made through new ways of professional communication, in addition to those made through more traditional scholarly formats. Fueled in part by advanced technologies, as well as by changing notions of organizational decision-making processes and individual learning, visual presentations are increasingly important in enhancing our understanding of issues relevant to the higher education enterprise. The ability to develop effective visual presentations is an important addition to the narrative and quantitative techniques more traditionally employed in scholarly and professional settings. Visual presentations are important for communicating with various audiences. The award recognizes expertise in this area, and is expected to help elevate professional norms surrounding this important institutional research function.

A BVP subcommittee of the AIR Publications Committee issued a call for submissions and evaluated them. In 2003, nine presentations were submitted and in 2004, 13 presentations were submitted. The purpose of this *IR Applications* is to provide observations from the BVP Award Committee about attributes of presentations that we found to be particularly good as well as those that were especially problematic. This publication is not intended to be a comprehensive discussion of what makes a good visual presentation (other publications provide more information; see list of references). Moreover, the inclusion (or lack) of techniques articulated here does not automatically ensure a high quality visual presentation, as there are issues related to the balanced use of techniques that we observed in our reviews. Our goal here is to share what we've observed in order to foster improved visual presentations at subsequent AIR Forums and in other venues in which institutional researchers prepare and present data and information.

To reach our conclusions, we reviewed BVP submissions in both electronic and paper formats, discussed them together, and reached consensus about what made for excellent or poor contributions. We used these criteria, which were articulated in the proposal to AIR to initiate the BVP award:

- Properly chosen format and design appropriate for the identified audience.
- Focus on the effective presentation of data and information rather than visual effects for their own sake.
- Design quality, such as clarity of data/information presented; visual attractiveness; use of color, white space, graphics and other design elements; · and readability, including font size and style.
- Display of an accessible complexity of detail.
- Narrative quality that effectively tells a story about the data being presented.
- Design execution (e.g., sharpness of visual images).
- Paper color and stock (if appropriate).
- Appropriateness for identified audience.

In addition, we acknowledge some of our judgments were based on more subjective, aesthetic criteria. For the most part, our observations are derived from the review of electronic PowerPoint presentations, as this is the medium most frequently used in the BVP submissions we received.

Before presenting our examples, we note that the BVP award focuses on presentation materials in isolation from their use. Therefore, there is an assumption that the materials need to 'stand alone;' that is, to be interpretable and sensible in isolation from the manner in which the

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presenter interacts with these materials during the presentation. While this certainly holds true for a conference presentation that is intended for subsequent publication, it is perhaps a more stringent requirement than is the norm for most presentation materials, which are typically evaluated in conjunction with the presenter and the content.

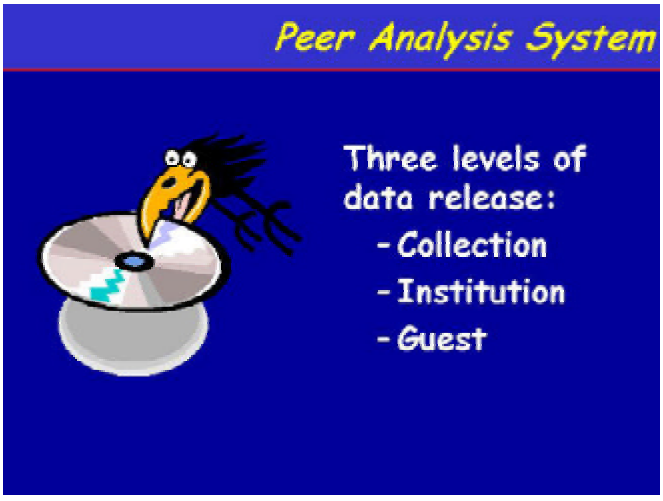
The slides used below are provided with the consent of their creators. It should be noted that a slide might be used to illustrate the specific attribute we wish to highlight, even if the slide in totality includes attributes we do not advise. Now, in the spirit of collegiality, we offer our perspectives.

Attributes of Excellence

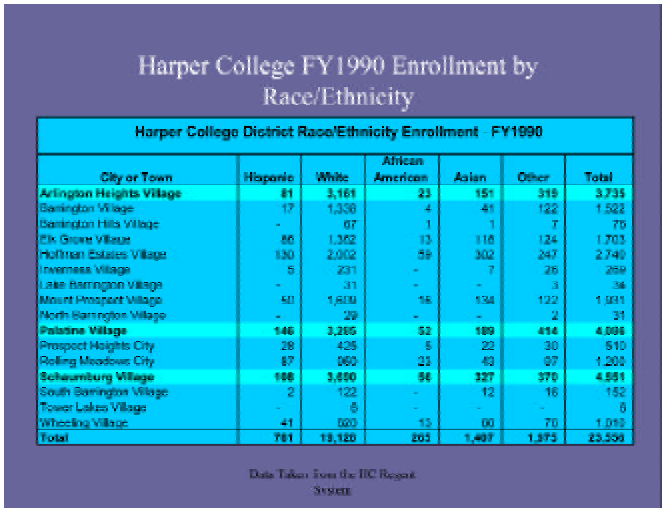
The excellent visual presentations we reviewed have these attributes, though not every presentation has all of them. We have included examples of slides we assessed to be excellent illustrations of our points.

- Use visual balance and apply sound artistic and graphic composition principles. What does this mean?
  - Large, simple, bold fonts, (and we mean large).
  - Good use of color, including color contrasts.
  - Judicious use of templates and background designs; this also means not devoting a disproportionate amount of space to logos or other design elements that reduce space available for or detract from presenting data and information.

We believe this slide, from a 2003 IPEDS presentation that was recognized for good practice, is a good example.

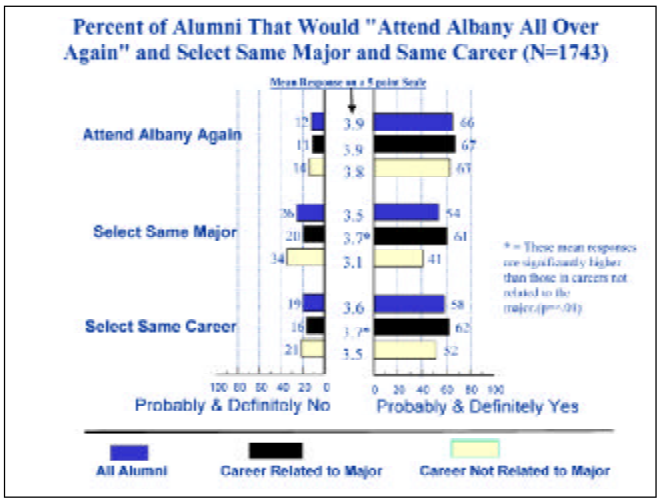


- Provide appropriate visual focus and draw the eye to the key point(s). The following slide, from a 2004 presentation about the use of GIS systems, provides a good illustration of our point. The presenters wanted to highlight data from three communities in particular, and used a lighter color in the table to draw attention to them. (At the same time, the small font size and amount of data presented here detracts somewhat from the overall visual quality of the slide.) Note the highlighted data would be even more salient if the background were white rather than light blue.



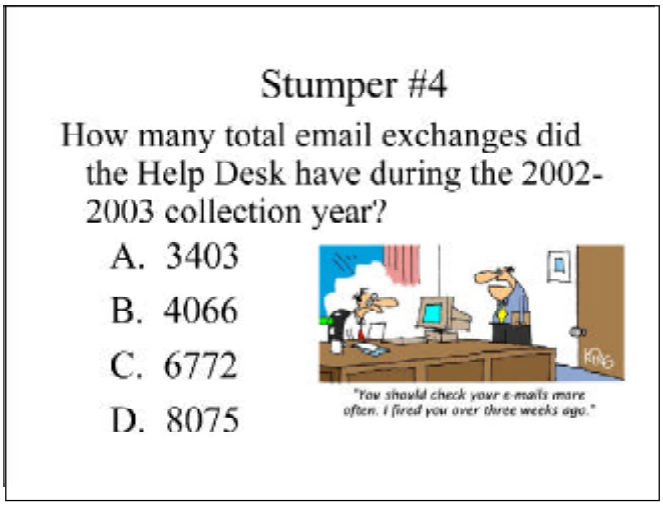
- Rather than presenting a page full of numbers showing the frequency distributions and means of responses to survey items, use a bar chart to show those scoring above and below the scale midpoint. For example, the following chart from an Albany Alumni study draws the viewer's eyes to the contrast between those responding YES versus those responding NO to three different survey items and three different populations. It shows the mean responses to the 5-point scale in the center column, and asterisks the significant differences, thus packing a good deal of digestible information into one display. The chart was created essentially by doing the left hand bar (from a spreadsheet), then doing the right hand bar and copying them onto the same slide and adding the means and scales.

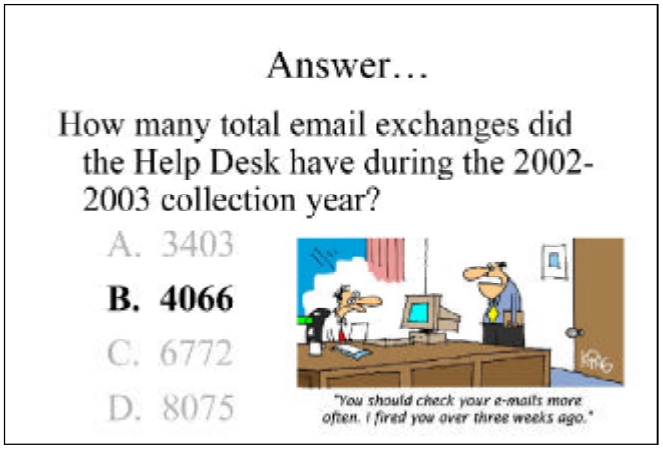
- Draw viewers into the presentation through pedagogical devices such as quizzes and rhetorical questions that help engage the viewer in the material upon which the presentation is based. Done effectively, this can move the audience toward a deeper understanding of the material presented than would be likely with a simple display of data points. The following two slides were part of a 2003

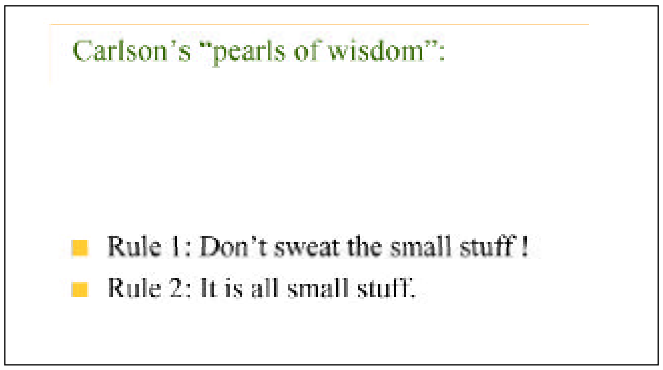


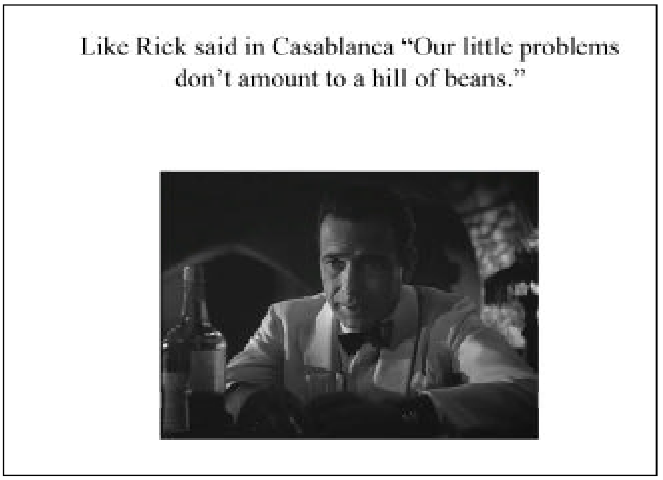
presentation about the IPEDS Help Desk; the presentation was recognized for good practice.

- Use of humor. Some researchers seem reluctant to use humor to punctuate their presentations, perhaps out of concern that it might weaken the perception of the quality of work being presented or fear of trying – but failing – to be funny. Humor in visual presentations can be useful in engaging an audience, by strengthening a point, making it more memorable, and enhancing the enjoyability and memorability of not just a presentation, but the material being presented. The following slides illustrate the use of humor; they come from a 2004 BVP submission that was recognized for good practice.

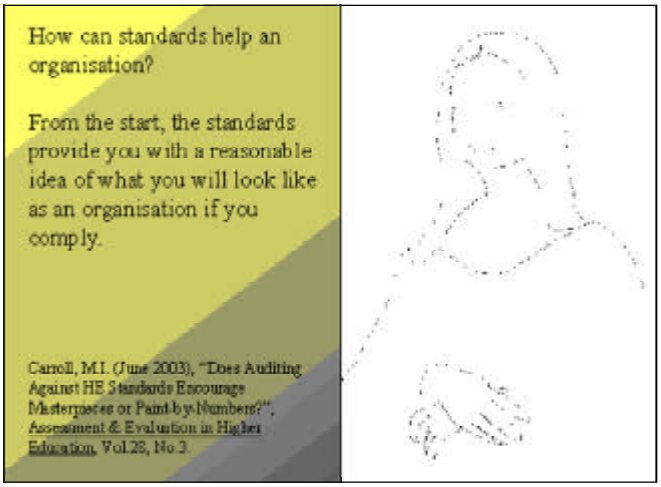


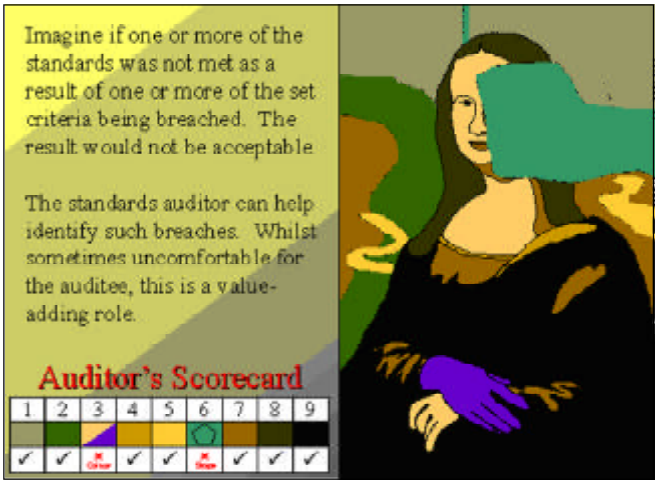


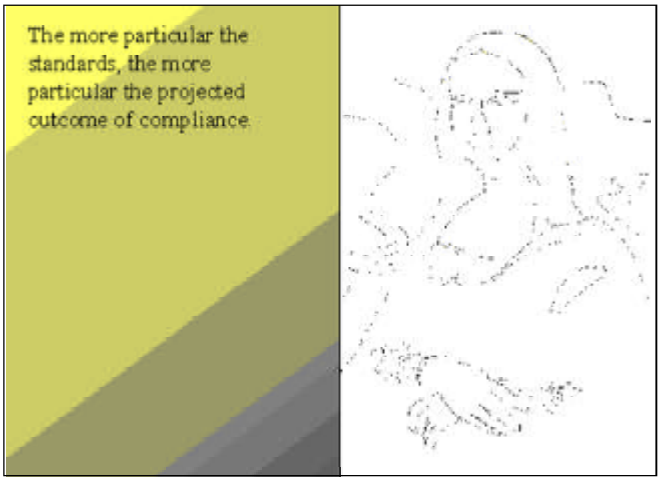


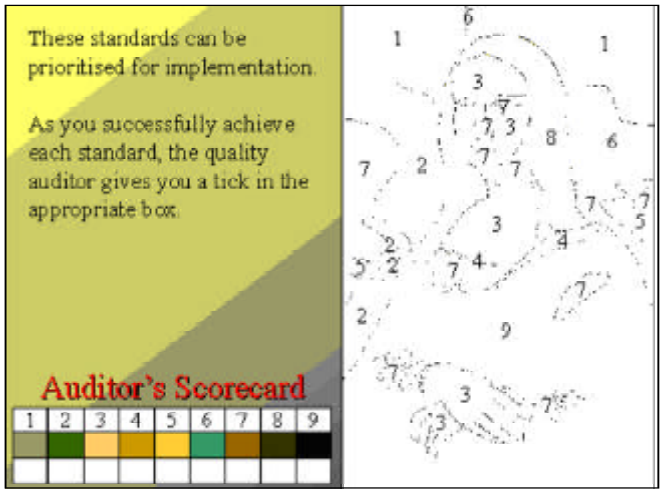


- Marriage of the medium and the message. Our first BVP award winner, created by Martin Carroll, exemplified this attribute. Available on the AIR Web site for members (look for paper 648, Track 6, Tampa Forum papers), the presentation uses different renditions of da Vinci's Mona Lisa as a metaphor for the important point Carroll makes: to demonstrate excellence, different approaches are needed that go beyond "objective measurements" and "minimum control standards." By displaying different renditions of this famous portrait that build from a dotted outline, to a fill in the blank picture, to the masterpiece itself, the visual presentation run parallel and is well integrated with the line of argument that Carroll offers.









Problematic Attributes

As we evaluated Best Visual Presentation submissions, **we noticed recurring characteristics of presentations that, in our view, detracted from the quality and effectiveness. As with our attributes of excellence, this compendium of problems is not exhaustive, but reflects common "mistakes" we found during the two years of the BVP awards.**

- Avoid using small (unreadable) tables and charts. As researchers, we are often zealous to present all of our data, and often do so in the same format we use in print publications and reports. Tables and small charts are rarely readable in PowerPoint presentations, however. We suggest these alternatives:

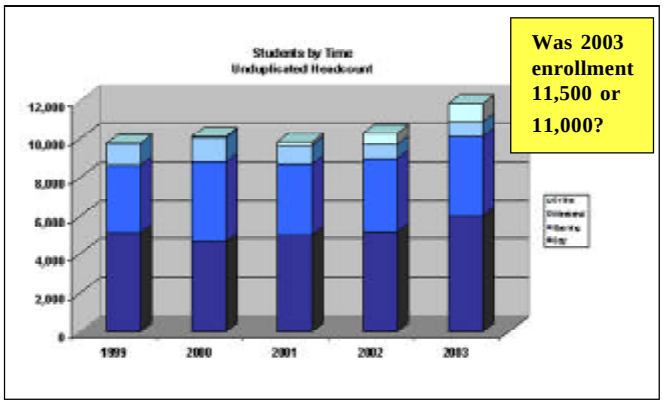
- If your purpose is for participants to see/ understand the data, put the table in a handout and bullet key points in the PowerPoint.

- If your purpose is to display how a table is organized, use large fonts to label the columns and rows and don't fill in the cells with numbers.

- Avoid allocating disproportionate space to logos, headers, and graphics that don't advance the content of the presentation. We saw slides that allocated one-third of the space to design devices, leaving barely two-thirds of the slide space for substantive material.

- Avoid poor choices of colors, such as colors that clash, provide too little contrast, or shimmer when placed adjacent to one another. (Kosslyn's *Elements of graph design*, 1994, provides an excellent discussion of color.)

- Avoid the use of 3-D bars or pies when only two dimensions of data are presented. Such graphic displays of data actually distort the meaning. To illustrate, we've created a simple example. There are two dimensions of data, fall semester enrollment (by year) and number of students in each time category: online, weekend, evening and day. How many online students were there in 1999? Was the total 2003 enrollment approximately 11,000 or closer to 11,500? The third dimension simply muddies the data.



- Avoid excessive repetition of design and/or transitions. A design and color scheme that is effective and appealing for several slides can become tedious when used too much. Likewise, slide transitions can interfere with the visual effectiveness of a presentation and, when the same transition is repeated over and over, can become monotonous.

Thinking about Visual Presentations

In addition to the observations offered above, the literature on graphics and information design can provide a useful set of frameworks to plan and implement your own work related to developing visual presentations. There are many excellent Web resources available on this topic (including the "Guidelines for Forum Presenters" available on the AIR Web site), as well as more traditional scholarly and professional outlets. A comprehensive review of this literature is beyond the scope of this article, but we highlight below ideas, insights, and resources that should prove useful to the AIR community in preparing visual presentations (and some of which also helped inform the development of the BVP award itself).

Among those working in this area, Edward Tufte is a well-recognized name in both scholarly and professional fields. Professor Emeritus at Yale University, Tufte is the author of seven acclaimed books and taught courses on statistical evidence, information design, and interface design. Tufte recently wrote an influential essay titled "The Cognitive Style of PowerPoint," in which he argues vociferously that such programs reduce the analytical quality of most presentations, and that "the popular PowerPoint templates (ready-made designs) usually weaken verbal and spatial reasoning, and almost always corrupt statistical analysis" (http://www.edwardtufte.com/tufte/powerpoint).

Writing in Wired magazine (http://www.wired.com/wired/archive/11.09/ppt2.html), Tufte summarizes his concerns about PowerPoint-driven presentations in this way:

> Presentations largely stand or fall on the quality, relevance, and integrity of the content. If your numbers are boring, then you've got the wrong numbers. If your words or images are not on point, making them dance in color won't make them relevant. Audience boredom is usually a content failure, not a decoration failure.
>
> At a minimum, a presentation format should do no harm. Yet the PowerPoint style routinely disrupts, dominates, and trivializes content. Thus PowerPoint presentations too often resemble a school play – very loud, very slow, and very simple.
>
> The practical conclusions are clear. PowerPoint is a competent slide manager and projector. But rather than supplementing a presentation, it has become a substitute for it. Such misuse ignores the most important rule of speaking: Respect your audience.

So how might we best develop and organize presentation content? In another work, Tufte identified principles of graphical excellence useful to those creating visual presentations (Tufte, 2001). To quote (p. 51):

> "Graphical excellence is the well-designed presentation of interesting data—a matter of *substance*, of *statistics*, and of *design*.
>
> Graphical excellence consists of complex ideas communicated with clarity, precision, and efficiency.
>
> Graphical excellence is that which gives to the viewer the greatest number of ideas in the shortest time with the least ink in the smallest space."

These principles are important touchstones against which to evaluate both the visual and substantive quality of presentations. Presented as statements of logic and argument, they force the presenter to think through what it is she wants her audience to learn, whether and how evidence supports assumptions or conclusions, and whether visual material helps or hinders making these points. Put another way, adherence to the graphical principles sharpens the *substance* of the presentation.

In addition to observations useful for organizing presentations, Tufte (1983) has contributed to our understanding of effective and efficient displays of data that are often incorporated into visual presentations. He asserts that such displays are those that have eliminated chartjunk (graphical elements that are really clever flourishes, but not useful contributors to the display or understanding of data), maximized the ratio of data to ink or pixels (which implies the reduction or elimination of gratuitous graphical decoration), included multifunctioning graphical elements (ones that simultaneously serve multiple purposes), and demonstrated high data density (e.g., the ratio of data points to area created by the related graphic). Bounford's book on "Digital Diagrams" (2000) is a useful supplement to the work of Tufte, as it serves as a useful reference to ideas and examples that can guide effective practice in this area.

Concluding Comments

Given the growing importance that information plays in organizational analysis and decision-making, it is our hope that these comments will be useful to the AIR community. Developing professional skills related to the creation of visual presentations will be an ever-increasing component of the repertoire of institutional researchers in our view, and we intend these observations and resources to be useful in helping create such skills, which will be displayed over time at professional conference presentations and within colleges and universities with increasing routine.

Presentations recognized by the AIR Best Visual Presentation Award Committee

2003

Martin Carroll, Audit Director, Australian Universities Quality Agency (AUQA), "Australian HE Quality Assurance – Domestic and Abroad" (winner).

Susan Broyles, National Center for Education Statistics, "IPEDS" (recognized for good practice).

Janice Ennis Kelly, Senior Survey Director, RTI International, "IPEDS Helpdesk" (recognized for good practice).

2004

Nick Roberts, George Mason University and **Soham Bhatt**, Kennesaw State University, "A Systems Approach to Constructing a Fact Book Information System" (winner)

Daina Henry, College of William and Mary, "
7 Habits of Highly Effective Institutional Researchers (and other pearls of wisdom)" (recognized for good practice).

Editor's Notes

> "Practice doesn't make perfect, because you can practice bad habits and never get any better.... You play like you practice, and if you practice correctly, you'll play correctly." Attributed to Cal Ripken Sr. , (http://eteamz.active.com/hilton/news/index.cfm?cat=217459, accessed March 2005)

Several years ago, AIR reported "The first selection for the award for the Best Visual Presentations at the 2003 AIR Forum. The winning entry, by Martin Carroll of the Australian Universities Quality Agency, is on the AIR Web site. The winner was acknowledged at the 2004 AIR Forum in Boston." (http://airweb.org/images/2004annualreport.pdf, accessed March 2005) With this announcement, the Association initiated the Best Visual Presentation Award.

It would seem that two thoughts frame the purpose of this *IR Applications* with the observations from the members of the Best Forum Visual Presentation Award Committee and make it an extremely valuable addition to our publications. First, the presentations we need to do as part of our profession have some unique needs based on our profession. Second we can get better by making our "Best" work more visible. On the first note, our profession places a great deal of emphasis on developing and using analytical methodologies, some quantitative and some qualitative. It does so in the context of the

complex and often political issues of higher education. Having gotten to the point of application, our work, our methodologies, and our results must be delivered to individuals, frequently within an interpretative presentation. This presentation occurs within two of the unique challenges of our profession. Much of what we deal with is data based and data do not tend to be exciting. Another unique part of our profession is that many of our results come from methodologies that are rather complex and are not, in general, amenable to explanation in a 15-30 minute presentation much less a five minute summary. This then identifies the need for many of us to do presentations and to do them as effectively as possible.

The Forum is where we practice our craft and where we seek to improve. Certainly not all of us every year – but several hundred of us share our work ever year. Furthermore these contributions range across the tracks of or profession. Dr Bers and her colleagues give us some "do's" and some "don'ts." These recommendations seem to be made more necessary by the ease of graphics as evidenced by PowerPoint, Adobe, plots from Excel and SPSS, and numerous other packages. The needs for "Best Visual Presentations" practices are also evidenced by the web site versions – but that is another discussion.

The combined thinking goes beyond the does and don'ts to apply many of them to our methodologies and our presentations. It gives examples of those presentations selected as best.. It shows and tells why while leaving some latitude for your judgment of what you want to do and how you want to do your presentation. It looks at both projected and printed presentations but focuses mostly on the projected. It does not make you and expert but it gives you the start to improve the quality of your presentation.

I hope you will take some of the presentations you have seen, and perhaps some you have given, and use this as a template. How many words on the slide? How was contrast used? How much room was taken by the standard format before the message was presented?

Summary

It is obvious that our profession puts a lot of emphasis on the importance of delivering the results of our research and our reports in as effective manner as possible. The Best Visual Presentation award has given us the opportunity to compete for recognition of the quality of our work. In establishing this award, the Association has followed the advice of General Douglas MacArthur. when he had the following verse inscribed on the portal of the West Point gymnasium: "Upon the fields of friendly strife are sown the seeds that, upon other fields, on other days will bear the fruits of victory." Stephen E. Ambrose, *Duty, Honor, Country: A History of West Point* (Baltimore: The Johns Hopkins Press, 1966, p. 275), as cited in http://www.au.af.mil/au/awc/awcgate/saas/ohalloran.pdf

But even more than the fact that the competition for best visual presentation gives us the opportunity to practice and to compete, by sharing their thinking with you, in this article Dr Bers and the committee are reminding you of the fact that just practice is not enough. If you want to improve the way you apply our craft you need to "practice correctly."

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IR Applications is an AIR refereed publication that publishes articles focused on the application of advanced and specialized methodologies. The articles address applying qualitative and quantitative techniques to the processes used to support higher education management.

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Authors can submit contributions from various sources such as a Forum presentation or an individual article. The articles should be 10-15 double-spaced pages, and include an abstract and references. Reviewers will rate the quality of an article as well as indicate the appropriateness for the alternatives. For articles accepted for *IR Applications*, the author and reviewers may be asked for comments and considerations on the application of the methodologies the articles discuss.

Articles accepted for *IR Applications* will be published on the AIR Web site and will be available for download by AIR members as a PDF document. Because of the characteristics of Web-publishing, articles will be published upon availability providing members timely access to the material.

Please send manuscripts and/or inquiries regarding *IR Applications* to Dr. Gerald McLaughlin.