

# Measuring Information Architecture Quality: Prove It (or Not)!

## Organizers:

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## Panelists:

**Shiraz Cupala**, Microsoft Corporation

**Jesse James Garrett**, Metrius

**Marti Hearst**, School of Information Management & Systems (SIMS), University of California, Berkeley

**Gary Marchionini**, School of Information and Library Science, University of North Carolina at Chapel Hill

**Nick Ragouzis**, Interfacility

## ABSTRACT

This panel debates a topic that has been popping up recently as a consequence of different disciplines rubbing up against each other in a new field: can the quality of an information architecture be measured quantitatively? And if so, how can this analysis be verified?

Information architects and HCI professionals already are discussing this issue regularly and at times heatedly. The need for guidance is especially pressing because information architecture is an emerging field. As in other areas of HCI, information architects are regularly confronted by clients and employers alike with the need to justify the cost of their efforts in quantitative ways.

Information architects come from a variety of disciplines including HCI, library and information science, visual design, technical communications, and computer science. These fields have widely varying opinions on the validity of and techniques for quantifying information system performance. While some dispute the validity of quantification, others tend to believe that it is not only possible but the only valid means for assessing information architecture. Members of both camps may resort to traditional means of assessing information systems performance, while others feel that the new medium of the Web requires new tools, techniques, and approaches for such assessment.

## KEYWORDS

Information architecture, metrics, evaluation, information systems performance, automated evaluation, qualitative methods.

## ISSUES TO BE COVERED

Panelists will be asked to state their position on these questions for five minutes apiece, followed by open debate and audience participation:

- Can an information architecture be measured as a whole, or can it only its components be measured?
- Prove your case (that it can or cannot be measured).

Follow-up questions could include:

- How does evaluating the information architecture differ from evaluating the user interface? The user experience?
- What levels of evaluation (such as qualitative, “soft” quantitative and “hard” quantitative) are appropriate at which times?
- What are the strengths and weaknesses of these qualitative and quantitative approaches?
- Are different architectural components (e.g., table of contents, site hierarchy, search system, contextual and global navigation) more measurable than others?
- What are specific examples (case studies) from large sites where measurement attempts have been made?

## INTENDED AUDIENCE

Information architects and HCI professionals interested in how to determine the value of a web site or information systems in general. CHI attendees who are applying their knowledge to large Internet and intranet sites will be interested.

## PANELISTS

For Quantification	<b>Marti Hearst</b> , research and tools <b>Shiraz Cupala</b> , business and user experience
Against Quantification	<b>Nick Ragouzis</b> , quantification follows innovation <b>Jesse James Garrett</b> , analysis tools lack contextual knowledge
Multifaceted	<b>Gary Marchionini</b> , both quantitative and qualitative

## POSITION STATEMENTS

### Marti Hearst

Assistant Professor, School of Information Management & Systems (SIMS), University of California, Berkeley, [hearst@sims.berkeley.edu](mailto:hearst@sims.berkeley.edu)

Quantification is necessary for automation, although the converse is not necessarily the case. I believe (most aspects) of information architecture quality can be quantified, and that new tools are needed to augment existing ones in order to make this happen.

These tools do not yet exist, but my research group is actively investigating how to develop them (see the paper by Ivory, et al. in this proceedings). It is imperative that such tools be verified with user studies and that their results be seen as complementing those of other methods.

### Shiraz Cupala

Lead Program Manager, Microsoft Corporation, [shirazc@microsoft.com](mailto:shirazc@microsoft.com)

If work on Information Architecture can improve usability and experience, this improvement necessarily must be measurable. If not how would we know it happened?

When you ask someone to improve an IA or to evaluate two IAs to see which is better, they are doing those things with an eye to some set of criteria that they define as important to that work.

I purport that the measures can be quantified down to the level of the factors/features driving them. Further they all must be measured to get the complete picture of the performance of an IA.

### Nick Ragouzis

Principal, Interfacility, [nick@interfacility.com](mailto:nick@interfacility.com)

Quantification seems an important goal. After all, the progress of science depends on quantification. Or does it?

One familiar with HCI research could readily conclude that those in applied practices rarely know of even established research results (let alone more recent results). They rarely have a method for evaluating that research (especially in disambiguating popularized applied-domain “findings” from well-executed research) and integrating it into practice. They are equally slack in pursuing research in other domains and reconciling it with HCI research. They almost never credibly analyze their implementations.

However, with the rise of interaction design and information architecture, and the overt intention of delighting end users even while making their lives easier, the design community has continued their push into the experience domain. Over decades, without a credible basis for defining or measuring the whole of human experience, they have garnered an astounding quantity of successes.

One could conclude that success in this domain requires only the ability to innovate or to follow strategically, and the ability to deliver user-perceptible value.

Which is another view of science: that quantification merely follows, but that science (especially the social sciences) proceeds through innovation and serendipity in theory and application, and by the delivery of ultimate value. Abandon quantification; and may the fittest win.

### Jesse James Garrett

Information Architect, Metrius, [jjg@jjg.net](mailto:jjg@jjg.net)

A software tool might be able to count the clicks to a destination, but how can it evaluate the contextual information that steers users along the right path? It might be able to count the words in navigational labels, but how can it know if they are the right words?

In the four years I have been dealing with information architecture issues in Web development, I have encountered this fallacious thinking time and again: that problems arising in a technological context must therefore have a technological solution. In my experience, only the application of our own human intelligence can enable us to avoid casting users into a well-intentioned but ill-conceived array of “shortcuts” to their goals.

### Gary Marchionini

Professor, School of Information and Library Science, University of North Carolina at Chapel Hill, [march@ils.unc.edu](mailto:march@ils.unc.edu)

I do believe we can measure the usability and effectiveness of a design for very fine-grained characteristics such as number of clicks to task, mouse-travel distance from object to object, and average response time for an N-term query. I am skeptical that we can have a standardized overall measure of IA effectiveness.

My approach to the measurement of digital libraries and interfaces has thus been multifaceted and longitudinal (or at least iterative when time is short). I believe these same approaches apply to IA evaluation.

Multifaceted approaches use several techniques and metrics to gain a fuller view of the design. Triangulation within or across quantitative (e.g., results of transaction log analysis) and qualitative indicators (e.g., user self-reports via interview or questionnaire) can lead to plausible conclusions about design effectiveness, for different site topologies and mission characteristics.

## ORGANIZERS

Lou Rosenfeld is the President of Argus Associates and co-author of *Information Architecture for the World Wide Web*. Keith Instone is an Information Architect / Usability Specialist at Argus and curator of Usable Web.