

If “A Picture is Worth a Thousand Words,” What is a Video Worth?

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In a 2014 *Huffington Post* article, writer Scott MacFarland asks, “If a picture is worth a thousand words, what is a video worth?” (1). McFarland suggests that we are in the midst of a paradigm shift, and if “a picture is worth a thousand words then maybe a moving picture (video) is worth a million people.” Statistics show that in the United States, 75 million people watch videos online each month and 40 billion videos are streamed monthly.

These numbers are simply staggering considering that I personally feel somewhat impactful when one of my published articles gets referenced more than 10 times a year. As we all know, having a scientific article “go viral” just doesn’t happen that often, and while the number of eyeballs may not be a metric that scientists strive for, providing our scientific findings in the most impactful way using the most astute media capabilities seems to make a lot of sense.

Traditional publication venues are confined in a 2-dimensional world using multipanel figures which condense in size with increasing panel numbers thereby increasing the information content. As figures become more and more complex, they become increasingly more difficult to interpret and to derive meaningful information.

Radiology Takes Place in a Multidimensional World

Why are we still using outdated forms of communication while publishing papers when this is not how we interact with the data in the lab or clinical environment? *Tomography's* solution is a digital publication format (dPub) that provides authors an opportunity to position movies directly within an article. To illustrate the power of dPub, 3 orthogonal views of diffusion-weighted MRI extracted fiber tracts are shown in Figure 1. Two-dimensional panels can be difficult to conceptualize into a 3-dimensional object. Clicking on the  PLAY VIDEO button in the figure caption in the dPub allows for more rapid and precise communication of information content as illustrated when comparing the 2-dimensional information with the 3-dimensional video content. This single example serves to illustrate the significant potential of *Tomography's* dPub capabilities to provide more effective communication of information as the location of fibers surrounding the tumor are more spatially definable within the brain parenchyma. Thus transmission of this information from the author to the reader is much more effective using video content within our dPub format.

Tomography provides authors with several options for embedding videos into articles. The  PLAY VIDEO button may be positioned within the text. Alternatively, videos may be placed within the actual figure. Both options allow for more effective

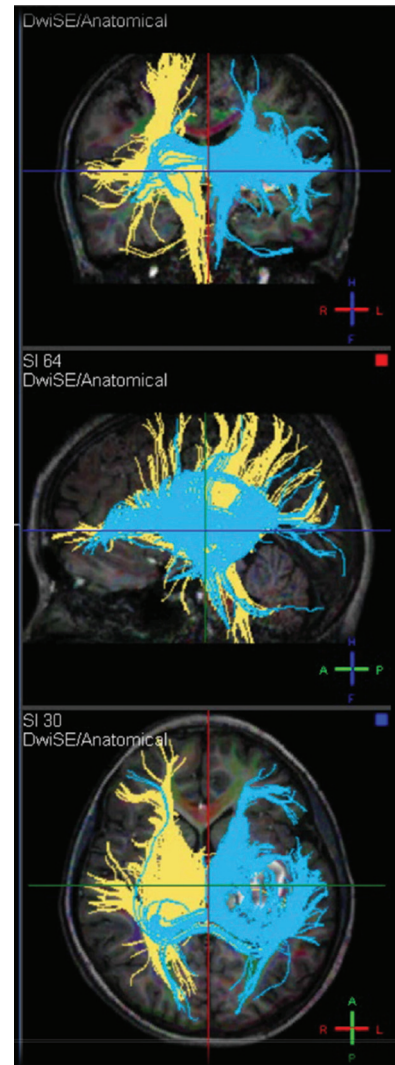



Figure 1. Diffusion weighted MRI delineation of fiber tracks in the brain of a subject with a primary brain tumor shown in 3 orthogonal planes. (Kindly provided by Dr. T. L. Chenevert, University of Michigan). There is also a video of the same subject  which vastly improves the information content available to the reader.

use of digital technology and authors are encouraged to utilize their own creativity when including video content within *Tomography's* digital publication. In this issue of *Tomography*, Dr. Peter van Zijl inserted a video that shows dynamic glucose enhanced difference images of a human subject with an anaplastic astrocytoma (2). The video provides direct viewing of the temporal glucose wash-in process in real time with 5.3 s time resolution. Thus dynamic temporal and spatial information may be incorporated into articles published in *Tomography* in a very meaningful way. Moreover, in this issue of *Tomography*, Dr. Naoharu Kobayashi and colleagues used dPub's video-enabling capabilities to more effectively visualize the complex structures of the inner ear by presenting to the reader different projected planes of MIP images (3). The examples published in this current issue should inspire authors to publish in *Tomography* as we

believe that this is the future of communicating information in Radiological Sciences.

One of the goals of an actionable communication platform is to provide information content that makes the reader feel more comfortable as if they were in the lab or clinical reading room. In this regard, *Tomography* will continue to evolve and incorporate diverse advances in this new era of digital publication to provide for an overall greater impact in the field of imaging sciences. On behalf of all Editorial Board Members along with myself, I invite our readers to participate in making *Tomography* a top-tiered and technologically savvy journal for the publication of papers which are relevant to scientists, clinicians, and the general population.

Supplemental Materials

Video: <http://tiny.cc/tom-01-02-s002>

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3. Kobayashi N, Goerke U, Wang L, Ellermann J, Metzger GJ, Garwood M. Gradient-Modulated PETRA MRI. *Tomography*. 2015;1(2):85–90.