

Q&A with Marc Tayer, author of *Televisionaries*

1. What motivated you to write this book?

From the first day of my involvement in General Instrument's digital television project, I knew there would be a compelling story to tell someday. Joel Brinkley wrote a very good book in 1997 called *Defining Vision: The Battle for the Future of Television*. But Brinkley's scope was mostly limited to the FCC process of selecting an over-the-air advanced television broadcast system. Moreover, his book was published before HDTV became commercially available, and also before DVRs, VOD, and the Internet became major factors.

With Netflix and YouTube now in the limelight, it seemed like time had passed by the significance of digital TV's origins. The story was becoming lost in history. A couple things happened that inspired me to start writing, and I didn't stop. Fortunately, I had saved a treasure trove of magazine articles, newspaper clippings, and documents from the early days, when it literally felt like we were in a race to change the world. I also had access to a lot of key people who were willing to tell me their personal stories and help me fill in the gaps.

We are now in the twenty-fifth year after the invention of digital television. Walter Isaacson's new book, *The Innovators*, was published in October 2013, documenting the remarkable inventors of chips, software, computers, and the Internet. But he doesn't cover digital TV. It's time for the story of digital television to be told!

2. Why didn't Walter Isaacson's book include a discussion of digital television?

You'd have to ask him, but I've been puzzling over that question and I think it comes down to two main reasons. First, Isaacson's book is focused on computers and the Internet. In one sense, digital TV is an extension of analog TV, an older innovation that isn't covered in his book. But more broadly, digital TV represents the intersection of computers and television, so he could have written about digital TV in that context.

Second, there is a lot of confusion regarding "what is digital TV?" Some people think of it as "HDTV" while others think of it as "Netflix." In reality, digital TV is much more fundamental than either of those things. It's the conversion of the television delivery infrastructure from analog waves to digital bits, allowing hundreds of channels, new video service providers, better quality pictures, and new consumer viewing behavior. Digital TV is perhaps more amorphous and not as singular of an invention as the semiconductor chip or computer software. It's an entire communications system platform comprising digital compression, digital transmission, encryption and security, consumer navigation, and related apps — embedded in chips, software, and hardware.

In this context, GI's true innovation was not only its breakthroughs in digital video compression technology. Even more importantly, it was the company's ability to synthesize an entire end-to-end communications system, incorporating the various elements mentioned above.

3. What was your role in the digital TV revolution?

I was directly involved since the beginning, and feel very fortunate to have been in the right place at the right time. In 1989, after returning to General Instrument (San Diego) from a business trip to Japan, I was told by our division president that I had a new job – to bring our new digital TV technology out of our R&D labs and turn it into a business. At the time, we had a management structure whereby each major project had a “core team” comprising personnel from each discipline (engineering, marketing, sales, operations, finance, etc.). As the core team leader, my initial role was to coordinate the various activities, ensuring that the team worked together cohesively, and also to shepherd the project through its various milestones and development phases. At the same time, I was responsible for the initial product management and market development activities for GI's digital TV project.

I remained involved in the digital TV business as it evolved over the next twenty-five years, including the broadband Internet phase. I had many different roles during my tenure at GI/Motorola, mostly in business development and marketing. I was also responsible for GI's technology licensing in the mid-1990s. As an adjunct of that role, I was chairman of the MPEG-2 Intellectual Property Rights group, leading to the formation of MPEG-LA, the patent licensing administrator. Then I became VP of Business Development; VP and general manager of our international business unit; and VP of Global Marketing.

I didn't expect to stay at the same company for so many years, but GI was a pretty exciting place to work. GI was a technology company at the epicenter of the entertainment and communications industries. The subscription TV business and GI's forte—the underlying broadband technology infrastructure—was very dynamic and made for an interesting career. After leaving Motorola (which acquired GI in 2000), I co-founded two digital video tech start-ups (Aerocast and Imagine Communications), and also worked for Cablevision/Rainbow Media. Most recently, I was an independent consultant in the media technology field until I decided to write this book.

4. Where is the industry going?

We are living through the most confusing and exciting period ever for the television business. It is unfolding before our eyes. Consumers are being inundated with an overwhelming choice of new technologies and services. Important topics

like cord cutting, net neutrality, a la carte content, and 4K Ultra HD are constantly in the news.

It is impossible to understand how everything fits together without the context and framework of where it all came from. The mission of *Televisionaries* is to connect and convey the history and dynamics of these myriad factors in a comprehensive, entertaining, and comprehensible narrative.

5. Why did you end *Televisionaries* with the epilogue “2101, A Video Odyssey”?

In the last section of the book, I discuss the current state of the industry and prognosticate about its direction with respect to various business, technological, and regulatory issues. So in that sense it seemed natural to end the book by fast-forwarding into the future. But I realized the writing style and futuristic nature of “2101, A Video Odyssey” were major departures from the nonfiction genre of the rest of the book. So I made it an epilogue instead of the final chapter. This also provides structural symmetry with the prologue, which briefly recounts television’s analog origins.

6. What else do you like to do?

I love to spend time with family and friends. My favorite outdoor activities are skiing, surfing, and tennis. I play the piano and enjoy traveling and cultural events such as theater and music. In recent years, I’ve also done quite a bit of volunteer community work.