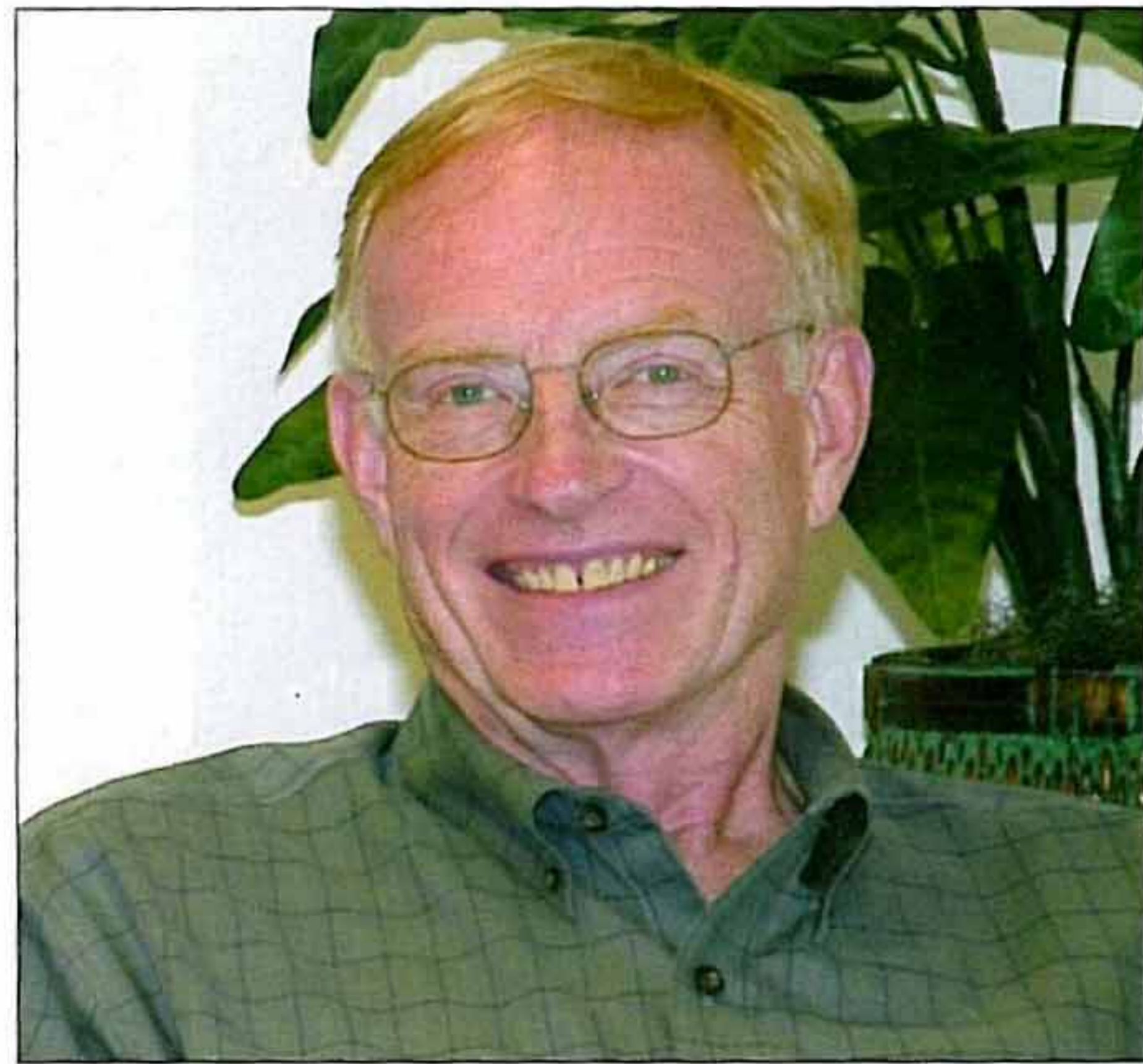


Malcolm's Silicon Valley background makes him well-placed to forecast future trends

# Master and server

**Michael Malcolm**, founder, chairman and CEO of Kaleidescape, talks about the future of AV content delivery in the home



**Q: How did Kaleidescape form, and how did its technological lead in video distribution for the home come about?**

**A:** After many years in Silicon Valley, founding and running companies like Network Appliance and Cacheflow that targeted the enterprise market, I was ready for a different challenge. I wanted to work in a new category of technology, and cre-

will be capable of receiving licensed content in the future through internet delivery or via hard-disk cartridges.

**Q: Multi-room distribution of audio is an accepted part of many residential installations, but parallel distribution of video is still in its infancy. How easy has it been to convince integrators and**

like multiple named favourite scenes, and the ability to sort and filter your collection, offering consumers the ability to take full advantage of their DVD collection the same way that they use their music servers for their CD collection.

In this context, the Kaleidescape System is capable of transforming the home entertainment experience for maxi-

**DVD. What is the company doing to assure people of its systems reliability?**

**A:** We built the Kaleidescape System to do one thing very, very well – deliver high-bandwidth, high-quality entertainment content throughout the home. The Kaleidescape System has been put together using entirely new components and ground-breaking technology. And our record speaks for itself. To date, we have sold over 4,000 components worldwide and not had any customer returns. One hundred percent of our customers are satisfied. Our view is that this exceptional build quality and performance reliability is fundamental to our success. It will ensure that homeowners are delighted with the product, and that installers can maximise their own profitability by keeping call-backs, service and maintenance costs to a minimum.

**'Entertainment has gone digital and control systems will have to evolve to reach a broader market – in terms of both price and ease of use'**

ate products that would fundamentally change the entertainment market.

Working closely with two former colleagues who became my co-founders at Kaleidescape, Cheena Srinivasan and Dan Collens (now COO and senior director, engineering, respectively), we gravitated towards the idea of developing a system that could deliver high-quality video over the internet. We forecasted that in the next 5-10 years the proliferation of content that may never be made available in shrink-wrapped retail DVDs would represent a great opportunity for online content delivery methods.

To address that opportunity, we sought to develop a hierarchical distribution system for video content with very large file sizes over the internet in a secure and economical manner. As our first step, we created an entertainment server that could securely store hundreds of DVDs per server, could be easily expanded to store a virtually unlimited number of titles, and distribute that content anywhere within a residence. This system

**end-users that the Kaleidescape solution is useful and viable?**

**A:** Multi-room video setups in the US are quite common. Over 80% of US households have at least one DVD player in their home. 135 million DVD players have been sold to 80 million households and according to industry reports more than 46% of households in the US have multi-room DVD playback capabilities.

The phenomenon of the DVD has seen collections rapidly increase and it is generally deemed more economically sound to purchase rather than rent. Over 4.7 billion DVDs have shipped since 1997 in the US alone and an average household has over 60 DVDs. As collections grow, and especially in multi-room situations, discs are transferred from room to room to accommodate the entire family's entertainment needs. With huge DVD collections, problems arise – shelf space management, broken DVD cases, missing DVDs, and so on. We see these same trends and issues emerging now outside the US, in Europe and beyond.

Also, it's important to understand the distinction between multi-room audio and multi-room video systems. Most people believe that listening to music is a passive, background activity that you do whilst doing something else in the home – eating a meal, taking a bath, etc. Whereas with DVD video, you're forced to set aside dedicated time to relax and watch. This is a direct result of the way we have been trained to watch movies at home. The DVD players don't offer the flexibility for customers to interact with their collections the way they are able to do so with music servers. The Kaleidescape System offers features

num entertainment in an effortless manner. Benefits are huge for people who want to store, manage, play and enjoy their music and video collections like never before. With the Kaleidescape System, it's easy to locate films, source movie details and create personalised collections.

Integrators have seen the benefits too. They recognised that with this system they could excite their customers with a brand new category of consumer electronics product. At the same time, they realised they could grow their revenue streams and build business with an easy-to-install and extremely reliable technology platform.

**Q: The Kaleidescape System relies on an Ethernet infrastructure. This is commonplace in American homes but less so in Europe, where historic buildings can make it hard to retrofit such a network. Is the company targeting new-build projects here, or is it hoping to encourage the provision of Ethernet networks in older homes?**

**A:** New homes are indeed easier places to fit the Kaleidescape System. However, getting a cable installed is generally not a problem for the homeowner, or most installers. We have not lost a single sale yet from the installer not being able to pull a wire. And in properties where a custom installation has already taken place, the system is especially straightforward to retrofit, offering a great way for installers to go back to their customers, and add value to a project.

**Q: Some integrators and end-users may feel that Kaleidescape's technology is unproven compared with VHS or**

**Q: Many industry analysts believe that the real growth in residential systems will be generated by the middle market. Is Kaleidescape working on solutions that will be available at a lower price-point, to address this?**

**A:** I agree with the analysts. Over time, the cost curve on technology will make our products less expensive to make, and we will be able to reduce the price. We may also create another product line with greater appeal to the middle market.

**Q: What other developments will influence our industry, and what will Kaleidescape be doing to address them?**

**A:** Improvements in user interfaces and control systems will have the most profound impact on the industry. Simplicity and reliability will fuel the growth of home entertainment servers. Entertainment has gone digital and control systems will need to evolve to reach a much broader market – both in price and in simplicity of use and integration. And finally, content distribution will evolve and the industry will move away from physical media to online delivery. Kaleidescape is well positioned to take advantage of all of these trends and help further improve and personalise the home entertainment experience. ■

[www.kaleidescape.com](http://www.kaleidescape.com)  
Interview: Tom Bradbury



Kaleidescape hardware is concealed within an elegant outer casing