

# What Comes First - the Virtual or the Real?

**Keywords:** avatars / virtual retailing / virtual product development

## **Abstract**

*This research focuses on questions relating to the emergence of the body-tech avatar as a fashion marketing and product development tool. The avatar is a graphical image of the viewer that is widely used in massively multi-user online virtual reality environments (MMOVRE) and games. It can symbolize a range from fantasy to idealistic to realistic representations of the user. The avatar is also currently emerging in the retail sector as an idealized generic and/or customized marketing tool for an expanding variety of fashion products and uses. This industry/market exploration will address an array of questions relating to the avatar as a marketing and/or product development tool. What impact does it have with the merchandising of fashion products? How are potential customers reacting to developing an idealized generic and/or customized avatar to model fashion items? What types of products and/or services can be successfully marketed using this body-tech tool? What are the benefits of using 3D avatars for fashion product development? Can virtual in-world avatars promote real world fashion brands? Can virtual in-world avatar fashions be successfully produced and marketed in the real world? Divergent real and virtual world research will provide a convergent overview of how avatar body-tech marketing and product development tools are impacting each other, the users and their target markets.*

## **Introduction**

An avatar<sup>1</sup> is a graphical image of the viewer that is widely used in massively multi-user online virtual reality environments and games. Avatars can diverge to reflect a range of forms from fantasy to cartoon-like to idealistic to photorealistic representations of the user. Up until recently avatars have primarily been restricted to a variety of video games and massively multi-user online virtual reality environments (MMOVRE). There is a rapidly expanding emergence of the virtual avatar as a personalized body-tech fashion product development, retailing and marketing tool.

This exploration illustrates a divergent variety of different types of personalized avatars, their intended fashion related end uses, as well as new convergent ways they are evolving for product development, marketing and retailing. The overall goal will be to observe the impact of the integration of the avatar into product development, marketing and sales of fashion

products. Focus will also be on product development and user-centric retail applications that customize the avatar to reflect various aspects of the user. Benefits of developing customized 3D avatar models for product development and online retailing are pointed out. How avatars are being used for promoting real world brands, targeted advertising, simultaneous in-world/real world product marketing and future trends are presented.

### **Avatars for Fashion Product Development and More**

The OptiTex application represents the future of virtual fashion product development that incorporates customized body-tech avatars. According to Yoram Burg, President of OptiTex<sup>2</sup> at the MCPC 2007, '3D is not just a tool but the future.' I very much agree with him. OptiTex is a system that does it all – it digitally integrates all initial design and product development steps into one application, including a linked 3D customized avatar. The user can draft a computerized sloper into the PDS (Pattern Design System) that can be endlessly modified to include original styling lines. A grading table can be easily applied, adding multiple sizing to enable marker making. The integrated application includes Modulate, an interactive parametric, one-of-a-kind, made-to-measure software engine. Each parametric style fits a particular set of dimensions that belong to a specific person or represents specific manufacturing requirements.

With this system, printing off the prototype pattern and assembling a muslin sample to fit on to a dress form has been eliminated for some Optitex clients. A customized 3D avatar takes the place of a traditional dress form (Figure 1) so that all modifications to the garment pattern (or fabric and/or surface pattern) can be automatically reflected on the 3D avatar (that can be animated). Specific fabric properties can be input and applied to the garment as well as custom designed surface pattern designs. Retailers will reach a much higher level of accuracy in the product development process using an accurate avatar that represents the targeted end user. This will result in better fitted garments, more rapid production times and quick response time for changing trends.

Burg stated in an e-mail 07 November, 2007:

'From a product development perspective, the avatar is the most important element in a creation of the garment, this is where the measurements are determined and the final look and feel helps determine whether the garment really fits or not.'



**Figure 1.** Adam is the newest OptiTex male avatar. (Yoram Burg, OptiTex, 2007)

What types of products and/or services can be successfully produced and marketed using this body-tech tool? According to Burg, this application can be used for “anything” from product development to marketing and web e-commerce. OptiTex works extensively with a variety of companies on the combination of the three. Initial digital development of a product that has the capacity to drape on to a 3D avatar will have a profound impact on quick response and cost effectiveness for mass customized and/or personalized products and online retailing.

Some examples of OptiTex partnerships can be found on Brides.com<sup>3</sup> where the user can create customized bridal gowns. Another example is on the Virtual Product Presentation<sup>4</sup> site where the user can order customized patterns. OptiTex worked with Nike to develop the Nike Team Uniform Builder site<sup>5</sup> and the Nike Shoe Designer site<sup>6</sup>. One partnership of special note is Tim Gunn’s Guide to Style show on Bravo<sup>7</sup>, and there is a new product release with Bernina called Bernina MyLabel<sup>8</sup>. This 3D fashion pattern software product provides home sewers with a library of garment templates. The user inputs their measurements into the system and a customized 3D avatar representing the user appears. The selected garment template automatically adjusts to the user measurements and a pattern can be printed out. This system has the potential to transform the home sewing market.

Burg stated in an e-mail 07 November, 2007 that the market did not accept the virtual prototyping so openly only two years ago. There was skepticism with regards to avatars accurately reflecting real life (RL) measurements. After some time passed his customers realized that a well designed avatar and a well designed 3D product is something that is based on accurate information. Such an avatar was developed along with educational institutions. Some brands and retailers are working only with 3D virtual prototyping. Each Individual company develops their own set of avatars or actually scans in their fit models so they can work on the RL looking body, not the computer symmetric version of it. The benefits of using 3D avatars for fashion product development are perfect fit, mass customization, cost effectiveness for design, development, prototyping and e-commerce marketing.

### **Early Introduction to Personal Avatars for Retailing and Marketing: Pre-Teens, Tweens & Teens**

For pre-teens, Webkinz®<sup>9</sup> is a controlled closed on-line environment that bridges the virtual and the physical worlds. As part of the Webkinz® marketing phenomenon for the pre-teen set, the Webkinz® owner keys in a secret code and a furry virtual avatar is created to compliment the real world Webkinz® plush product. According to a graph in the Wall Street Journal Online (Steel 2007), participation in Webkinz® has increased 592% for September 2007 from the previous year. With number like that, the rush is on for retailers to develop their own virtual marketing strategies. Club Penguin®<sup>10</sup> is another pre-teen kid-friendly online virtual game. In addition to games and social interactivity there is a shopping section to purchase real world items. Visitors have increased 147% at Club Penguin® since last September to 4.7 million (Steel 2007).

For tweens, the online virtual concept of Barbie® Girls is similar to Webkinz®. The user can shop, chat, design fashions or play games. For the older teen crowd, Virtual MTV<sup>11</sup> (a downloadable application) is affiliated with multiple MTV shows. There are social events, shopping and music sections. Users are encouraged to design their own virtual fashions.

H&M<sup>12</sup> is at the forefront of tween virtual avatar branding with the combined marketing promotion of H&M and The Sims®<sup>13</sup>. The integration of H&M into the Sims® game as well as the Sims® and H&M Virtual Runway Fashion Runway Design Competition<sup>14</sup> represents the branding/marketing impact potential of fashion in virtual game worlds. According to Michault, the 'world is not big enough for the global fashion community' (2007, para.1). It is only a matter of time before other retailers will really catch on to the marketing power of virtual fashion competitions and brand identity.

H&M branding and marketing of fashions virtually via the Sims are not the only big major retailer entering the virtual marketplace through “twens” interest in virtual “avatar” fashion dolls. According to Guy (2007, para.7), Sears<sup>15</sup> launched a partnership with My Virtual Model™(MVM)<sup>16</sup> and Donnerwood Media Inc. (Meez)<sup>17</sup> to develop the e-Me<sup>18</sup> site. E-Me is another term for personalized avatar that the user can dress in a wide variety of customized shoes and apparel that is available on the Sears site. The tween user saves the virtual clothing virtual closet and the parent can then select items from the closet to order in the real life (RL) retail world – with a 10% discount. Sears is definitely on the cutting edge of virtual branding and marketing with e-Me. The addition of the on-line games possibly inspired by the Webkinz® gaming concept should elevate user participation, social interaction and elevated brand awareness.

Sean Ryan, CEO of Donnerwood Media Inc. (Meez) stated at the Mass Customization and Personalization Conference 2007 in Montréal<sup>19</sup> that in 2008 Meez will give users tools to modify and upload content. Meez Games<sup>20</sup> were launched at the beginning of October, 2007. Currently there are over four hundred Meez videos on U-Tube. The results of a recent survey the company conducted revealed that mothers are the top user group. Additional company research indicated that the 3D web is still considered hard to do but users readily accepted an integrated Web-based activity like Meez.

### **Mass Market: Online Avatars for Marketing and Retailing**

Direct online market research indicates that one of the most prevalent and popular avatar retail marketing tool that is embedding itself into online shopping and social networking is the personalized virtual model. A company that is on the cutting edge of this virtual merchandising tool is My Virtual Model Inc. (MVM), co-founded in 1993 by Louise Guay, Ph.D., and Jean-François St-Arnaud. The release of My Virtual Model in 1997 represented a major breakthrough in online personalized customer service.

MVM My Dressing Room™ enables consumers to “try on” clothes on the Internet. Users can create and customize their own personal avatar and “try before they buy” to get a better idea of how the fashion item will look on their figure. Optional features added to the basic package are virtual shopping assistants that include zoom, fit & size suggestions, recommended items, shop by outfit and the outfit wizard; my closet where you can save your personal profile as well as your selections and an e-mail option where the user can e-mail their personal model to others.

An up and coming company called myShape<sup>21</sup> is addressing the profiling of the users body measurements and multiple fashion searches based on style trends and advice to match the users shape type. myShape is powered by ShapeMatch™ a patent-pending system that matches clothing to an individual. An excellent example of mass customization and personalization are custom jeans that can be tailored specifically to the individual users measurements at Lands End<sup>22</sup>.

MVM's My Dressing Room™ application has a viral marketing feature that enables retailers to research and track individual shopping behavior and offer customized promotions. A novel self-improvement use of the MVM personalized avatar is the MVM-Weight Loss application for weight loss tracking and visualization. The display can show the start, current and goal weights side-by-side. MVM also provides product personalization services to other markets with a product called MVM Showroom™<sup>23</sup> that allows customers to visualize hard or soft goods. It can be used for kitchen, bedroom, bathroom, dining room, patio, etc.

An indirectly related comparable product I located is the Virtual Reality Fashion Tour from a company called 360 Promo™<sup>24</sup>. They offer services for developing 360 degree fashion, product and location virtual tours. You cannot customize this avatar or the products you select to place on the avatar – it simply provides a full 360 rotational view of the product as is. I would consider this a static virtual marketing tool and not an interactive (real-time) mass customization tool as the MVM products are. With the 360 Promo™, the user drags the mouse to rotate the image on a 360 degree rotation.

A wide range of products from all types of fashions, to home décor and home products can be successfully marketed using this tool. Wang et al. (2007) found that, 'Web sites that grab customers' attention, pique their curiosity and interest, and give them some control over the shopping process should increase patronage.' Two studies conducted by Holzwarth, Janiszewski and Neumann (2006, p.19) indicate that; the use of an avatar leads to more purchases, greater satisfaction with the retailer and the product; the positive impact an attractive or expert avatar has on the customer.

Baker's research is interesting from the point of view of the retailer. The results of her collaborative research with Wang, Wagner and Wakefield conclude avatars to be potentially powerful marketing tools for retailers. The research revealed that virtual avatars that are designed to simulate human interactions with users – can enhance shoppers' enjoyment and ultimately lead to increased sales (Neely School of Business Press Release 2007, para.1-4).

## **Users Are Driving the Personalized Avatar Development for Retail**

Louise Guay, President of MVM stated in a telephone interview 09 October, 2007,

'Mass media is transforming into personal media and advertising is transforming from customer relationships to personalized avatar advertising. Personal communities and networks as virtual worlds will surround users in unprecedented ways. It will start by personal catalogs and stores and extend wherever it will be needed and wanted by the users. The passage from 2D to 3D on the Web as well as the virtual identity is the next big thing.'

Currently the MVM company products are being developed as user-centric tools for merchants, they have recently introduced BrandME™ – I am the Brand, a social shopping virtual identity experience (SSVIE). According to Guay, It is all about the user because the user is driving the show today, they always want to create their avatars humanlike and photorealistic when they shop. Industry discussion at the Mass Customization and Personalization Conference (MCPC) 2007 focused on imagining that people will be able to control their identity which will bring a trusted high security program to the merchant and the user.

Guay visualizes users controlling and managing their profiles containing multiple avatars. Sometimes they will use a cartoon avatar when they want to play games or another type of avatar if they want to attend a conference or date in Second Life (SL) or other virtual worlds. They will also use their avatar model to shop because they trust the virtual identity program currently under development. This vision is in line with the Open Standards that Linden Lab (SL) and I.B.M. are currently working on.

After I joined FaceBook<sup>25</sup> and added the BrandME™ application to my FaceBook page, I realized first-hand that BrandME™ is a kind of a social shopping virtual identity experience that enables the user to be more mobile with their virtual model. There are multiple fashion brands to choose from. More brands are continually being added to BrandME™ and the user can mix and match different brands and save them to personal closet. The user can send their personalized model to themselves as well as to a friend or can embed a widget of their model to a Website, blog or various social sites. Guay described a unique user-centric intuitive visual search tool that will soon be introduced as a result of a partnership with StyleFeeder<sup>26</sup>.

Expanding retailing applications are direct evidence that potential clients and users are obviously reacting favorably developing an idealized generic and/or customized avatar to design and develop fashion items. Direct feedback in an e-mail from G. Saumier-Finch, Product Manager, MVM dated 07 November, 2007 states that several retail clients have measured a one million lift in sales per month. Shoppers using their solutions spend more, buy more and return far fewer items-resulting in higher sales and reduced shipping and handling costs. The most popular avatars are for products that are hard to try-on in store, most notably swimwear and jeans. According to the Trendwatching Database customized avatars for online retailing are part of a larger TRYSUMER<sup>27</sup> trend in retailing that will expand into the virtual 3D world to include a variety of products.

So far we have seen where personal avatars can be customized to match the user's size for trying on fashion products and some can be customized for made-for-one fashion product development. Now the user is able to upload an image of their face and place it onto the MVM BrandME™ avatar. The user will activate a wizard and upload a picture of their face into BrandME™. Facial makeup and a variety of hair color and hairstyles will soon be incorporated. Elements of this concept are similar to photo technology applications I located through my research developed by Oddcast<sup>28</sup>, a speaking avatar technology company.

### **Virtual World Marketing and Retailing: Avatars in Second Life**

A logical simultaneous move from a self contained virtual marketing package like Sears e-Me avatars would be to a global virtual environment like SL. It looks like Sears is definitely leading the pack by exploring the possibilities of researching the marketing impact that an international virtual environment can provide.

According to an e-mail response from Mike Lutze, Director - IT Store Systems for Sears, on 06 November 2007, 3D virtual environments where the idealized avatar represents the user, are still new and currently lacking in meaningful research.

'Because apparel is arguably the most prevalent commodity being traded in SL, one could conclude that it might play a significant role in merchandizing real-life fashions. The only way to tell, and we are prepared to experiment and evaluate, is to offer items that are wearable by an avatar and the real-life person behind it.'

In an e-mail dated 06 November, 2007 Lutze states that, 'Too little work has been done to reach meaningful conclusions,' based on how potential customers are reacting to developing



an idealized generic and/or customized avatar to model fashion items. 'A pivotal requirement is that a user's avatars become transferable between venues.' He anticipates the day in the near future when a person can create a representative avatar and use the same avatar to visit different fashion vendors in order to make selections. 'IBM's partnership with Linden Labs to set standards in this regard will be helpful.' In addition to apparel items Lutze thinks jewelry can be promoted in the virtual world along with home furnishings that an avatar can set up in their virtual place of residence.



**Figure 2.** House of Nyla fashions, what comes first, the virtual or the real? (Nyla Kazakoff, House of Nyla, 2007)

Examples of virtual integration and connecting to real world products are the House of Nyla (Figure 2) and Bershka. The House of Nyla<sup>29</sup> represents Vancouver Designer, Nyla Kazakoff who creates one-of-a-kind clothing from bridal to avant-garde. Kazakoff has a SL link on her Web site to promote her virtual fashion location in SL. Her strategic approach is to market fashion products simultaneously in the virtual world and in the real world. Bershka<sup>30</sup> (a Spanish brand) has a virtual fashion presence in SL and promotes it on their RL Website.

Virtual in-world avatars can promote real world brands but real world brands need to do their in-world research first. Lacoste and L'Oreal Paris have recently run some in-world virtual promotions to promote their RL brand. Currently Pontiac has selected avatar CaLLie Cline<sup>31</sup> from SL to serve as the official spokesavatar for SL and RL Pontiac brand.

The British branding firm Rivers Run Red<sup>32</sup> works with real-world fashion firms and media companies inside SL, where they're creating designs that can be viewed in all their 3D glory by colleagues anywhere in the world. According to Hof, the branding firm has worked with a consortia of more than 200 companies (including retail giant Wal-Mart) to present how virtual worlds can be used for training marketing, collaboration and product development. (2006, para.10), So convinced of the value of the virtual presence and future marketing impact of SL is the Rivers Run Red firm that the CEO, Justin Bovington has set up shop on the virtual island of Avalon. He claims that the virtual presence has saved his company a sizable amount of travel expenses. The company recently collaborated with Scarlett Johansson to release a new line of real-life clothing that will also be offered in SL (Hof 2004, slide 6). Dent, of Linden Lifestyles stated,

'SL is an excellent platform for building relationships, cementing brands and building consumer loyalty - yet few real-life brands are doing those things correctly' (cited in Harkin 2007, para.9).'

The article is an excellent resource for anyone interested in retail branding and marketing in SL. It addresses how SL can change the way we shop.

Lohr (2007, para.3) envisioned people owning multiple avatars and moving seamlessly throughout the virtual worlds. Linden Lab (SL) and I.B.M. recently announced plans to develop open standards that will allow avatars to roam from one virtual community to the next. The goal is let a person create a digital alter-ego that can travel to many virtual worlds, keeping the same name, look and even digital currency.

A virtual world project of gargantuan proportions currently in progress and set to launch in June of 2008 is the China Recreation District (CRD) cyber project. According to Sherman,

'The CRD's goal is to create a virtual economy providing infrastructure and platforms through which any business - not just those based in China - can come in world and sell their real-world products and services. While a concerted effort will be placed on bringing Chinese businesses and consumers in world, the effort is worldwide and open to businesses and consumers from any country. (cited in Sherman 2007, para.2).'

### **The Next Step: Web-Based Virtual Worlds?**

Until now MMOVRE had to be installed on the user's computer by downloading and application. That alone represents a learning curve to the new user. New developments currently taking place in 3D virtual reality may soon make virtual worlds like SL obsolete. In September of 2007, a new open-platform open-ended new product called Metaplace<sup>33</sup> was publicly unveiled. Metaplace is a web-based program developed by Ralph Koster, who is a very well known game developer. According to Fildes, Koster wants to revolutionize and democratize access to virtual worlds for everyone with this product (2007, para.5). Koster states in a video on YouTube<sup>34</sup> that,

‘Metaplace is very versatile and user friendly and can be used for gaming, socializing or e-commerce, can be embedded in a webpage, Facebook profile or blog and because it is web-based it can be embedded into “any” webpage. ‘

A Web-based virtual application will easily empower literally anyone without programming or content creation knowledge to create their own avatar in their virtual room or virtual world that can be connected or added on to other virtual worlds to create a virtual community. There can be millions of user created worlds that can be easily tagged, rated, reviewed, searched, and connected together. MetaPlace is currently being tested, the public version is scheduled for release in spring 2008.

This has very powerful implications for virtual retail marketing. The Gartner Symposium/ITxpo 2007 report predicts that up to 80% of active Internet users will be using a virtual world in four years time and something like the Metaplace product has the potential to make virtual worlds as common (and easy) as using a Web Browser. This can produce a transformational effect on retailers.

In addition to retailers' having a Web presence, a virtual 3D online department store can be developed with a product like Metaplace. Users can sign on and enter the store, input body size measurements to temporarily create a realistic customized avatar to represent the customer, then try on all sorts of garments and drop them into a shopping cart! This will completely change our current perceptions about shopping at the mall. It will still be a social experience because others will also be there shopping or you can arrange via My Space or FaceBook to meet friends at a certain time and you can shop together. Welcome to the future.

The ability to form various social communities is a very powerful aspect of virtual worlds (and the Internet in general), a product like Metaplace has the potential to make the virtual reality experience as common as Web-surfing and as social as MySpace and very exciting (and also profitable) for on-line retailers.

### **Avatar Body-Tech Convergence**

Presently avatars are converging as a body-tech tool for fashion to:

1. Enable fashion product designers to develop a highly targeted end-product that represents the brand client while simultaneously developing digital 3D content for personalized online retailing and marketing
2. Create social and game communities that directly connect to the online retail products
3. Virtually represent TV series characters and market products
4. Initiate retail/game brand merging to create a retail familiarity and brand identification for the target market
5. Cater to the mass personalization and customization trend by enabling individual customer fashion garment fitting of existing products and limited customization for a fashion product purchase
6. Enable retailers to establish personalized “targeted push” marketing for new products and services
7. Visualize the fashion product itself on a 360 degree rotation as with the 360 promo product
8. Market fashion products simultaneously in the global virtual world and in the real world

### **Avatar Body-Tech Conclusion**

My conclusions are based on an assimilation of my web-based research, professional research of others, direct response from companies on the cutting edge of avatar technology for the retail/fashion industry. Avatars are rapidly emerging in a variety of forms as powerful tools that are changing the face of online retailing and the fashion product development process. Product development will benefit with the cost effective capability to speed up the development cycle by eliminating the traditional prototyping process in the near future while simultaneously creating 3D content for online marketing. The benefit for marketing and retail is that user-centric avatars applications can represent an idealized customized generic and/or personalized tool for an increasing variety of fashion products and social networks. Companies like OptiTex and MVM are at the forefront of the user-centric virtual product development and retailing movement.

My review of multiple forms of direct and indirect personalized avatar marketing strategies lead me to conclude that social and game communities that directly connect to the online retail products are attractive to users and profitable to the retailers. The rapid expansion of virtual avatars from TV series and development of online game characters to market products is user driven as evidenced by the growth in participation and product sales.

The rapid expansion of the mass personalization and customization field in general validates the success of this trend. New user-centric applications are continually emerging in response to the diverse ways the avatar is impacting the retailing and development of fashion products. Applications are continuing to emerge that incorporate sophisticated visually intuitive product searches as well as the ability to embed the personalized application into a variety of social sites. This trend empowers the retailer to track and offer customized promotions to the user and is continuing to expand to include products the user creates or selects to order or sell.

Virtual in-world avatar fashions have the potential to be successfully produced and marketed in the real world, but I have yet to see a successful example of this concept. The major stumbling block here is that most of the in-world fashion designers do not have the comparable skill sets to develop, produce and market in the real world and vice versa. There may be some exceptions like Kazakoff from the House of Nyla who designs, develops and markets duplicate virtual and real world fashions. Strategic in-world/real world partnerships can expand opportunities in this area.

Avatars of all sizes and shapes are everywhere and each of us will soon have a high security collection of avatars to fit our every mood, need, fantasy and desire. We are currently experiencing just the beginning of a diverse multiple avatar trend. Open access to numerous virtual worlds, customized and personalized fashion products, fashion magazines and personalized marketing will soon be considered the "norm." Mass customization and personalization partnerships are well on their way to transforming the way we shop. Open virtual worlds like SL as well as other web-based virtual world options currently under development are the logical simultaneous next step,

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