

Interview with Virginia Howlett, mother of Verdana.

By Bruce Lawson, DMX. June 14, 2004

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You may not know the name, but trust me: if you use the web you've had reason to thank Virginia Howlett. Why? Because she was Microsoft's Program Manager in Typography, working with Matthew Carter to design what is still the best web font, Verdana.

In addition, if you've ever used Windows in the last 9 years, you've come across her groundbreaking work on User Interface Design. Windows 95 was the operating system that brought personal computing to the mass market.



Virginia in her studio. Copyright © Virginia Howlett

Nowadays, Virginia has retired from the world of computers and gone back to her first love: painting, the old fashioned way with Watercolours or Oils at her studio
<http://www.blueskyartist.com>
in Seattle, U.S.A.

Of course, that didn't stop our intrepid reporters catching up with her and subjecting her to the relentless questioning that makes the Movers and Shakers tremble...

DMX: *It's probably fair to say that Microsoft's Internet Explorer hasn't earned them the undying love of web developers. But something that's proved an unqualified success is the Verdana font. Can you give us an overview of why this was developed and how the team worked together?*

VH: Verdana – well that's a long story.... Back in the days of Windows 3.1, our interface font was MS Sans Serif: a bitmap font whose characters had been drawn by an early Microsoft developer. It wasn't bad, but it only came in 2 sizes and it wasn't scalable. I felt we should create a TrueType interface font, which would be scalable, designed specifically for readability at text sizes.

This was not a popular idea. Even my team of designers objected - they liked MS Sans Serif, proving that everyone prefers the familiar, even when it's "sub-optimal". But my managers approved, the Typography group understood, and I can be very determined.

Microsoft had a long working relationship with Monotype, and the people in our Typography group knew Matthew Carter well. The world of typography is very small. I spearheaded a project to hire Matthew Carter to design a TrueType font designed for maximum readability at small sizes on the screen. The Typography group contacted Monotype and hired Tom Rickner to hand-hint the font (which is a very exacting kind of programming). We started meeting with Matthew, and he started proposing ideas. I ended up as a sort of Art Director on the project. After I took a 5-month leave of absence to write my book ([Visual Interface Design for Windows](#)), I came back to a job as a Program Manager in the Typography group, and saw it through.

The working process was seamless, because of the excellence of both Matthew Carter and Tom Rickner of Monotype. After they were in full swing, all I did was review the beautiful work they produced. And the Typography team was excellent too. Vincent Connare, a type designer in the group, later designed another wonderful screen font - Trebuchet - which is very good, and markedly different from Verdana.

Matthew and I also worked on Georgia, a serif font designed for the screen. Later, MS Typography and Matthew Carter went on to create Tahoma, which is used in XP as an interface font. Tahoma is essentially Verdana condensed horizontally. Verdana's great readability at text sizes is partly due to the space within the characters, but this gives it a long line length. You can fit more text in the same space with Tahoma, which is helpful for dialog boxes.

DMX: *Of all typographers out there, Matthew Carter is probably the best known. What was he like to work with?*

VH: Matthew was great to work with - charming, insightful, and a brilliant designer. What can I say - he's the best in the world, in my opinion. And, a real pleasure to work with.

DMX: *How do you "test" a typeface?*

VH: Well, you test it like any other piece of code. TrueType fonts are highly programmed - because the TrueType technology is very technical, the typographer has elaborate control of myriad details in the characters, and how they scale.

We did fund two universities to do research studies of readability & legibility of type on computer screens - and confirmed that readability is very hard to quantify. Legibility is somewhat easier to define.

DMX *Why's it called Verdana?*

VH: At one point, some people from the Typography group and I went out to Boston to meet with Matthew and look at the early outlines of Verdana. They were gorgeous. (The type designer draws outlines for the shape of each character in the font.) Matthew had settled on a process where he designed the bitmaps for the 8 & 10 pt. sizes first, and then drew the outlines to fit them. This was quite novel at the time. (The process is usually the reverse.)

I remember that it was at this meeting when we named the font. We wanted to call it Ventana, but the lawyers had rejected that idea, because it means Window. We had been brainstorming words that mean green, because Washington is the Evergreen state and Seattle is the Emerald City (if you've been to the Northwest, you're aware of how green it is here). So we were thinking of Verde and Verdigris - and then Matthew mentioned the tradition of type designers naming fonts after their daughters. My eldest daughter's name is Ana (pronounced Ah-na), so we settled on Verdana - a combination of Verde and Ana.

DMX: *How does Ana feel about having a famous typeface named after her?*

VH: I think she feels somewhat flattered - she has told a few people about it, but not many.

The hard part is that I have another daughter, who doesn't have a typeface named after her, and she feels a little bad about it. It's a good lesson in how important it is to be equal as a parent.

DMX: *You were also intimately connected with the design of the Win 95 UI - the UI that caused the explosion of consumer PC ownership. Can you describe Microsoft's goals with the Win 95 UI and your role in its development please?*

VH: Whoa. This is a VERY long story! I could go on for pages & pages. Here's the short version: As Manager of the Graphic Design team in the User Interface group, my team designed a fully "3-D" interface for Windows 3.1. (The majority of the real design work was done by Allison Grauman.) We met with Billg, who approved it, but the VP of the Windows team, Brad Silverberg, decided not to ship it.

This design was then used as the basis for Cairo - an NT-based future OS. Once the Windows team shipped Windows 3.1, they started working on Chicago and appropriated much of the Cairo design. (Chicago became Win95.) I continued working on both projects - Cairo was eventually shelved.

Our design goals were to make a fully 3-D interface, with as simple and clear a visual presentation as we could. We wanted to make the UI more intuitive with clear affordances, and an elegant use of color, fonts & icons. Windows 95 was the most extensively usability-tested software product ever built, at that point. UI design is always a compromise, but we were pleased with the overall usability of Win95, and the visual presentation was a key part of that.

DMX: *"So you met BillG? What was he like, and what was it like, meeting the richest man in the world?"*

VH: Bill Gates - yes, well. There's a lot already written about him. He's extremely smart - which you are aware of when you talk to him. He can be kind of charming -- I was in a circle of people at a ship party once, listening to him tell a story about how he met Steve Ballmer. They were both at Harvard and met while taking the same Microeconomics course. Evidently Bill never attended the courses he signed up for, he audited whatever interested him, and then would turn up for the finals and ace his classes. He said he and Ballmer had heard about each other, but didn't really know each other until this microeconomics class. During that term, would run into

each other & say, hey - we gotta study for that class someday. So, a few days before the final, after not attending the class at all, they studied together, and then got the two highest grades in the class.

Bill is demanding as a boss, but he respects people who know their stuff. He asks a lot of penetrating questions in meetings. If you have the answers, he'll respect you - if not, he won't. (Which seems perfectly reasonable to me.) If you're smart & work hard, he's very fair.

He has an incredible memory. When I first joined Microsoft, there were about 900 employees worldwide, and he knew who all of them were.

DMX: *Are there any aspects of the UI that, in retrospect, you wished you had changed before the final release?*

VH: I went on a leave of absence to write my book before the final release of Win95. Ironically, the marketing people used blue skies with white clouds in the marketing materials, so the team made a sky desktop background. It was a cliched sky - I could have done much better ones, but I wasn't involved by then.

DMX: *It's common for fine artists to be working as web designers, but User interface engineers [insert your preferred term] seem generally to be from psychology backgrounds. How did your own involvement in fine art lead you to Microsoft, Verdana and Win 95?*

VH: Another long story. I have an MFA in Painting from a good art school (The Art Inst. of Chicago) and was a college professor teaching Painting, Drawing, Design & Art History. Due to family circumstances, I had to leave teaching and change to a career as a graphic designer. (I did both graphic design & teaching in grad school.) I kept painting, but had to work fulltime to support my two daughters. I started at Microsoft as a production designer, doing paste-up on manuals (before desktop publishing software). I had always been interested in visual perception, especially color perception, so I took classes & did research. Then I worked on the design of computer-based training. And, when Microsoft set up a User Interface group (which included Usability), I was asked to start a Graphic Design group in User Interface. I built a great team of talented designers, eventually installing designers on all the key product teams. Now there's a position called "Product Designer" at Microsoft and product designers on all the development teams.

DMX: *It's interesting that your gorgeous Sky paintings on blueskyartist.com are "traditional media" e.g. watercolour or oils - no computers used Should we read into that a rejection of all things computer, or is it something about the tactile process of "getting your hands dirty" that means you don't use digital techniques, or what?*

VH: I was a painter first. I've always been a painter, even when designing interfaces for Microsoft, and others. They are two sides of my brain really. Artwork is about expressing a feeling and making a statement, in pure visual terms. My work is quiet and meditative, using color to express a sense of light, space and landscape.

I use PhotoShop to prototype software, but could never use it for creating fine art! A big aspect of my work is the softness of the shapes I can get with watercolor, and the feelings they evoke. I paint in oil as well, blended color fields -- abstract visions of water, sky, space.

It's not that I reject using a computer for fine art, but the goals of my work -- evoking that deep connection we get from staring at the sky -- can't be easily achieved on a computer. My artwork

is about who I am, really, which is true of all artists. My work is what I do, it's what comes out of me. I almost don't have any choice about it.

DMX: *Thanks Virginia!*