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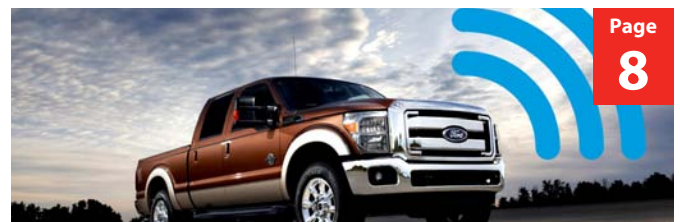
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Opera CEO, Jon von Tetzchner

# Style, technology and the user experience

Winter has arrived here at Opera Software headquarters in Oslo. The long, dark months of winter are a perfect time to reflect on our products and how to make them better. That is, while Opera Software products blaze trails out in the marketplace, we invest a lot of time and resources in creating new innovations, new products and a better user experience. This is what Opera has been built upon, and it continues to drive us every day.

Over the past few months, we have rolled out a harmonized look and feel across our Opera Software product portfolio, highlighting the importance that we place on constantly looking for ways to provide a better user experience in everything we do.

For Opera, the user experience goes beyond visual style and the technology behind it. The user experience is also about enhancing a platform or reshaping the way users interact with their browser and on the open Web.

Once upon a time the Internet was an experience that was limited to the traditional PC or Mac. However, early on, Opera's engineers and developers understood that innovation within the user experience and adding new, user-friendly features were how we were going to differentiate ourselves from the competition. We also understood that users should have a great user experience regardless of what device they were on or what kind of Internet network connection that had. This thought leadership has helped us pioneer many of the top features and designs that you see in every browser today – things like Speed Dial, visual tabs, pan and zoom, address bar and even tabbed browsing itself. As we move into other devices and the next generation of Web technologies, we have also pioneered things like widgets, compression technology (Opera Turbo), Opera Link (sync bookmarks, save pages, etc.), and even Opera Unite, your very own Web server in your browser. We continue to push the envelope by adding new features and new designs, and look forward to continue making Opera the most user-friendly and visually appealing browser on the market.

This quarter, Opera Insights delves into different aspects of the user experience, from renowned creative designer, Jon Hicks, discussing design as an integral part of the user experience to research findings from Strategy Analytics about mobile Web-browser best practices. We also talk to several of our partners, including the Ford Motor Company and Orange Vallée about their products and technologies and how they contribute to the user experience. Our Roadmap features in-

depth discussion on how the Opera Turbo solution benefits operators and users alike. In the Developer's corner, we introduce the Opera Developer Relations team highlighting the various types of projects the team is currently working on to promote (directly and indirectly) our new user interface and gather ideas and thoughts from other developers and Opera users.

Closing out 2009, and looking forward to a new year of enhancing the user experience with both technology and design, we wish you the best in the coming year.

“ The user experience is also about enhancing a platform or reshaping the way users interact with their browser and on the open Web. ”



*Thanks for reading.  
Jon von Tetzchner*

## Analyst view

# Defining the user experience

Strategy Analytics' Senior Analyst, User Experience Practice, Paul Brown, shares findings on mobile-browser best practices from their recent end-user research on the mobile Internet

Mobile Internet usage is on the rise. In Western Europe, Strategy Analytics has found that the number of people using the mobile Internet at least once a week has increased by 130% since 2008. This increase is being driven by smartphone users, and in particular, the improved experience offered by touchscreen devices. Strategy Analytics has undertaken extensive consumer research on mobile Internet and believes that the following criteria need to be met in order to provide users with an experience that is useful, usable and compelling:

### Provide a mobile experience that replicates the computer experience

Participants rated having the ability to play video directly in the browser, multiple tabs and the ability to view full Flash as the three most desired features for a mobile browser.

### Maximize screen real estate

With their large screen size, touchscreens make for the ideal mobile-browsing experience. As much of this screen space as possible should be given to the actual Web page. At most, a mobile browser should show the address bar at the top, and one row for menu options at the bottom. Auto-hiding menu options is good as long as it is both clear and straightforward for the user to access these options when required.

### Give users fast access to most-used browser features

The most commonly used features should be accessible directly from the browser, without having to navigate menus. These features should include zoom, back/forwards and bookmarks.

### Employ intelligent zooming

Users should be given two ways to zoom. The first option should allow them to zoom directly onto a certain area, and the zoom should automatically adjust to the width of the column. Users should also be able to control the zoom level manually.

### Make using bookmarks simple

As people start to use the mobile Internet more frequently, the use of bookmarks is also increasing. A list of existing bookmarks should be accessible within a few clicks. Adding a bookmark should be a straightforward process. The user should not be forced to go to the address they want to bookmark first, and both the title and address should be editable before it is saved.

## Trends:

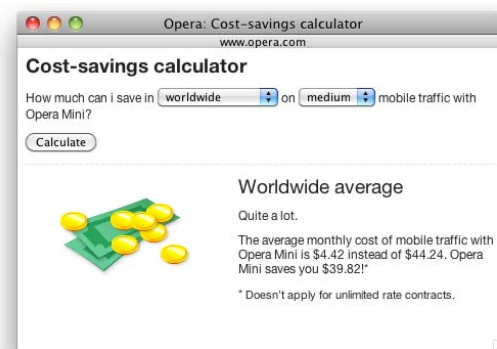
# State of the Mobile Web: How much can Opera Mini save you?

Every month, Opera conducts the definitive review of the numbers and trends shaping the mobile Web.

Beyond examining trends and information affecting the mobile Web, the November edition of the monthly State of the Mobile Web report is digging into to the cost savings made possible by browsing the mobile Web with Opera Mini. In addition to the regular country snapshot and trend highlight features, we introduce the new cost-savings calculator. This tool helps users break down the numbers to see exactly how much they have saved by using Opera Mini to browse the Web.

The State of the Mobile Web report this month shows that almost 40 million people used Opera Mini last month, representing more than 11% growth in one month. Page views and data transfers increased at an even faster rate, meaning consumers now save 9.4 billion USD per year just by choosing Opera Mini. The new cost calculator allows users to see what the value is for him/her individually by using Opera Mini each month. The bottom line for many users is value for money and, fundamentally, this is what determines whether the user experience is good or bad.

As always in the State of the Mobile Web report, use and download statistics provide valuable insight into mobile Internet usage. Opera and its partners aim to build the best tools and create the best content to foster the continued growth of the mobile Web—in ways that are both affordable for users accessing the mobile Web and complementary to the user experience.



VISIT [opera.com/smw](http://opera.com/smw)

Developer's corner

# The user experience behind-the-scenes

Meet the Opera Software Developer Relations team

Opera Insights got an insider's view of the Opera Software Developer Relations team from Web Evangelist and Developer Relations team member Bruce Lawson. In addition to introducing the team and all the functions Developer Relations handles, Bruce described how Developer Relations' primary focus is helping Web developers everywhere to provide the best user experience to their customers. This in turn builds on Opera Software's commitment to create the best Internet experience on any device. Developer Relations drives multiple behind-the-scenes endeavors that cut directly to the core of enabling the ideal user experience.



*The Developer Relations team. Photo by Ilya Shpan'kov*

## At work with Developer Relations

By Bruce Lawson

The Developer Relations team at Opera Software works internationally with Web developers. We deal with everybody from individual developers to huge Web teams behind the biggest properties on the Web. There are two main strands of work, but each is concerned with helping web developers to give the best possible user experience to their customers. Some of the ways Developer Relations actively works to ensure best Web practices and to enable the best user experience include:

### Open the Web

The Open the Web program is led by David Storey. Sometimes Web sites do not work correctly across all browsers, or perhaps they work fine on desktop computers but not so well on devices or mobile phones. In today's challenging economic climate, you want your Web site to be available to anyone who comes looking for it, so our team works with developers to show them how to amend their code to work perfectly for as many visitors as possible.

### Outreach

Another main focus of our work is education and outreach. This starts with students, as we know from partners that many universities teach old-fashioned courses that don't meet the needs of industry, so we have developed, alongside other industry players, such as the Yahoo! Developer Network, a free course on modern Web development: the Web Standards Curriculum.

## Standards: Development and practice

The latest Web standards from the W3C are designed to enhance user experience, too. Many members of our team sit on the international cross-vendor committees to design the standards that define the Web. Technologies like widgets, SVG, CSS Media Queries and the upcoming HTML5 standard allow development of graphics-rich and video-rich Web sites without plugins to download, or allow Web developers to write applications that work on any widget-capable phone, device or desktop.

## Real-life implementation and user experience

Most of our team speaks regularly to developers at conferences, meet-ups and ad hoc presentations in businesses. Recently, for example, I put on my business suit for the first time in months to travel to the headquarters of a very large British financial institution to show some of the new W3C technologies that Opera is working on.

I demonstrated how HTML5, a technology begun by Opera but now being actively developed by all browser manufacturers, provides richer form controls, and I mocked up a demo using sliders and built-in form validation to increase the usability of their mortgage calculator pages, also using another HTML5 technology called canvas to draw graphs of interest payments.

Opera co-chairs (with Vodafone) a W3C Working Group that is finishing a specification called Geolocation. I showed how the company's ATM-finder page could benefit from the Web browser "knowing" where the user is and directing her to the nearest cash machine. Great if you are in an unfamiliar part of town and do not know the postcode you are standing in!

We then moved on to making pages mobile-friendly with Media Queries. Rather than develop, test and maintain parallel Web pages for mobiles, Media Queries allow developers to write one page but reformat its layout according to the device's screen size. This enhances usability for customers, while keeping costs down by reducing development complexity and ensuring that the "mobile pages" never fall out of step with the desktop pages.

I am proud to say that the development team met the day after my demonstration and decided on immediate implementation of some of the techniques I showed.

From wearing a business suit in a plate-glass and brushed-steel London office complex, to demoing code in a crowded university restaurant in India, life in the Opera Developer Relations team has one constant: helping developers provide the best user experience to their customers.

Q&amp;A

# Design: Elevating the user experience

Meet Lead Designer Jon Hicks

Opera Software has been a leader in providing technological innovations that enhance the user experience, and now, more than ever, is working on integrating a more consistent, visible brand that flows through the entire Opera product offering. With the new, elegant user interface for Opera Mini 5 and Opera Mobile 10 that harmonizes with the desktop product, design shows itself to be a crucial aspect of elevating the user experience.

Opera Insights sat down for a Q&A session with renowned designer and Opera Lead Designer, Jon Hicks to discuss design, Opera Software's moves to incorporate an integrated look and feel across products and the role of design in the user experience.

## **Opera Insights (OI): Can you tell us a bit about your background and how it prepared you for what you do now?**

JH: Although I trained as a wildlife illustrator initially, I took a job as a junior designer straight after leaving college. I've been working in design for 15 years now, starting in print and publishing design, and then designing for the screen from the mid-late 1990s onwards. Discovering the Internet led to design for Web sites, and finally to the browser around those Web sites, and software interfaces in general. The training in illustration has been very useful grounding, however, particularly for creating icons.

## **OI: Please talk about how you came to Opera and what contributions you felt you could bring to the table.**

JH: I've been fascinated by browser interfaces for a number of years, and before starting at Opera I regularly used a variety, as well as working on them. I even have a license for Opera back when you had to pay for it, and had always felt that it was a great browser, but one that didn't have a pleasing UI. Last year I saw the job advertised, and while I wasn't looking for employment, I felt I couldn't pass up the opportunity to investigate it.

I came up to Oslo in August 2008 (it was a good Norwegian summer day!) and met the team and loved what I saw. I then started in November.

I bring to Opera a variety of skills and disciplines from branding design to illustration to user interfaces. Probably my strongest was icon design—something that the Opera Desktop in particular has a lot of.

## **OI: Can you talk a bit about how your design experience and expertise fit into and have fed some design projects at Opera?**

JH: I've previously worked on the browser interfaces of Flock, Camino and Firefox (the latter as an advisor on the FF2 theme rather than designer). In particular I was part of the early genesis of Flock, from when it was 'Round Two'. Aside from this direct experience, I've been

working on software interfaces for about four years, and icon design for six. Just before starting at Opera, I completed work on Linotype Font Explorer featuring just over 280 icons, each with as many as eight different resolutions.

## **OI: How important is design to user experience? How big a part of the process of user experience is design?**

JH: Design is big part of user experience, but the tendency is to think of design as 'prettifying', almost like a layer that sits on top of the architecture. Design can be the obvious visual part, but it's also the process of the actual construction. A button's position, size and context are just as much a part of the design process as how it's styled.

The obvious visual part is still important though. In general, people won't want to use or trust something that looks ugly. We naturally gravitate towards things that are attractive (although that can be subjective). If something is successful and ugly, it's despite of it, rather than because of it.

“ Design is all about problem solving within limitations. ”

## **OI: Do you have a guiding philosophy or thoughts on how design fits into the user experience?**

JH: Keep it simple. I often find that I can easily over-design something, which creates obstacles for a user. You see this particularly with icon design, where every extra detail increases recognition time. The famous quote from Albert Einstein applies here: "Make everything as simple as possible, but not simpler."

## **OI: In technology, how does design come together in harmony with the more technical side of the equation? How does this come together in what is probably a difficult give-and-take process of negotiation to create a good user experience?**

JH: There is always a technical limit to what you can achieve, no matter how much you try and push it. Whether that's something that is just not possible to do, or the time involved is just too much. Design is all about problem solving within limitations, though, and as long you know early on what they are, it will inform the design process.

## Partner spotlight: Orange Vallée

# User-driven experience: Simplicity is key

As an innovative experiment that enjoys support from a more traditional corporate parent (Orange), Orange Vallée is the type of telecommunications lab that values and encourages new ideas and concepts. Ultimately, its cutting-edge approach is untethered from the constraints of the larger corporation, which allows for groundbreaking research and development. Orange Vallée takes full advantage of the freedom and flexibility afforded to it as a semi-protected start-up, enriching the business without being hindered by too much bureaucracy.

Recognizing the rapid and sometimes unpredictable changes in the communications industry, Orange Vallée was designed to be agile in what is a mercurial marketplace. This agility has led Orange Vallée to develop numerous innovations that make Orange Vallée a leader in consumer technology. One such innovation is Orange Tabbee – a small Internet-connected, touchscreen device that acts as a central media/communications hub in the home. Orange Tabbee provides the ability to browse the Web and access various multimedia content, all in a mobile, easy-access tablet.



Opera Insights spoke with Orange Vallée's CEO, Jean-Louis Constanza, about the Orange Vallée commitment to cutting-edge, creative technology development, its strides in enabling Internet access and content on a variety of unique devices, and its contributions to the concept of the connected life and the user experience.

**Opera Insights (OI): Can you talk a bit about the relationship between Orange Vallée and Orange as a parent company – the strengths this kind of innovation organization under the Orange umbrella enables, both from technical and a consumer-oriented viewpoints?**

Orange Vallée (OV): With Orange Vallée, Orange combines the best of both worlds: the power of a major group and the flexibility of a start-up. Orange Vallée currently employs 60 people directly, who work in collaboration with 300 Orange Group staff. Half of this group works in Orange Labs, mainly in France, the USA or China. Apart from Orange Labs, Orange Vallée is intimately connected with other Orange innovation hubs: the Technocentre and Content department,

as well as Orange marketing and technology specialists in countries where we operate.

**OI: How has operating essentially as a start-up ignited the innovations you have introduced?**

OV: We are working in small project teams and with short decision processes, focused on fast delivery of products and services that customers are expecting. Development time from idea to market has been reduced to 12-14 months, including development of hardware or specific devices. Once ready, our products and services are immediately brought to market, which is eventually the best customer acceptance test!

**OI: How has the evolution of Internet access, moving onto different kinds of devices, inspired the development of products like the Tabbee?**

OV: Customers are demanding immediate and easy access to the Internet, anywhere and anytime. Tabbee is a clear response to this, thanks to its mobility (with its 3G access, Tabbee can also be used in other places than at home), its portability (in any room of the house, especially where there is no computer) and immediate access to the best Web services and content (the device has been designed to stay "always on"). Its beautiful touchscreen also allows for more simple and straightforward access to our services, and, in a lot of cases, to Opera's widget store with no need for adaptation.

**OI: Why the Tabbee? (We have seen other operators introduce similar small touchscreen tablets designed as a kind of in-home hub for sharing information and Internet access, so the idea is clearly one with traction in the industry. What makes Tabbee different?)**

OV: The Tabbee project has come from the idea of an Internet device offering entertainment (TV, radio, access to photos), practical applications (with our partners we offer free and premium applications like the press, comics, online shopping or Opera Widgets). It has not come from the idea of a voice device that would also go to the Internet, but that would basically remain a telephone. This is a very different spirit, and whatever their ISP, customers can access the "Tabbee by Orange" services platform.

**OI: At Opera, we constantly keep in mind the drive to provide "the best Internet experience on any device" – putting emphasis on the user experience. How much user input goes into your R&D and innovation?**

OV: We are always challenging our products with customers through qualitative focus groups first and then quantitative private beta tests with hundreds of customers. All feedback is included in our development process. But of course, we also listen to our customers after product launch! A forum has been open on our [tabbee.fr](http://tabbee.fr) Web

site from the start, and it is becoming more and more active; not only do we listen to and help our customers, but customers are beginning to help each other, which is very encouraging regarding product acceptance.

**OI: Knowing that the Tabbee is a part of the Orange Connected Home strategy, can you talk more generally about the Orange Vallée thinking on the connected-home concept, device and connectivity convergence and the thinking and vision about where this is leading (in the industry in general)?**

OV: We at Orange Vallée believe that a fourth screen is going to enter the connected homes and that it will be another opportunity for our customers to use Orange services. TVs, PCs, mobile phones and tablets will gradually all propose access to a wide and converging range of services: IPTV, VOD, voice, video telephony, Internet access, applications and services, music, and so forth.

**OI: How are users responding to Tabbee? And to Orange Vallée innovations in general? Are users seeing the innovation, responsiveness and flexibility promised?**

OV: First response is very positive. Tabbee and Orange Vallée services are perceived as very innovative and often disruptive (in a good sense, that is, as market shakers). As an example, Tabbee is the first of its kind to enter the market and customers see it as a clear answer to their needs for mobility and immediate access to Web services and content.



**OI: For Orange Vallée, what are the biggest challenges and opportunities arising from achieving the optimal user experience?**

OV: Orange Vallée focuses on improving user experience on the four screens of our customers. Simplicity is key but even more important is to place the user at the heart of experience, i.e., making the experience altogether social and personalized.

**OI: What is coming up in the near-term future for Orange Vallée, and how do you see it fitting into trends in the industry? What can users look forward to?**

OV: Orange Vallée's mission is to bring short-term innovation to our customers. We work on improving simplicity, attractiveness of IT/CE products and services. We constantly work to propose the right mix between content, usability and device, and our innovations will come from there.



## Opera Mini 5 launching soon

Start planning your Opera Mini campaign today with this customizable, free material from Opera Software

For more information or to request other marketing materials, please contact [partner@opera.com](mailto:partner@opera.com).

**The Opera Mini 5 marketing materials include:**

Key imagery	Direct mail
Template copy	Online banners
Print ads	SMS and MMS examples
POS collateral	

**Example material**



Partner spotlight: Ford Motor Company

# The Web behind-the-wheel



Paul Russell

The automotive industry, generally speaking, has long development and renewal cycles (five to seven years). Coping with the speed of the consumer electronics industry is a challenge. People are becoming accustomed to taking the full Web with them wherever they go, but because of these long development cycles and unique safety constraints, the vehicle has been slower to connect. This is the challenge Ford has tackled, leading the world's automakers in using a variety of technologies to bring the full Web and its functions to its line-up of vehicles.

Opera spoke with Paul Russell, Ford Motor Company's marketing manager for Ford's SYNC and Ford Work Solutions products, to discuss harnessing the power of the Web everywhere and Ford and Opera's shared commitment to providing the best user experience on all of their respective products.

**Opera Insights (OI): Looking at the ultra-competitive automotive industry, we have seen that Ford is blazing a trail in implementing technology innovations in its line-up of vehicles. Can you talk a bit about Ford and its industry-leading position in the connected-vehicle space—what is available and how did Ford foresee and actualize these innovations?**

Paul Russell (PR): Generally everything related to the industry these days is based on the product cycle and how quickly the products can come to market. In order to bring products to the market quickly, we have identified the opportunity to enhance the user experience through technology. Integrating these new technologies into our products is helping transform the market perception of our brand. Ford is viewed as a value-oriented brand—we provide good value, reliability and quality for the money, but we also wanted to demonstrate that we have great engineering capability and a very innovative side to our company.

Ford has four pillars that define the brand: quality, green, safe and smart. Within the smart and safe pillars, clearly technology features help to differentiate our products in the marketplace. SYNC was one of the features that helped lead the way with that. Now we are very committed to being a leader in the industry in delivering new in-vehicle technology.

The best example in the marketplace has been very heavy use of human-machine-interface technology, like SYNC, adaptive cruise control, blind-spot warning, best-in-class navigation, rear back-up sensing systems and so forth. With the new 2010 Taurus, for example, we are bringing all these features together to push toward market leadership when it comes to incorporating in-vehicle technology.

**OI: In the HMI realm, Ford is well-known for its SYNC system, powered by Microsoft, which makes extensive use of voice commands (Ford is in fact widely perceived as the best in this area so far). How has this modified the user experience? Do customers like it, do they specifically ask for it or do they just discover it after having bought it?**

PR: First of all, we spend tremendous time and effort in our communication strategy to let the consumers in the marketplace know that we have these features and services available. Case in point, the new 2010 Taurus advertising shows that we have dedicated communications budget and resources to talking about these technologies. This includes messaging on fuel economy, best-in-class performance and vehicle features like SYNC with Traffic, Directions and Information services.

Right now, 80 percent of our vehicles are sold with SYNC, which is a very high take rate for any product feature. We also have research data that show that 80 percent of customers use the SYNC hands-free, voice-activated phone feature on a daily basis. The nice thing about these technologies is that customers really do reap the benefits of them, and that is a key factor for us—providing hands-free, safe and convenient technologies.

Also right now there is a lot of media coverage and even pending legislation about driver distraction with mobile devices and driving. Ford endorses and supports safe driving; SYNC is a fully integrated, voice-activated system and promotes and supports safe use of your mobile device while driving your vehicle.



**Ol: How do you see Ford fitting into the trends in the industry, that is, the marrying of more advanced computer and Web functionality to the driving and user experience?**

PR: SYNC is obviously a mobile-based strategy versus an embedded strategy. Everything relative to SYNC is based on leveraging a customer's mobile handset and those associated applications that the user brings into the vehicle with them. This is much more cost-effective and nimble than spending a lot of money embedding software and hardware in the vehicle. Ford also does have embedded systems, but the technologies employed depend very much on customer need. As an example, we wanted to give our commercial customers true mobile-office functionality, so we developed the Ford Work Solutions In-Dash Computer with an Opera browser and full Internet access via Sprint Broadband. Our commercial customers live in their vehicles, for both work and personal use. It is literally their mobile office on the road and on a job site. We wanted them to have the functionality of an in-dash computer, so we really use both approaches, mobile and embedded, depending on customer need.

As we move forward, there may be more of a trend across our vehicles to amplify the mobile-based strategy because that enables greater flexibility to keep pace with the electronics industry and market. The technology space moves at such a rapid pace that it makes sense for us to have the vehicle structured in a way that we merely host any and all Bluetooth devices you bring into our vehicle environments, enabling us to support limitless applications versus being an embedded mechanism or driver. This is how SYNC works. Your mobile device enters the vehicle environment, and through the Bluetooth interaction with our SYNC module, operates your device with full voice-activated functionality. SYNC is the integrator leveraging your applications and services on your mobile device. As your mobile device applications grow, so does SYNC.

**Ol: How has the evolution of Internet access moving onto different kinds of devices inspired the development of Ford services? Has this kind of push been part of the Ford plan all along, or has it developed more as connectivity becomes more ubiquitous on non-traditional devices? Or both?**

PR: The different ways and mechanisms for accessing the Internet have driven a couple of things. First, it has helped us to develop products like Ford Work Solutions, which uses an in-dash computer to support business needs. In that specific instance, it has inspired us because it has allowed us to take the power of the Internet and make our customers more productive in their vehicles. A Ford truck provides our customers all of the industry-leading traditional capabilities of a tough work truck, but the mobile office also adds productivity.

On the SYNC side, it will be interesting going forward because the Internet is the universal communication portal for everyone. Clearly we are using the power of what information is available on the Internet and trying to engineer our vehicle environments to accommodate the information from the Internet to meet our customers' in-vehicle needs. For example, the SYNC system currently provides you navigational assistance, information or services that might be available through the Web or off-board features on your mobile device, such as business search, traffic reports and so forth. Ultimately, we aim to provide value-oriented technology that harnesses the power of the Web or your mobile device to provide best-in-class in-vehicle information, services and entertainment, and do so in a safe and responsible manner.

In the end it comes down to how much a customer is willing to pay. While there are limitless possibilities with what you can do, reality is determined by what is of real value to the customer and what they will pay for it. As manufacturers, we are all experiencing this now. It has not yet been defined as to what consumers are willing to spend for full

in-vehicle technology and communications integration, let alone how many apps they are willing to purchase to support their systems.

**Ol: As a kind of follow-on of the previous question, with both the long development cycle and stringent safety regulations in auto manufacturing, enhancing the driving experience has to pose tremendous challenges. Given the long lead time, how has Ford managed to be the leader in this arena? Has it been difficult to incorporate computer and connectivity technologies that admittedly move in much faster development cycles than do automotive development cycles?**

PR: Yes, this is a difficult challenge. First of all, Ford Work Solutions is embedded technology, but through our consumer-facing Web sites, we can upgrade and manage these systems to keep them fresh and up-to-date with the latest software versions.

Where we stand now with our SYNC module allows us to use the Web and or our dealers to update software as needed to keep up with the rapidly changing mobile-device development curve. Our strategy is to take what the mobile-device community is developing and allow seamless integration and connection into our vehicles through our voice-activated system. Don't get me wrong—it is a challenge. Keeping up with all that is happening in this space is difficult, but it keeps the team busy. We have a dedicated electrical engineering services team that delivers all of our in-vehicle technologies. The team is nimble and rapid, which allows us to get our systems to market much quicker.



Another key to developing our in-vehicle technologies and introducing them to the market quickly is our partnerships with other technology providers, such as Opera. For our Ford Work Solutions offering, we partnered with Opera for the browser, with Sprint and LogMeIn for connectivity, Garmin for the navigation, Microlise for the telematics in our Crew Chief fleet tracking system, and ThingMagic for the RFID technology in our tool-link system. We could not have brought Ford Work Solutions to market as quickly without partner-supplier resources, skills and the leadership positions they each have in their respective spaces.

**Ol: In last quarter's Opera Insights, industry analyst Michael Gartenberg predicted that the future is all about sync. ("Sync, sync and sync. Control sync and you control the world. It is not just e-mail or bookmarks, but access to everything I own, always up-to-date and available.") In the automotive world, it seems that so far no one has sold a system in which you can synchronize your car with your computer the way you would do it with a smartphone—synchronizing the music files, phone book, the navigation system address book and so forth. Obviously in the PND space (TomTom, Garmin and so on) this is considerably easier because they**

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**are nomadic devices that can easily be brought home and plugged into your computer. What is Ford's take on this—does Ford intend to do this? Why (or why not) and what technical infrastructure would it require (or what unique constraints does it pose)?**

PR: SYNC is really structured now to support this in the sense that a smartphone is your computer, and your smartphone interacts with SYNC. Any applications that you have via that Bluetooth-connected device create an opportunity for us to allow voice-command access to those applications. We are moving in that direction as part of SYNC and Bluetooth. Where the applications make sense and where there is value, if you had another computing device, smartphone, laptop, etc., we could theoretically develop mechanisms to enable communication via SYNC to run those Bluetooth-enabled devices.

Earlier I mentioned the four pillars that anchor our Ford brand—our commitment to quality, the environment, and innovation. At the same time, the fourth is commitment to the safety we engineer into our vehicles. In adding innovative functionality, there is balance to ensure maximum safety in the vehicle's operation. Innovative product features for communication and entertainment are crucial for the user experience, but drivers need to be focused first and foremost on driving. Driver safety is the priority, which is why SYNC, as a fully integrated voice-activated communications and entertainment system, is meeting both of these challenges. Ford Work Solutions also delivers in this same regard by not allowing the in-dash computer to surf the Internet when the vehicle is in drive. Only the interactive, voice-activated functions like navigation and hands-free phone operate when the vehicle is moving.

Our commitment to being the leader in the automotive-technology space is one thing, but we are also focused on providing great value. This principle goes back to the days of Henry Ford and the roots of the company. It does not follow with the principles of the Ford brand to create innovative features at premium prices. The technology space in general has succeeded at bringing value-oriented technologies to market at reasonable price points, and we aim to do this as well.

**OI: Talking a bit about what other carmakers are doing in the aforementioned arena, Renault's new integrated navigation system developed with TomTom already has an SD card that can go between car and PC (where a specific TomTom application is installed). It already allows the customer to manage the navigation system's address book, to plan the next trip more easily than in the car, and to buy online updates, new maps, new voices and other services. The Renault system is the first of its kind because it is inexpensive; it is also upgradable and enables evolution because of this SD-card system.**

From Ford's standpoint, what do you think about these kinds of solutions? Do they deliver fully on what Ford perceives as market and customer demand, particularly in terms of the user experience?

PR: At Ford, we think it is great that all manufacturers are working to leverage in-vehicle technologies, whether navigation-based, communication systems or entertainment. At the end of the day, consumers win based on these enhancements. Competition is a good thing and pushes all of us to be more innovative.

I would say that Ford is really focused on our own strategy and plan. We believe in what we are doing, and by leveraging your mobile device through Bluetooth integration into our vehicle environment, we can deliver a superior in-vehicle experience at a competitive price point.

**OI: With the full Web-browser, how did Ford decide to move forward first in the F-150, Super Duty, E-Series and Transit Connect trucks and vans? Was the focus on work- and industry-oriented vehicle users just a start, with the intent to introduce more Web functionality to other Ford vehicles?**

PR: We really wanted our commercial customers to have the benefit of a full mobile office in the truck. Our truck customers live in their trucks and needed a means to be more productive on the job site. With our partners, Opera and Sprint, Ford Work Solutions delivered by offering a unique proposition leveraging browser technology and the Internet to meet the needs of these valued truck customers.

**OI: How have users responded to the Ford Work Solutions offerings?**

PR: We just launched this summer, and response has been good. We have been spending a lot of time with larger fleet customers who want to test out the technology for six months or so before making a purchase commitment. Any new technology has an adaptation curve associated with its entry into the market. The cost per unit is a key assessment that our fleets like to analyze during the purchase cycle. Some key Ford fleets are in the pilot phase for in-dash computers and Crew Chief as we speak. One challenge is that while you can get a good understanding of what Ford Work Solutions does and how it functions from our Web site, you really need to experience it firsthand to appreciate its power and potential. To literally sit in the truck and use the touchscreen or wireless keyboards while surfing the Web or modifying a document really shows the power of it. To date, media and customer reaction at shows and events has been very favorable. Ford Work Solutions features will not have an 80-percent take rate as with SYNC, but it is a different product, serving different needs, at a different price point. This is new territory and a unique offering in the marketplace, so we do not know what the ultimate upside or take rate will be yet.

**OI: What is coming up in the near-term future for Ford and its technological innovations?**

PR: We have many new innovations on the way designed to maximize your communications and entertainment interface with your vehicle while at the same time delivering the highest level of driver awareness and safety. SYNC is just the starting point.

In the near-term future, the greatest challenge we face is the need to move even faster. It is an interesting phenomenon—every time we make a big leap and deliver a new technology, it just reinforces for us the many other opportunities untapped. The nice thing is that our engineering and product development teams do an excellent job staying ahead of the pace. Our partners have also been a tremendous asset; we could not have moved forward on some of these initiatives or nearly as fast without partners such as Opera, Microsoft and Sprint.

The near-term outlook—more innovation in an even faster manner than ever.

## Roadmap

# Opera Turbo: The Internet-anywhere challenge

Product Manager Haakon Flage Bratsberg discusses Opera Turbo

The Internet has become an important part of people's lives. Access to the Internet has become both wireless and ubiquitous. There is a challenge for operators and OEMs to provide a compelling, seamless user experience while managing their network resources and costs. Users are asking for better and faster Web browsing no matter how, where or when they access the Internet.

Here is where the Opera Turbo solution comes in—Opera Turbo helps not only to enable the best Internet experience on any device but, crucially, on any network. Opera Turbo embodies Opera Software's One Web philosophy, as a behind-the-scenes Web-access enabler: the best Internet experience anywhere, anytime, any device, any network.

## The Opera Turbo user experience

The Opera Turbo solution is a key ingredient to creating and maintaining a great user experience, but Opera Turbo is largely a behind-the-scenes innovation. While Opera Software has been putting greater emphasis on the visual user experience and satisfaction, Opera innovations have often been, like Opera Turbo, industry-leading, revolutionary developments that users do not see. Part of reaching the goal of providing the widespread Internet experience for everyone rests on constant improvement and user-oriented innovation.

Driving the Opera Turbo user experience is high-grade data compression technology to minimize bandwidth while browsing the Internet. The solution is compatible with the Opera Desktop 10 browser, the Opera Mobile 10 browser and the Opera Devices SDK. Data compression and optimization technologies result in traffic that is compressed by up to 80%, improving page-download time and the user experience as a whole. Compression of the data traffic up to 80% has great advantages for users who have pay-per-use subscriptions. This is good news for operators, too:

- **Data compression:** Opera Turbo compresses network traffic by up to 80%, which reduces network load and increases browsing speed. Extending the lifespan of the network allows operators to postpone network investments.
- **Service enabler:** Opera Turbo enables Web browsing on slow networks and slow network areas. In regions where broadband Internet connectivity is not widespread, or the network infrastructure is underdeveloped, Opera Turbo ensures a better user experience by compressing traffic and reducing the amount of data that a mobile browser has to download. More efficient use of the mobile network means that more users can be online at the same time and enjoy a speedier mobile-Web experience.

- **Operator and OEM presence on all platforms:** With the cross-platform capabilities of Opera 10 Desktop and Opera Mobile 10 (with Opera Turbo enabled), users get a consistent cross-platform experience. The Web experience is consistent for the user. The cross-platform capabilities create opportunities for Web applications/widgets, content and branding across different devices.

- **User experience:** At the heart of Opera Software's innovation is the drive to engender user satisfaction. With Opera Turbo, the user enjoys a full, fast mobile Web experience with an easy-to-launch and easy-to-use browser.

Opera Turbo is a boon for both operators and users alike. For many Opera employees as hands-on users, Opera Turbo has brought the full Web to life in areas with low-bandwidth connections or at events and in locations where everyone wants to get online.

The key differentiators are a speed advantage and allowing more users to access the same network at once. The prevalence of poor connections/developing network infrastructure, overloaded networks and pay-by-MB downloads means that Opera Turbo saves money for the operator and consumer, grows usership and catapults usage over the hurdles of network limitations.

Different operators face different challenges. Some operators face price competition and heavily overloaded networks, which drives them to seek ways to extend the capital investments they have made in existing networks and reduce costs associated with the exponential growth in usage. Other operators face challenges in enabling Web browsing in slow parts of the network while improving the user experience for all the users.

For consumers in every market, the applications of the Opera Turbo solution come down to the user experience. Users demand speed, accessibility and the full Web wherever they happen to go. Opera Turbo is relevant in many scenarios in both developed and emerging markets. For example, Opera Turbo can be used:

- On a laptop with a 3G dongle, on a slow network/in a remote location, e.g. a 2G area outside of a city/metropolitan area to generate greater speed and a better user experience.
- On a netbook on a congested, free Wi-Fi service (overloaded network)
- On a network on which users are charged for data volume downloaded, which makes browsing less expensive (essentially giving the consumer more for less).

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