Web 2.0 Visual Effects in Microsoft® Access®

An OpenGate White Paper

Traditional Access UI Design

User experience is paramount in the present age of software, with an entire discipline now dedicated to the finer points of interface design and human interaction with machines. New technologies and platforms have blossomed to deliver rich internet applications, such as AJAX, Silverlight™, and Flash®. These platforms provide frameworks to offer users greater productivity and enjoyment. It is in fact one of Google's key goals to deliver "delightful" user experiences. For many Microsoft Access developers, the Access design paradigm remains somewhat anchored in the traditional desktop application domain: static interfaces, dense data-driven entry forms, and the traditional dark gray Windows 3.1 backgrounds. With Access 2007, Microsoft has thoughtfully made font and color schemes more modern by default. Yet even still, there is much to be desired from a user perspective when using the out-of-the-box Access controls and interface design techniques.

Expectations of the Contemporary User

The interface design evolution in the last decade is remarkable, and user experience is itself a new competitive advantage to be taken or lost. Apple, Google, and Microsoft are all competing for user satisfaction. The contemporary user expects a "natural" interface that does not include a thick instruction manual (recall if you will the circa 2000 Microsoft Office bundles with thick printed manual), and interaction flows that are designed for business process, not data. But just as important, the user should be able to intuit what is possible within the application in a few very short seconds. Steven Krug's book on usability, *Don't Make Me Think,* offers logical (and visual) advice on how to ensure your products/websites/applications are usable. Finally, users expect visual effects that are both purposeful and enjoyable to watch. Think of the YouTube video frame. The ability to easily scroll to related videos after one is finished is useful to you, and also ensures you stay on the site longer. Surely YouTube could have designed their interface to simply have you click a right arrow to see the next set of videos without fancy fading effects, semi-transparency, and dynamic scrolling? But in the present user experience paradigm, these are exactly the techniques that provide competitive advantage.

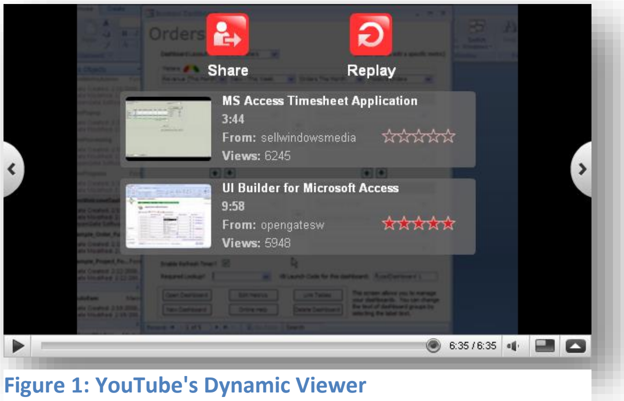


Figure 1: YouTube's Dynamic Viewer

The Cost of *Not* Designing Well

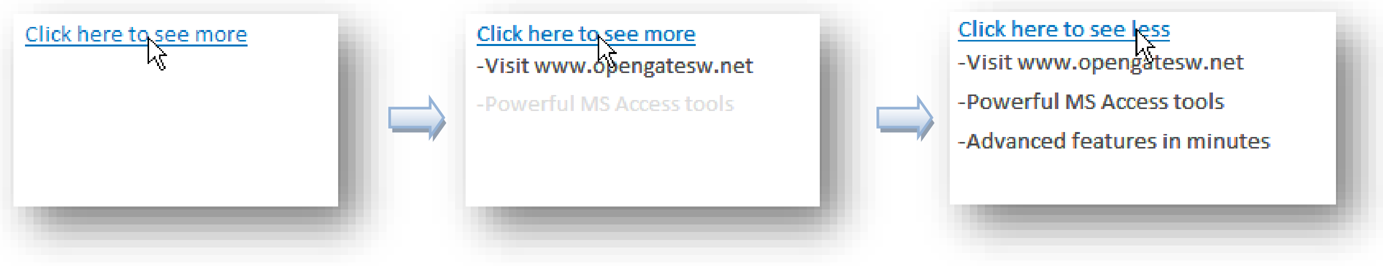
As you may have guessed, poor design can place you at a competitive disadvantage. But there are other related costs as well. An interface which is not focused on the user experience often causes "cognitive dissonance," or more simply, a small delay in the user's mind as they work out what to do next. Small design choices, such as consistently placing the "OK" and "Cancel" buttons, can ensure users are more productive and less frustrated with your product. Similarly, overwhelming a user with choices can increase errors, reduce productivity, and cause a customer to look for more usable products. Or worse yet, need to rely on customer support, resulting in lower profit margins for you the vendor. User experience can be the difference between a successful product and a poor seller, regardless of the true value the product delivers to the customer. Software developers are learning that similar to the layout and visual appeal of a retail store, the small touches incorporated into a product's interface weigh heavily in a user's overall impression of and satisfaction with their purchase.

Web 2.0 Design and Effects for Access

Fortunately, Microsoft Access' existing capabilities provide developers with all the tools needed to develop Web 2.0-like interface designs. With proper use of several rarely leveraged events and methods, Access can be made to offer more interactive, dynamic user experiences.

1) Add Fade-In/-Out Effects

Often it would be ideal to present a user with helpful information or advanced options without overwhelming them. You may have the screen real estate to incorporate the additional information, but it may not be the sort of thing you want to show at all times. A great example would be some useful tips for new users that you don’t want to relegate to a help document or separate screen, but don’t want experienced users to see at all times. Similar to our YouTube example, you could simply set one or more control’s Visible property to show and hide them, but where is the fun in that! Instead, you can easily introduce a fade-in/fade-out effect using some simple looping Visual Basic to gradually change the color of one or more controls from white to black.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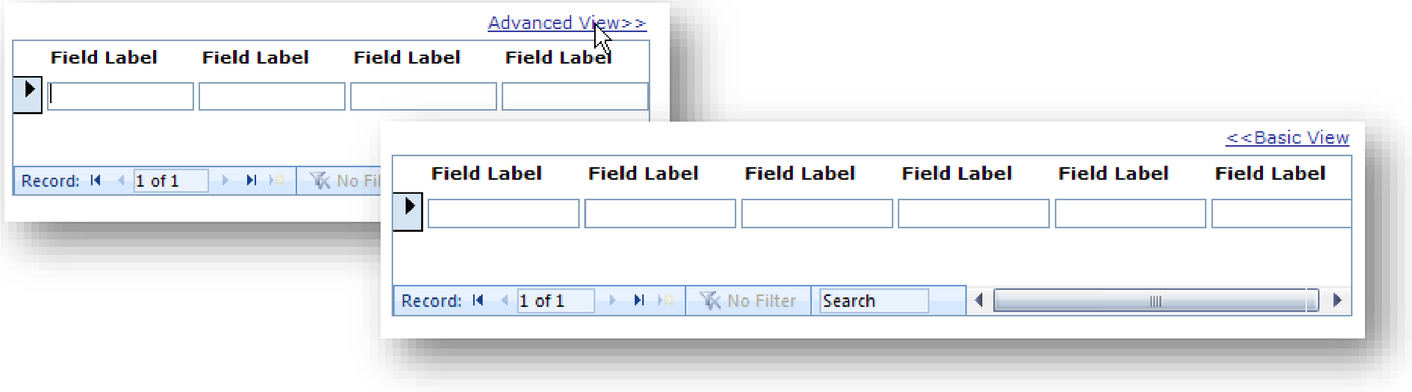
Download the free example Web 2.0 Effects database from the OpenGate website to learn how to implement this effect.

2) Dynamically Expand/Contract Form Elements

Screen real estate can be difficult to come by in cases where you have a busy form with many text boxes and controls, or where you are constrained by small monitor dimensions. Creatively incorporating subforms into a parent form, and dynamically sizing the subform when needed, can save significant space. Better yet, you can add visually impressive expand and contract effects to enhance your users' experience. To do so, you just need to introduce a button or label to act as the expand/contract control, a subform sized at less than the full horizontal or vertical dimensions, and some simple looping Visual Basic to gradually expand or contract the subform on command.



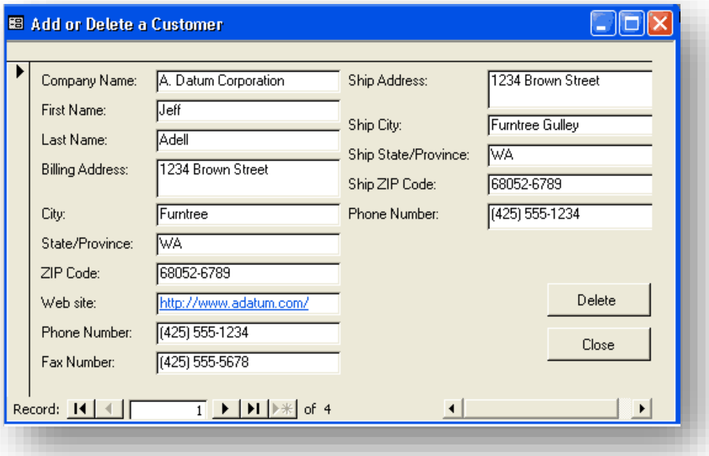
One particularly nice advantage with this technique is that you can have other controls (text boxes, combo boxes, buttons, etc) in the space that the subform will expand into. Simply set them to be behind the subform as it expands, or make them disappear until the user shrinks the subform back down.

Download the free example Web 2.0 Effects database from the OpenGate website to learn how to implement this effect.

3) Cleaning Up Your Forms

If you used the Access Form Wizard in Access 2000 or 2003 to design your forms, you can easily modernize and clean up your forms to reflect a more modern look with a few simple steps:

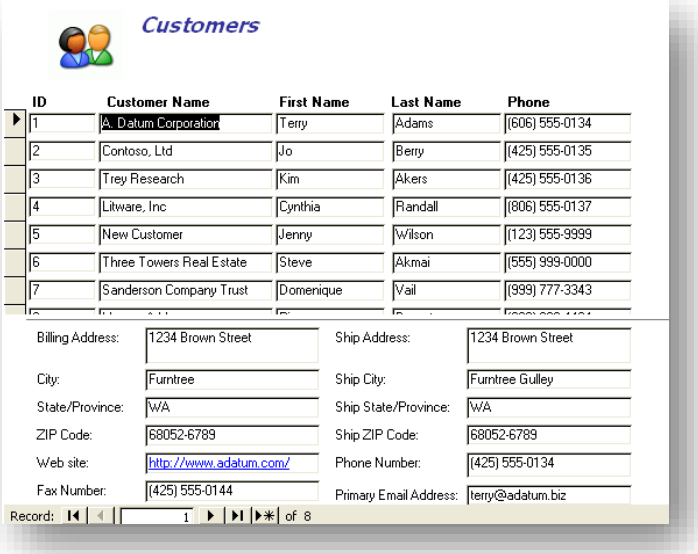
- Change the background color of the form (header/detail/footer) sections to white.
- Set the borders on your text boxes, combo boxes, and other controls to a light gray.
- Change the font from System or Tahoma to Arial, Verdana, or Calibri. Our favorites are Arial and Verdana. You'll want to size them between 9 and 10 for most labels and controls.
- Expand your forms. The common standard at present is a 1024x760 monitor. Many Access applications were designed in the days when 800x600 was a large format screen. With the increase in space, you can give your forms a less claustrophobic feel.
- Rethink the layout. Many forms are designed over a table, whereas users often need rapid access to information from multiple tables at once. Additionally, learn from users when they need summary views of information, as shown in figure 3, versus detailed views of data, as shown in figure 2.



Add or Delete a Customer

Company Name:	A. Datum Corporation	Ship Address:	1234 Brown Street
First Name:	Jeff	Ship City:	Furntree Gulley
Last Name:	Adell	Ship State/Province:	WA
Billing Address:	1234 Brown Street	Ship ZIP Code:	68052-6789
City:	Furntree	Phone Number:	(425) 555-1234
State/Province:	WA		
ZIP Code:	68052-6789		
Web site:	http://www.adatum.com/		
Phone Number:	(425) 555-1234		
Fax Number:	(425) 555-5678		

Figure 2: Traditional Table-Oriented Form Design



Customers

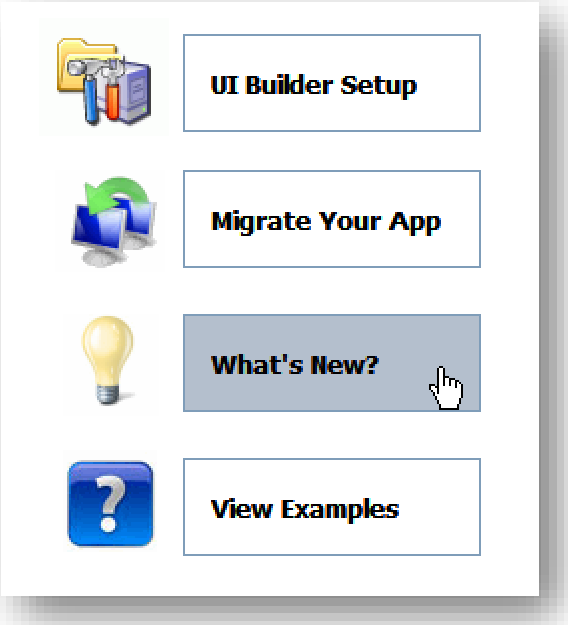
ID	Customer Name	First Name	Last Name	Phone
1	A. Datum Corporation	Terry	Adams	(606) 555-0134
2	Contoso, Ltd	Jo	Berry	(425) 555-0135
3	Trey Research	Kim	Akers	(425) 555-0136
4	Litware, Inc	Cynthia	Randall	(806) 555-0137
5	New Customer	Jenny	Wilson	(123) 555-9999
6	Three Towers Real Estate	Steve	Akmai	(555) 999-0000
7	Sanderson Company Trust	Domenique	Vail	(999) 777-3343

Billing Address:	1234 Brown Street	Ship Address:	1234 Brown Street
City:	Furntree	Ship City:	Furntree Gulley
State/Province:	WA	Ship State/Province:	WA
ZIP Code:	68052-6789	Ship ZIP Code:	68052-6789
Web site:	http://www.adatum.com/	Phone Number:	(425) 555-0134
Fax Number:	(425) 555-0144	Primary Email Address:	terry@adatum.biz

Figure 3: User-Oriented Form Design

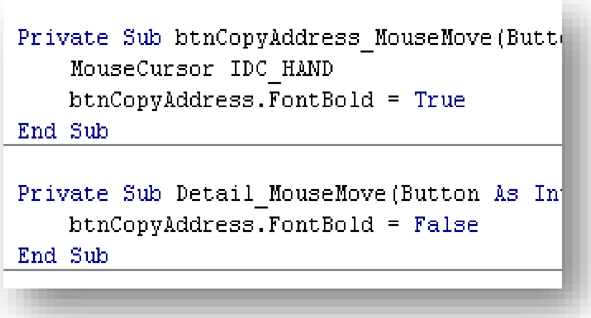
4) Hover Effects

Sometimes the simplest effects are the once that establish credibility with your users, and increase the usability of your application. In his book *Don't Make Me Think,* Steven Krug emphasizes the importance of conveying the actions a user can take with visual cues. There are two techniques that are fast to implement, and help you achieve more web-like visuals. Both involve the On Mouse Move event of a control.



First, use the [mouse cursor API]() to change the mouse cursor icon to reflect what the user can do when they click on a particular control. Most often this will be a hand, but you might decide to introduce the hand with question mark if the control will offer the user help. In Access 2007 Microsoft introduced the Cursor On Hover property for buttons, but not for other controls that you might use, such as labels or text boxes.

Second, use the On Mouse Move event to highlight the text the user is hovering over. You can do this by setting the label or button's FontBold property = True. Then add another event to the Form Detail's On Mouse Move event to set that label or button's FontBold property = False.



```
Private Sub btnCopyAddress_MouseMove(Butt
    MouseCursor IDC_HAND
    btnCopyAddress.FontBold = True
End Sub

Private Sub Detail_MouseMove(Button As In
    btnCopyAddress.FontBold = False
End Sub
```

5) Pervasive Navigation and Search

The last advice we can give is to incorporate pervasive navigation and search capabilities into everything you design. A search box is never far away in today's world, and users expect fluid navigation links and visuals to help them wade through increasingly dense applications and sites. With Microsoft Access 2007, the Ribbon UI has many advantages for application developers. Simultaneously, the familiar toolbars and the ability to create and control them dynamically is gone. While it is possible to design user-oriented Ribbons for your applications, VB-level control at runtime is not present. The Switchboard Manager remains an option, but the look and feel have not been enhanced since Access 2.0 released in 1993.

A very popular approach is to design a navigation form with specific command buttons for your application. Within that navigation form you embed a subform area that can be changed from one data entry form to another based on the user's actions. UI Builder for Microsoft Access is an example of a dynamically constructed menu navigation framework with pre-built menu commands.

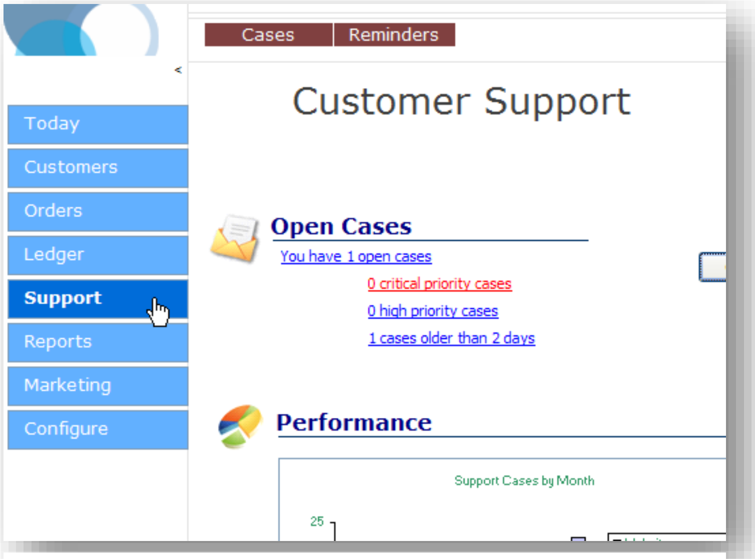


Figure 4: UI Builder for Microsoft Access

Incorporating pervasive search functionality requires an unbound text box, and visual basic code to construct a form filter statement, based on what the user types into the text box, that searches over multiple fields in the form's data source.

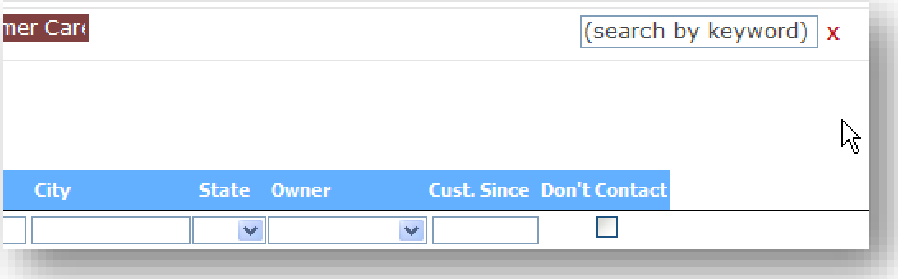


Figure 5: UI Builder's Universal Search box

Conclusion

Spending time and effort to enhance the visual appeal of your Access databases can result in greater competitive advantage, fewer customer support calls, and generally happier users. The Web 2.0 movement need not be limited to web applications, nor should it exclude desktop applications like Microsoft Access. Existing flexibility and rich functionality in the Microsoft Access form design tools can help you to impress your users with advanced visual effects they have come to expect.

For more examples and world-class Microsoft Access tools, visit OpenGate Software's website.

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