

# **LabVIEW GUI** – Essential Techniques

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## **First Edition Errata Listing**

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## Front Matter

<b>Page Number</b>	First Title Page (just inside the front cover).
<b>Location</b>	Top right
<b>Correction (in bold)</b>	“Lab <b>VIEW</b> GUI” - [ <i>VIEW</i> should be capitalized]

<b>Page Number</b>	Page viii - Table of Contents
<b>Location</b>	After: “3.4.3 Modified Waterfall Models and GUI Design”
<b>Correction (in bold)</b>	Missing items: “ <b>3.4.4 The Spiral Lifecycle Model and GUI Design</b> ” and “ <b>3.4.5 Lifecycle Models in Review</b> ”

<b>Page Number</b>	Page xvi - Acknowledgements
<b>Location</b>	Lines 3 and 4 on this page
<b>Corrections (noted in bold)</b>	“...but also for spending several hours modeling and <b>rendering</b> the 3-D Thermal <b>Desorber</b> Process Graphic <b>featured</b> both on the cover and in several figures throughout the book.

<b>Page Number</b>	Page xvi - Acknowledgements
<b>Location</b>	15 <sup>th</sup> line on the page
<b>Correction (in bold)</b>	“... every time I checked my email, I <b>discovered</b> a new article or VI from Jean-Pierre

<b>Page Number</b>	Page xvi - Acknowledgements
<b>Location</b>	22 <sup>nd</sup> line on the page
<b>Correction (in bold)</b>	“ <b>John</b> Paul Osborne from CARDIAC in Norway...”

<b>Page Number</b>	Page xvii - Acknowledgements
<b>Location</b>	2 <sup>nd</sup> last line on the page
<b>Correction (in bold)</b>	“...would I <b>ever</b> write another LabVIEW book?”

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## Chapter 1

<b>Page Number</b>	4
<b>Location</b>	1 <sup>st</sup> bullet point under the heading: “1.2 Benefits of a Well-Executed GUI”
<b>Correction (in bold)</b>	“Improved usability leads to higher <b>levels of</b> user productivity...”

<b>Page Number</b>	4
<b>Location</b>	Heading: “Improved Usability Leads to Higher User Productivity and Lower Long-term Costs”
<b>Correction (in bold)</b>	“Improved Usability Leads to Higher <b>Levels of</b> User Productivity and Lower Long-term Costs”

<b>Page Number</b>	4
<b>Location</b>	1 <sup>st</sup> sentence after the heading: “Improved Usability Leads to Higher User Productivity and Lower Long-term Costs”
<b>Correction (in bold)</b>	“... a number of usability benefits are realized, including: [ <- colon missing after “including”.]

<b>Page Number</b>	8
<b>Location</b>	Last sentence before heading: “1.1.4 Make Your Own Case”
<b>Correction (in bold)</b>	“Developers willing to invest in optimal <b>usability</b> can expect to reap the long-term economic advantages...”

<b>Page Number</b>	11
<b>Location</b>	1 <sup>st</sup> sentence after the bullet list
<b>Correction (in bold)</b>	“After <b>you</b> have completed this exercise...”

<b>Page Number</b>	11
<b>Location</b>	1 <sup>st</sup> paragraph after the bullet list, last sentence
<b>Correction (in bold)</b>	“...and save them along with copies of <b>the</b> analyzed <b>VIs.</b> ”

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## Chapter 2

<b>Page Number</b>	21
<b>Location</b>	1 <sup>st</sup> paragraph after the heading “How the User’s Mental Model Develops” - last sentence
<b>Correction (in bold)</b>	“... the user’s mental model continues to evolve in a positive direction and <del>[evolve]</del> toward the reality of the design model.” [to clarify: the second instance of the word “evolve” should be removed.]

<b>Page Number</b>	23
<b>Location</b>	Last sentence before the bullet list
<b>Correction (in bold)</b>	“Topics most relevant to <b>mental model</b> development include:”

<b>Page Number</b>	23
<b>Location</b>	First sentence after the bullet list
<b>Correction (in bold)</b>	“(For additional GUI design principles...)” [Entire sentence should be enclosed in parenthesis.]

<b>Page Number</b>	24
<b>Location</b>	Immediately under the heading “Freedom”
<b>Correction</b> (in bold)	“ “Give users well-marked roads...” ” [Quotation marks missing around the Bruce Tognazzini quotation]

<b>Page Number</b>	25
<b>Location</b>	1/3 of the way down the page
<b>Correction</b> (in bold)	[Quotation marks missing around Brian Paquette’s quotation]

<b>Page Number</b>	30
<b>Location</b>	Immediately under the heading “The Power of the Metaphor”
<b>Correction</b> (in bold)	[Quotation marks missing around Orson S. Card’s quotation]

<b>Page Number</b>	34
<b>Location</b>	2 <sup>nd</sup> last sentence before the heading “More Than Just Buttons and Switches”
<b>Correction</b> (in bold)	“...when a GUI designer assumes that users have a complete designer’s view of the system, inappropriate design <b>choices</b> can result.”

<b>Page Number</b>	39
<b>Location</b>	Under the heading “Elements of the Programmer’s Model” – second paragraph, second sentence
<b>Correction</b> (in bold)	“... we become so familiar in our roles as users that we often <b>execute</b> these roles without any conscious awareness...”

<b>Page Number</b>	42
<b>Location</b>	2 <sup>nd</sup> last paragraph, first sentence
<b>Correction</b> (in bold)	“... you pause for a moment to consider the impact this alternative will have on the overall usability <b>of your application.</b> ”

<b>Page Number</b>	42
<b>Location</b>	2 <sup>nd</sup> last paragraph, 3 <sup>rd</sup> and 4 <sup>th</sup> sentences
<b>Correction</b> (in bold)	“This change will require users to <b>copy</b> information between panels. Extra mouse clicks will be necessary to achieve <b>the</b> same objective...”

<b>Page Number</b>	44
<b>Location</b>	3 <sup>rd</sup> paragraph under the heading “A Language of Interfaces” – 1 <sup>st</sup> sentence
<b>Correction</b> (in bold)	“While most LabVIEW developers can immediately see the importance of reliable I/O communications, how <b>many</b> are prepared to approach...”

<b>Page Number</b>	49
<b>Location</b>	3 <sup>rd</sup> bullet point
<b>Correction</b> (in bold)	“The GUI object choices (for example, <b>a menu ring or</b> a list box?”

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### Chapter 3

<b>Page Number</b>	61
<b>Location</b>	2 <sup>nd</sup> bullet point
<b>Correction</b> (in bold)	“ <b>Graphical</b> differencing”

<b>Page Number</b>	61
<b>Location</b>	2 <sup>nd</sup> sentence below the heading “Testing and Verification”
<b>Correction</b> (in bold)	“... and if errors are <b>[not]</b> eradicated along the way...”

<b>Page Number</b>	64
<b>Location</b>	Last sentence under the heading “User Safety”
<b>Correction</b> (in bold)	“If you discover oversights in the safety requirements later in development, changing <del>to</del> the hardware requirements...”

<b>Page Number</b>	65
<b>Location</b>	Last two sentences on the page
<b>Correction</b> (in bold)	“... a comprehensive requirements document is usually needed as part of <b>the</b> contractual agreement. However, <b>the</b> degree of detail specified...”

<b>Page Number</b>	66
<b>Location</b>	1 <sup>st</sup> line on the page
<b>Correction</b> (in bold)	“of <b>the</b> project, and the business <b>processes</b> of the <b>parties</b> involved.”

<b>Page Number</b>	66
<b>Location</b>	4 <sup>th</sup> line on the page
<b>Correction</b> (in bold)	“... it is always a good idea to understand the most problematic aspects of the <del>[detailed]</del> requirements before finalizing the terms of <b>the</b> contract.”

<b>Page Number</b>	66
<b>Location</b>	4th sentence after the heading “3.2.4 Planning Hierarchy: General Considerations”
<b>Correction</b> (in bold)	“When you discover a need for changes during planning, these shouldn’t be <b>regarded</b> as setbacks...”

<b>Page Number</b>	68
<b>Location</b>	2 <sup>nd</sup> sentence after the numbered list
<b>Correction</b> (in bold)	“...the waterfall makes it <del>is</del> possible to catch oversights...”

<b>Page Number</b>	78
<b>Location</b>	1 <sup>st</sup> sentence under the heading “HiQ Access”
<b>Correction (in bold)</b>	“... provides linkages to <b>HiQ – National</b> Instruments’ dedicated data visualization tool.” [Note: <b>Dash</b> rather than hyphen between “HiQ” and “National Instruments”]

<b>Page Number</b>	88
<b>Location</b>	3 <sup>rd</sup> Bullet point – “Email capabilities”
<b>Correction (in bold)</b>	“... to send email using the <i>Simple <b>Mail</b> Transfer Protocol...</i> ”

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## Chapter 4

<b>Page Number</b>	98
<b>Location</b>	2 <sup>nd</sup> sentence before the heading “Long-Term Memory”
<b>Correction (in bold)</b>	“... tell him I can meet him between 6:00 <b>and</b> 7:45 P.M...”

<b>Page Number</b>	99
<b>Location</b>	2 <sup>nd</sup> paragraph – 1 <sup>st</sup> and 2 <sup>nd</sup> sentences
<b>Correction (in bold)</b>	“Memory researchers define the LTM as a complex, interconnected structure <b>of related or linked information.</b> <b>The links themselves</b> provide the access pathways...”

<b>Page Number</b>	108
<b>Location</b>	Last paragraph before section “4.2.3 Sound Perception” – first sentence
<b>Correction (in bold)</b>	“... will figure prominently in our examination of the GUI design process ( <b>covered in the next chapter</b> ), and in <b>various</b> other topics explored in the chapters to follow.

<b>Page Number</b>	116
<b>Location</b>	1 <sup>st</sup> sentence under the heading “Color Confusion”
<b>Correction (in bold)</b>	“Another visual impairment you may encounter in your user <b>population</b> is <i>color confusion</i> .”

<b>Page Number</b>	116
<b>Location</b>	Last line on the page – first word
<b>Correction (in bold)</b>	“In other , colors...”

<b>Page Number</b>	120
<b>Location</b>	4 <sup>th</sup> sentence after the heading “Age”
<b>Correction (in bold)</b>	“... but also that software <b>written to solve</b> a specific problem...”

<b>Page Number</b>	120
<b>Location</b>	3 <sup>rd</sup> last sentence before the heading “Gender”
<b>Correction (in bold)</b>	“Also, <b>employ</b> larger buttons to provide bigger targets...”

<b>Page Number</b>	123
<b>Location</b>	3 lines from the bottom of the page (3 <sup>rd</sup> word from the left margin)
<b>Correction (in bold)</b>	“Only <b>by</b> capitalizing on the unique strengths of each...”

<b>Page Number</b>	124
<b>Location</b>	Last line on the page, 2 <sup>nd</sup> word.
<b>Correction (in bold)</b>	“... starting with <b>requirements</b> -gathering techniques...”

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## Chapter 5

<b>Page Number</b>	146
<b>Location</b>	Last sentence before the heading “Custom Menus and Progressive Disclosure”
<b>Correction (in bold)</b>	“You may want to <b>consider reorganizing</b> the panels...”

<b>Page Number</b>	148
<b>Location</b>	Last line on the page, 2 <sup>nd</sup> word.
<b>Correction (in bold)</b>	“...when system security or safety is an issue, you may prefer to <b>programmatically</b> limit and control user access.”

<b>Page Number</b>	149
<b>Location</b>	First 2 sentences under the heading “Reasons to Reduce the Number of GUI Objects on Each Panel.”
<b>Correction (in bold)</b>	“There are several reasons why over-populated panels are <b>undesirable. From</b> a purely aesthetic point of view...”

<b>Page Number</b>	150
<b>Location</b>	Last paragraph before the heading “Strategies for Reducing Clutter”
<b>Correction (in bold)</b>	“While <b>over-crowding</b> typically compromises the <b>appearance</b> of a GUI panel, the problems of <b>over-crowding</b> often <b>extend</b> far beyond <b>aesthetical</b> considerations alone. Therefore, we will look at strategies for <b>reducing</b> panel clutter next.”

<b>Page Number</b>	152
<b>Location</b>	Caption for Figure 5-9
<b>Correction</b> (in bold)	“Although numerical displays provide more <b>precise</b> representations...”

<b>Page Number</b>	154
<b>Location</b>	1 <sup>st</sup> sentence under the heading “Graphic Representations Eliminate the Need for Labels.”
<b>Correction</b> (in bold)	“Toolbar icons are <b>not the only graphic elements that can reduce the volume of</b> GUI text.”

<b>Page Number</b>	154
<b>Location</b>	Last sentence of the 1 <sup>st</sup> paragraph under the heading “Graphic Representations Eliminate the Need for Labels.”
<b>Correction</b> (in bold)	“... you don’t have to specifically label a GUI object <b><i>feed pump</i></b> if the screen image depicts...” [add italics for emphasis]

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## Chapter 6

<b>Page Number</b>	180
<b>Location</b>	Heading: “Natural Eye Movements and visual Scanning Patterns”
<b>Correction (in bold)</b>	Natural Eye Movements and <b>Visual</b> Scanning Patterns [capitalize “Visual”]

<b>Page Number</b>	181
<b>Location</b>	1 <sup>st</sup> sentence under the heading “Usability Implications of GUI Object Placement”
<b>Correction (in bold)</b>	“... it should be stressed that the visual hierarchy <b>of</b> your GUI panels should be <b>governed</b> by more than aesthetic considerations alone.”

<b>Page Number</b>	186
<b>Location</b>	Last sentence on the page
<b>Correction (in bold)</b>	“While effective visual presentation can improve comprehension and user satisfaction, <b>[but]</b> the cart should not be placed...”

<b>Page Number</b>	194
<b>Location</b>	2 <sup>nd</sup> paragraph, 2 <sup>nd</sup> sentence (beginning on line 6)
<b>Correction (in bold)</b>	“... constructing a golden section rectangle geometrically <b>[remove comma here]</b> is somewhat more involved than simply creating a frame on your GUI panel, <b>[add comma]</b> and duplicating it twice (to create a rule of thirds rectangle). <b>[period here]</b> From a practical perspective...”

<b>Page Number</b>	194
<b>Location</b>	2 <sup>nd</sup> paragraph, last sentence
<b>Correction (in bold)</b>	“... dividing a rectangle into thirds along either axis will <b>produce</b> a visually pleasing effect.”

<b>Page Number</b>	195
<b>Location</b>	1 <sup>st</sup> paragraph, last sentence
<b>Correction (in bold)</b>	“... this proportion is heavier, and creates a more stable <b>[remove comma]</b> impression.”

<b>Page Number</b>	198
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “Thematic Consistency”
<b>Correction (in bold)</b>	“From color and font choices to control and indicator selections, <b>[add comma]</b> from panel and control proportions to control groupings and placement – <b>literally</b> every aspect of your design...”

<b>Page Number</b>	199
<b>Location</b>	2 <sup>nd</sup> paragraph, 2 <sup>nd</sup> sentence under the heading “Eliminating the Unnecessary and Redundant.”
<b>Correction (in bold)</b>	[replace “Visual complexity complicates...” with ->] “ <b>Panel clutter</b> complicates the design process...”

<b>Page Number</b>	199
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “Object Alignment”
<b>Correction (in bold)</b>	“ <b>When</b> GUI objects are not aligned...”

<b>Page Number</b>	201
<b>Location</b>	1 <sup>st</sup> line of the body text, last word
<b>Correction</b> (in bold)	“... frames and decorations can provide additional cues about the <b>underlying</b> functional organization...”

<b>Page Number</b>	202
<b>Location</b>	1 <sup>st</sup> sentence under the heading “Application-wide Unity.”
<b>Correction</b> (in bold)	“... professional presentation demands not only unity on a panel-by-panel basis, <b>[insert comma]</b> but also between panels...”

<b>Page Number</b>	210
<b>Location</b>	1 <sup>st</sup> sentence under the heading “User Controlled Resizing”
<b>Correction</b> (in bold)	“As an alternative to automatic <b>resizing</b> , you can also...”

<b>Page Number</b>	212
<b>Location</b>	First paragraph, 2 last sentences – 5 <sup>th</sup> and 6 <sup>th</sup> lines on the page.
<b>Correction</b> (in bold)	“... if you abdicate control to users, there is no telling how your panels may look. [ <b>&lt;- add period here</b> ] (User-controlled resizing caveats will be covered in a moment.) <b>[parenthesis added]</b> ”

<b>Page Number</b>	214
<b>Location</b>	2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence
<b>Correction</b> (in bold)	“Be sure to test all scalable VI panels <b>[to]</b> extensively...”

<b>Page Number</b>	214
<b>Location</b>	2 <sup>nd</sup> paragraph, last sentence
<b>Correction</b> (in bold)	In Chapter 8 we will explore a programmatic panel resizing technique that uses VI Server and property nodes to improve <b>the</b> outcome.

<b>Page Number</b>	214
<b>Location</b>	Last 2 sentences of the first paragraph under the heading “6.3.5 Layout and Design in Review”
<b>Correction (in bold)</b>	“So dive in and don’t be afraid of <b>designing</b> a few clunkers along the way. You <b>stand</b> to learn more from one failed experiment than from several successful ones.”

<b>Page Number</b>	216
<b>Location</b>	3 <sup>rd</sup> last sentence on the page, beginning 5 lines from the bottom.
<b>Correction (in bold)</b>	“For example, <b>setting all three</b> RGB bytes to an equal value of 127...”

<b>Page Number</b>	224
<b>Location</b>	1 <sup>st</sup> sentence under the heading “Using the Color Picker Utility”
<b>Correction (in bold)</b>	“... you will notice a large button in the upper <b>right-hand</b> corner of the panel...”

<b>Page Number</b>	225
<b>Location</b>	1 <sup>st</sup> sentence on the page
<b>Correction (in bold)</b>	“... and more information about <b>the</b> color picker utility, you are directed to the .pdf file included with <b>the</b> color picker on the CD-ROM.”

<b>Page Number</b>	226
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “Choosing a Typeface.”
<b>Correction (in bold)</b>	“... never mind trying to choose a particular <b>typeface {one}</b> for any given purpose.”

<b>Page Number</b>	230
<b>Location</b>	3 <sup>rd</sup> sentence from the top
<b>Correction</b> (in bold)	“The Color Picker VI introduced previously offers a <i>patchwork view</i> – a preview panel specifically designed...” [note: italics replace existing quotation marks and a dash sets off the last part of the sentence.]

<b>Page Number</b>	230
<b>Location</b>	1 <sup>st</sup> paragraph, last sentence (5 <sup>th</sup> and 6 <sup>th</sup> line from the top)
<b>Correction</b> (in bold)	“This interactive panel can be <b>indispensable</b> for evaluating <b>the legibility</b> of GUI text.

<b>Page Number</b>	230
<b>Location</b>	3 <sup>rd</sup> sentence under the heading “Controlling the Appearance of GUI Text”
<b>Correction</b> (in bold)	“... remember that <b>a</b> specific typeface will only display as intended [ <b>period removed</b> ] if it is installed on the target PC.”

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## Chapter 7

<b>Page Number</b>	242
<b>Location</b>	Last sentence
<b>Correction</b> (in bold)	“Back issues and <b>VI Code Paks</b> – collections of <b>related</b> LTR materials – are available directly from LTR...”

<b>Page Number</b>	261
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “GOOP Toolkit Overview”
<b>Correction</b> (in bold)	( <del>Windows and Mac versions are</del> [replace with] <b>More information is</b> included on the CD-ROM [remove closing parenthesis here], but for the most recent updates, visit the National <b>Instruments</b> web site at <a href="http://www.ni.com">www.ni.com</a> .)

<b>Page Number</b>	261
<b>Location</b>	1 <sup>st</sup> paragraph, 2 <sup>nd</sup> last sentence under the heading “GOOP Toolkit Overview”
<b>Correction</b> (in bold)	“... you will also need to construct one or more <b>custom method VIs.</b> ” [hyphen removed]

<b>Page Number</b>	271
<b>Location</b>	1 <sup>st</sup> full paragraph, 3 <sup>rd</sup> sentence (beginning on the 7 <sup>th</sup> line from the top)
<b>Correction</b> (in bold)	“Studies also suggest that arranging equal-priority items in alphabetical order <del>[also]</del> can help to improve...”

<b>Page Number</b>	271
<b>Location</b>	1 <sup>st</sup> full paragraph, 6 <sup>th</sup> and 7 <sup>th</sup> sentences (beginning on the 11 <sup>th</sup> line from the top)
<b>Correction (in bold)</b>	“Avoid placing dangerous or destructive items (such as Delete operations) next to frequently accessed <b>items, as</b> this increases...” [

<b>Page Number</b>	271
<b>Location</b>	2 <sup>nd</sup> full paragraph, 2 <sup>nd</sup> sentence
<b>Correction (in bold)</b>	“When possible, use <b>a single <i>action</i> word, or the name of a specific function or view.</b>

<b>Page Number</b>	271
<b>Location</b>	Bullet points at the bottom of the page
<b>Correction (in bold)</b>	[Italics for points]: “ <i>The Default</i> option, which...” “ <i>The Minimal</i> option, which...” “ <i>The Custom</i> <b>[delete unnecessary closing quotation mark]</b> option, which...”

<b>Page Number</b>	272
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “Using the Menu Editor”
<b>Correction (in bold)</b>	“... and typing the menu text into <b>the <i>item name</i></b> field provided.”

<b>Page Number</b>	295
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “Advantages of Event-Driven Designs”
<b>Correction (in bold)</b>	“... the majority of time is spent in a loop, <b>[comma added]</b> waiting for <i>exceptions</i> – disruptions to the usual <i>do-nothing</i> <b>[italics for emphasis]</b> behavior of the loop.

<b>Page Number</b>	296
<b>Location</b>	Last three bullet points
<b>Correction</b> (in bold)	[match bold pattern established with the first 5 bullets]: “ <b>System timing and synchronization events</b> “ <b>Status and Error events</b> ” “ <b>Media-playback events, and so on.</b> ”

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## Chapter 8

<b>Page Number</b>	309
<b>Location</b>	Opening quotation
<b>Correction</b> (in bold)	“An invasion of <b>armies</b> can be resisted...” [Also, this is the only chapter with the opening quote enclosed in quotation marks]

<b>Page Number</b>	319
<b>Location</b>	1 <sup>st</sup> sentence under the heading “8.3.1 The Run VI Method”
<b>Correction</b> (in bold)	“... the first thing to realize is that we are not talking about a VI <i>property</i> [italics for emphasis, unnecessary quotation mark removed] — accessed via a <i>Property</i> node – but rather a VI <i>method</i> [italics] – accessed using an Invoke node.

<b>Page Number</b>	319
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “8.3.1 The Run VI Method”
<b>Correction</b> (in bold)	“One aspect of VI Server that can cause confusion for the uninitiated is <b>the</b> visual similarity <b>between</b> components.

<b>Page Number</b>	322
<b>Location</b>	2 <sup>nd</sup> paragraph, 3 <sup>rd</sup> sentence
<b>Correction</b> (in bold)	“The critical enabling technology is the ability to pass control references <b>[to]</b> into a subVI...”

<b>Page Number</b>	322
<b>Location</b>	3 <sup>rd</sup> paragraph, 1 <sup>st</sup> sentence
<b>Correction</b> (in bold)	“Before we move <b>on to</b> the next...”

<b>Page Number</b>	323
<b>Location</b>	2 <sup>nd</sup> line, last word (“computer”)
<b>Correction</b> (in bold)	“... it is somewhat less appropriate for the end-users of your <b>completed</b> applications.”

<b>Page Number</b>	323
<b>Location</b>	2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence (4 <sup>th</sup> line on the page)
<b>Correction</b> (in bold)	Borrowing a technique <b>used</b> for mainstream applications, you might consider adding a splash screen to your <b>projects</b> .

<b>Page Number</b>	324
<b>Location</b>	2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence (line 5)
<b>Correction</b> (in bold)	“The actual function of Main.vi and its subVIs <b>are</b> not relevant here...”

<b>Page Number</b>	324
<b>Location</b>	1 <sup>st</sup> paragraph, 2 <sup>nd</sup> last sentence under the heading “Run VI Method in Perspective”
<b>Correction</b> (in bold)	“As you may recall, invisible data transfer mechanisms increase the potential for race conditions <b>and [remove comma]</b> can lead to data duplication.”

<b>Page Number</b>	324
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “8.4 VI Server’s Call by Reference Node”
<b>Correction (in bold)</b>	“While the defining <b>characteristic of the Call by Reference</b> node is its ability...”

<b>Page Number</b>	327
<b>Location</b>	2 <sup>nd</sup> paragraph, 3 <sup>rd</sup> sentence
<b>Correction (in bold)</b>	“From a <i>how-to</i> [italics for emphasis – add hyphen] perspective, this simply means...”

<b>Page Number</b>	328
<b>Location</b>	3 <sup>rd</sup> sentence under the heading “Plug-in Architectures in Action – CalcExpress.”
<b>Correction (in bold)</b>	“Each script is converted into a series <b>of</b> function calls...”

<b>Page Number</b>	330
<b>Location</b>	3 <sup>rd</sup> and 4 <sup>th</sup> sentences under the heading “8.5 VI Server and Distributed Applications”
<b>Correction (in bold)</b>	“... all you need is the remote computer’s network name (or IP address) and the name of the remote <b>VI [period removed]</b> <b>in</b> order to open a remote VI reference and...”

<b>Page Number</b>	331
<b>Location</b>	2 <sup>nd</sup> sentence of the body text (under the figure)
<b>Correction (in bold)</b>	“ <b>This</b> interesting VI Server techniques offers...”

<b>Page Number</b>	331
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “ 8.6 Selective GUI Panel Control”
<b>Correction</b> (in bold)	“Common work-arounds such as multiple-loop architectures, VI Server’s <b>Run</b> [capitalize] VI method...”

<b>Page Number</b>	333
<b>Location</b>	2 <sup>nd</sup> last line, last word (“Psycholog”)
<b>Correction</b> (in bold)	“The <b>Psychology</b> of Human-Computer Interactions.”

<b>Page Number</b>	334
<b>Location</b>	Caption for Figure 8-20, 2 <sup>nd</sup> sentence
<b>Correction</b> (in bold)	It should be noted, however, that this represents only one <b>of</b> several related panel-control strategies.

<b>Page Number</b>	337
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “The Conventional Approach”
<b>Correction</b> (in bold)	“The progress <b>indicator</b> depicted in this figure...”

<b>Page Number</b>	352
<b>Location</b>	Last 2 sentences of the first paragraph under the heading “How it Works.”
<b>Correction</b> (in bold)	If a <b>[new]</b> reference is found, the subVI panel is opened and moved to the front. If no reference exists, a <b>new</b> reference is opened...”

<b>Page Number</b>	357
<b>Location</b>	2 <sup>nd</sup> sentence under the heading “8.8 VI Server in Review”
<b>Correction</b> (in bold)	“Granted, the coverage <b>here</b> has been far from comprehensive...”

<b>Page Number</b>	358
<b>Location</b>	Last sentence (3 <sup>rd</sup> line from the bottom)
<b>Correction</b> (in bold)	In the next chapter we will shift our attention from the VI <b>diagram</b> back to the front panel...”

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## Chapter 9

<b>Page Number</b>	365
<b>Location</b>	Last paragraph
<b>Correction</b> (in bold)	“Clearly, passing control <b>references</b> to subVIs increases the opportunity for code reuse and promises to simplify <b>upper-level</b> VI diagrams. However, the ability to access any control at any location throughout <b>the</b> VI hierarchy also offers <b>completely new</b> architectural possibilities. Theoretically at least, GUI <b>panels could be constructed without any direct</b> wire connections to the VI logic they control. GUI controls could be arranged in any combination <b>on</b> otherwise nonfunctional GUI <b>panels</b> , and the underlying...”

<b>Page Number</b>	366
<b>Location</b>	Heading: “9.22 Control Reference and Property node examples”
<b>Correction</b> (in bold)	“9.22 Control Reference and Property <b>Node</b> [capitalize] examples”

<b>Page Number</b>	369
<b>Location</b>	2 <sup>nd</sup> paragraph, 2 <sup>nd</sup> and 3 <sup>rd</sup> sentences
<b>Correction (in bold)</b>	“... the best way to investigate your options is to wire a waveform <b>chart</b> or graph <b>reference</b> into a property node and explore. For additional examples using charts and graphs, investigate the cntrlref.llb <b>included</b> with the LabVIEW examples.”

<b>Page Number</b>	369
<b>Location</b>	Last sentence before the heading “The Mouse-Over Effect”
<b>Correction (in bold)</b>	“This <b>material</b> was first introduced in “LabVIEW Special Effects.” (LTR Vol. 7 No. 3, 1999). [<- period added] <b>The</b> VIs presented here have been updated for LabVIEW 6i.

<b>Page Number</b>	371
<b>Location</b>	First word on the 8 <sup>th</sup> line (“indictors”)
<b>Correction (in bold)</b>	“...regardless of the controls and <b>indicators</b> on the panel.”

<b>Page Number</b>	371
<b>Location</b>	Last sentence under the heading “LabVIEW Drag and Drop.”
<b>Correction (in bold)</b>	“Figure 9-8 provides a functional overview for the simple user-configurable GUI panel [ <b>period removed</b> ] <b>that</b> will be the focus of this discussion.

<b>Page Number</b>	382
<b>Location</b>	Last paragraph, 1 <sup>st</sup> sentence, 2 <sup>nd</sup> word (“broadcast”)
<b>Correction (in bold)</b>	“While <b>broadcast</b> video uses 30 fps...”

<b>Page Number</b>	383
<b>Location</b>	Last sentence under the heading “9.3.2 Dynamic Image Generation” (and before “The Picture Indicator Revisited.”)
<b>Correction (in bold)</b>	“The capabilities of the xy graph are covered in detail in <del>the</del> Chapter 12, “Advanced <b>Graph</b> Techniques,” so here...

<b>Page Number</b>	386
<b>Location</b>	Last sentence under the heading “LabVIEW Draw.”
<b>Correction (in bold)</b>	“...an implementation of the Undo function introduced in Chapter 7, “Building <b>GUI VIs</b> ,” has been included...”

<b>Page Number</b>	387
<b>Location</b>	Last sentence above the heading “Other Examples Using the Picture Control.”
<b>Correction (in bold)</b>	“For an in-depth analysis of the <b>LabVIEW</b> Draw VI diagrams, refer to LVDraw.pdf included along with the <b>LabVIEW</b> Draw VI on the CD-ROM.”

<b>Page Number</b>	392
<b>Location</b>	2 <sup>nd</sup> sentence after the heading “Constructing a Pict Ring Toolbar.” (2 <sup>nd</sup> line on the page)
<b>Correction (in bold)</b>	“... suppose that you wanted to recreate the LabVIEW <b>Draw</b> [capitalize] toolbar from the preceding subsection...”

<b>Page Number</b>	394
<b>Location</b>	8 different locations throughout the page
<b>Correction (in bold)</b>	“...picture-control...” becomes “... <b>picture control</b> ...” [remove hyphen]

<b>Page Number</b>	403
<b>Location</b>	2 last sentences before the heading “Codeless Radio Buttons.”
<b>Correction (in bold)</b>	“Next, we will briefly look at two additional examples based on <b>disguised</b> slide controls [period removed] – <b>specifically</b> , codeless radio buttons and a codeless toolbar.”

<b>Page Number</b>	403
<b>Location</b>	2 <sup>nd</sup> last sentence on the page (4 lines from the bottom)
<b>Correction (in bold)</b>	“... no diagram logic is needed to <b>produce</b> the appropriate mutually – exclusive behavior...”

<b>Page Number</b>	404
<b>Location</b>	3 <sup>rd</sup> sentence under the heading “More Slide Control Customization Ideas.”
<b>Correction (in bold)</b>	“However, slide controls also can be used for unconventional GUI <b>objects</b> [period removed] <b>as</b> illustrated in Figure 9-29. [period here] <b>These</b> examples are included with the...”

<b>Page Number</b>	407
<b>Location</b>	Internet web address (URL) directly before the heading “Coarse/Fine Control Knobs.”
<b>Correction (in bold)</b>	“ <a href="http://cybertechs.qc.ca/">http://cybertechs.qc.ca/</a> [comma removed] <b>jpdrolet</b> /labview.”

<b>Page Number</b>	418
<b>Location</b>	2 <sup>nd</sup> paragraph, 2 <sup>nd</sup> sentence under the heading “9.6.3 More Advanced ActiveX Integration Examples”
<b>Correction (in bold)</b>	“This example, also available <del>originally</del> from the National Instruments Web site...”

<b>Page Number</b>	418
<b>Location</b>	Last sentence before bullet list at the bottom of the page
<b>Correction (in bold)</b>	“... (see Figure 9-36). [<- period added] <b>CARDIAC ActiveX</b> integration <b>involves</b> such items as: ”

<b>Page Number</b>	419
<b>Location</b>	2 <sup>nd</sup> last line on the page
<b>Correction (in bold)</b>	“... some of the advantages of <b>leveraging advanced</b> [hyphen removed] technologies using ActiveX.”

<b>Page Number</b>	424
<b>Location</b>	Last sentence before the heading “9.8 LabVIEW GUI Customization in Review”
<b>Correction (in bold)</b>	“... consider hiding the tabs and altering the appearance of the tab control to <b>avoid</b> inconsistencies...”

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## Chapter 10

<b>Page Number</b>	430
<b>Location</b>	Heading: “Alternative Applications Extending the VI Model”
<b>Correction (in bold)</b>	“Alternative Applications: [colon added] Extending the VI Model”

<b>Page Number</b>	436
<b>Location</b>	Last sentence before the heading “Do-It_Yourself Compression: Manual Color Depth Reduction.”
<b>Correction (in bold)</b>	“... in particular, the <b>popular JPEG format</b> – also uses this approach.”

<b>Page Number</b>	442
<b>Location</b>	Inset (gray) box, 2 <sup>nd</sup> sentence
<b>Correction</b> (in bold)	“... (see Figure 10-5). This <b>Custom Controls</b> package includes a collection of tanks...”

<b>Page Number</b>	443
<b>Location</b>	Caption for Figure 10-5
<b>Correction</b> (in bold)	“National Instruments’ Industrial Automation Toolkit is <b>LabVIEW clip-art with a difference. These custom controls are</b> specifically designed for process control applications.”

<b>Page Number</b>	454
<b>Location</b>	2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence under the heading “The Slicing Procedure.”
<b>Correction</b> (in bold)	“... fetch the <i>Slice Select</i> [italics added] tool from under the Slice tool in the toolbox ( <b>clicking</b> the Slice tool icon <del>[to]</del> <b>produces</b> the pop-up menu), <del>[and]</del> then click on <b>any</b> slice to select it.

<b>Page Number</b>	455
<b>Location</b>	2 <sup>nd</sup> line of the body text
<b>Correction</b> (in bold)	“... likely turned to slicing because the simpler color-reduction techniques produced unsatisfactory results. [period replaces comma] <b>Therefore</b> , you generally will want to...”

<b>Page Number</b>	455
<b>Location</b>	Last sentence (in parenthesis) before the heading “Slicing and Color Reduction Combined.”
<b>Correction</b> (in bold)	“... summarized in Figure 10-12. ( <b>Unfortunately, all</b> File Save and Export options are disabled...”

<b>Page Number</b>	462
<b>Location</b>	Last sentence of the first paragraph under the heading “10.6 Custom Graphics Integration in Review”
<b>Correction (in bold)</b>	“... or by providing important visual cues to support <del>the</del> GUI object recognition.”

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## Chapter 11

<b>Page Number</b>	469
<b>Location</b>	2 <sup>nd</sup> paragraph from the bottom, 2 <sup>nd</sup> sentence
<b>Correction (in bold)</b>	“... freedom, direct manipulation and feedback, forgiveness, persistence, <b>metaphors, transparency</b> , familiarity, and so forth...”

<b>Page Number</b>	474
<b>Location</b>	3 <sup>rd</sup> paragraph, 3 <sup>rd</sup> sentence under the heading “Preliminary Designs.”
<b>Correction (in bold)</b>	“The inadequacies of this design choice are demonstrated graphically in <b>Figure 11-3.</b> ”

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**Chapter 12** - no corrections

**Appendix A** - no corrections

**Appendix B** - no corrections

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## Appendix C

<b>Page Number</b>	539
<b>Location</b>	7 <sup>th</sup> bullet point
<b>Correction (in bold)</b>	“... (for both Windows and Mac) <sup>1</sup> “ [closing parenthesis missing]

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## Bibliography

<b>Page Number</b>	544
<b>Location</b>	Line 1
<b>Correction (in bold)</b>	“... “Localizing <b>VI</b> s”...” [lower-case “s”]

<b>Page Number</b>	544
<b>Location</b>	Line 12
<b>Correction (in bold)</b>	“... “QuickTime Frame Grabber <b>VI</b> s”...” [lower-case “s”]

<b>Page Number</b>	
<b>Location</b>	
<b>Correction (in bold)</b>	

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## Index

<b>Page Number</b>	549
<b>Location</b>	Left column under “Advanced Graphs”
<b>Correction (in bold)</b>	“ <b>filled</b> shapes, 503-504”

<b>Page Number</b>	550
<b>Location</b>	Left column, 3 <sup>rd</sup> line from the bottom
<b>Correction (in bold)</b>	“code-and- <b>fix</b> model, GUI Design”

<b>Page Number</b>	551
<b>Location</b>	Left column under “customized GUI”
<b>Correction (in bold)</b>	animations, 382-383 [comma and space missing]

<b>Page Number</b>	552
<b>Location</b>	2 <sup>nd</sup> item from the top
<b>Correction (in bold)</b>	<b>requirements</b> , 139

<b>Page Number</b>	553
<b>Location</b>	Lines 17 and 18 (items 12 and 13)
<b>Correction (in bold)</b>	<b>LV Draw toolbar</b> , 388-389 <b>LV Draw VI</b> , 386

<b>Page Number</b>	555
<b>Location</b>	Lines 6 and 7
<b>Correction (in bold)</b>	<b>LV Draw toolbar, 388-389</b> <b>LV Draw VI, 386</b>

<b>Page Number</b>	561
<b>Location</b>	Right column, 3 <sup>rd</sup> item under “toolbars, 388”
<b>Correction (in bold)</b>	<b>LV Draw toolbar, 388-389</b>

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## About the Author

(Missing from existing book)

David J. Ritter is a LabVIEW programmer and GUI design specialist for BetterVIEW Consulting - a LabVIEW toolkit development, consulting and integration company located in Vancouver, Canada. With a diverse background in both applied technology and artistic disciplines, Dave has a unique perspective into the LabVIEW GUI design process.

After studying engineering at Mount Royal College and the University of Calgary, Dave began his professional career at Retco Engineering – an R&D consulting firm based in Calgary, Canada. Moonlighting as a computer instructor for Whiz Kids Computer Schools, and later for Mount Royal College - Continuing Education, Dave had his first insights into the challenge of making computers more “usable”. During this period, Dave wrote his first book: “The Whiz Kids Guide to the Commodore 64.” It sold more than 5000 copies in Canada before the rights were sold to a US publisher.

A capable composer and avid computer musician, Dave also earned a diploma in Composing, Arranging, and Acoustic Orchestration at the acclaimed Grove School of Music in Los Angeles, CA. In the mid-1980’s Dave assumed the title of “composer-in-residence” at the Centennial Planetarium in Calgary. This opened the door to other musical opportunities, and in the years between 1985 and 1992, Dave wrote numerous musical scores for industrial and feature-length films, television programs, video games, and interactive media.

Working closely with pioneers in the CD-ROM and interactive media industry, Dave began to develop an increasing interest in interactive media programming. This in turn, led him to pursue studies in graphic arts, layout and design, interactive media authoring, and web design at the University of British Columbia. To this day, Dave continues to follow the work of preeminent authorities specializing in human-factors design and usability engineering.

Hired initially by an R&D company to design the “look” for an experimental process control system, Dave was immediately drawn to the elegance and simplicity of LabVIEW programming. He went on to write the entire control system VI for that first project, and in the years since, his infatuation with the LabVIEW paradigm has continued to grow. Unquestionably his first tool of choice for virtually any programming project, Dave hopes one day to find enough time to write an algorithmic music composition program using LabVIEW.

“LabVIEW GUI –Essential Techniques” is David J. Ritter’s third computer book, following “The Whiz Kid’s Guide to the Commodore 64”, and “Power-up Basic 64”. In addition to his

responsibilities with BetterVIEW, Dave has also been a technical editor and frequent contributor to LTR (The LabVIEW Technical Resource).