INTRODUCTION TO THE BACKGROUND WORKER COMPONENT WITH WPF

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AGENDA

- About Me
- BackgroundWorker Component Features
- LOOK AT THE CODE
- Resources
ABOUT ME

- Jeremy Clark
- 10 Years as an Application Developer
- .NET/C# since 2005
- ASP.NET, WinForms, Web Services, WCF, WPF, Silverlight
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BACKGROUND WORKER COMPONENT FEATURES

- Background Thread Handling
- Automatic Marshalling Across Threads
- Progress Notification
- Cancellation
BACKGROUND WORKER MEMBERS

- **Methods**
  - RunWorkerAsync
  - ReportProgress
  - CancelAsync

- **Properties**
  - WorkerReportsProgress
  - WorkerSupportsCancellation
  - CancellationPending
  - IsBusy

- **Events**
  - DoWork
  - RunWorkerCompleted
  - ProgressChanged
LOOK AT THE CODE

```csharp
#region BackgroundWorker Events
private void BackgroundWorker_DoWork(object sender, DoWorkEventArgs e)
{
    var bgw = sender as BackgroundWorker;
    e.Result = DoSlowProcess((int)e.Argument, bgw, e);
}

private void BackgroundWorker_ProgressChanged(object sender,
                                            ProgressChangedEventArgs e)
{
    workerProgress.Value = e.ProgressPercentage;
}

private void BackgroundWorker_RunWorkerCompleted(object sender,
                                               RunWorkerCompletedEventArgs e)
{
    if (e.Error != null)
    {
        MessageBox.Show(e.Error.Message);
    }
    else if (e.Canceled)
    {
        outputBox.Text = "Canceled";
    }
    else
```
RESOURCES

- Pro WPF in C# 2008 by Matthew MacDonald
  - Contains an overview of the BackgroundWorker and a WPF example (prime number calculation)

- MSDN – BackgroundWorker Component
  - Contains an overview of the BackgroundWorker and a WinForms example (Fibonacci sequence)

- JeremyBytes
  - Contains downloadable code and full walkthrough
  - Email: jeremy@jeremybytes.com