

THE INS AND OUTS OF SCANNING

CHRISTOPHER J. RUSSELL, PH.D.

WWW.TECHINMUSICED.COM

Why Scan?

- * Convert paper music to digital sheet music (PDF)
- * Convert paper music to digital notation

Paper to Digital Sheet Music (PDF)

- * Choose your equipment wisely
 - * Computer
 - * Scanner
 - * <8.5"x11" Solutions
 - * >8.5"x11" Solutions



Industrial Photocopier

- * Issues:
 - * Non-cropped scanning
 - * Image quality issues (greyscale)
 - * Speed (page by page)



Flatbed Scanner (or All-In-One)

- * Issue:
- * Speed



Camera Phones

- * Issues:
 - * Light issues
 - * Page warping
 - * Edge detection
 - * Size of files (connected to size of original image converted to PDF)



In a pinch...

- * Those these methods: industrial photocopier, flatbed scanner, or mobile phone scanner will work.
- * There are better solutions for high-quality, smaller size, permanent scans.

<8.5" x 11"

- * Portable duplex sheet-fed scanner
 - * e.g. Canon P-215ii (\$250)
 - * Fast
 - * Great quality
 - * Multi-use (photos, too)
 - * Auto-cropping (software)
 - * Portable
 - * How much is your time worth?



>8.5" x 11"

- * Multiple solutions
 - * Fujitsu Scan Snap SV600 (\$600)
[Add a non-reflective plexiglass sheet]
 - * Oversize duplex ADF, such as the
Epson WorkForce DS-60000
(\$2400)
 - * onedollarscan.com



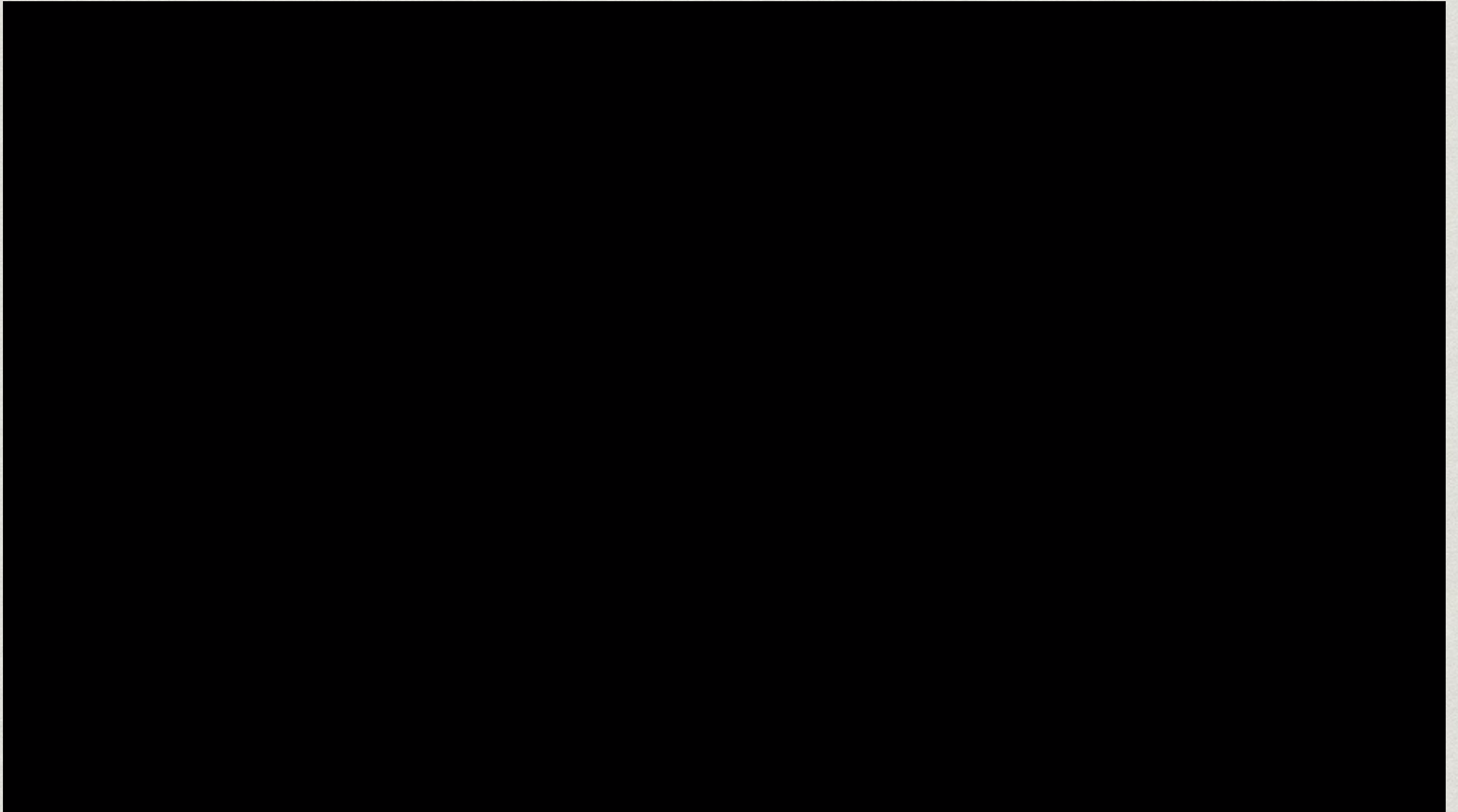
When scanning

- * Choral Octavos: cut folded edge (pianists want one of these anyway)
- * Name logically: Title Composer Arranger Voicing [Choir] Level [Band]
- * 300 dpi, Black and White or Line Art. NOT greyscale!
- * Save into specific folders. Choir: voicing. Band/Orchestra: Grade Level (if solo and ensemble, instrument)
- * If using an ADF, always check the number of pages after the scan!

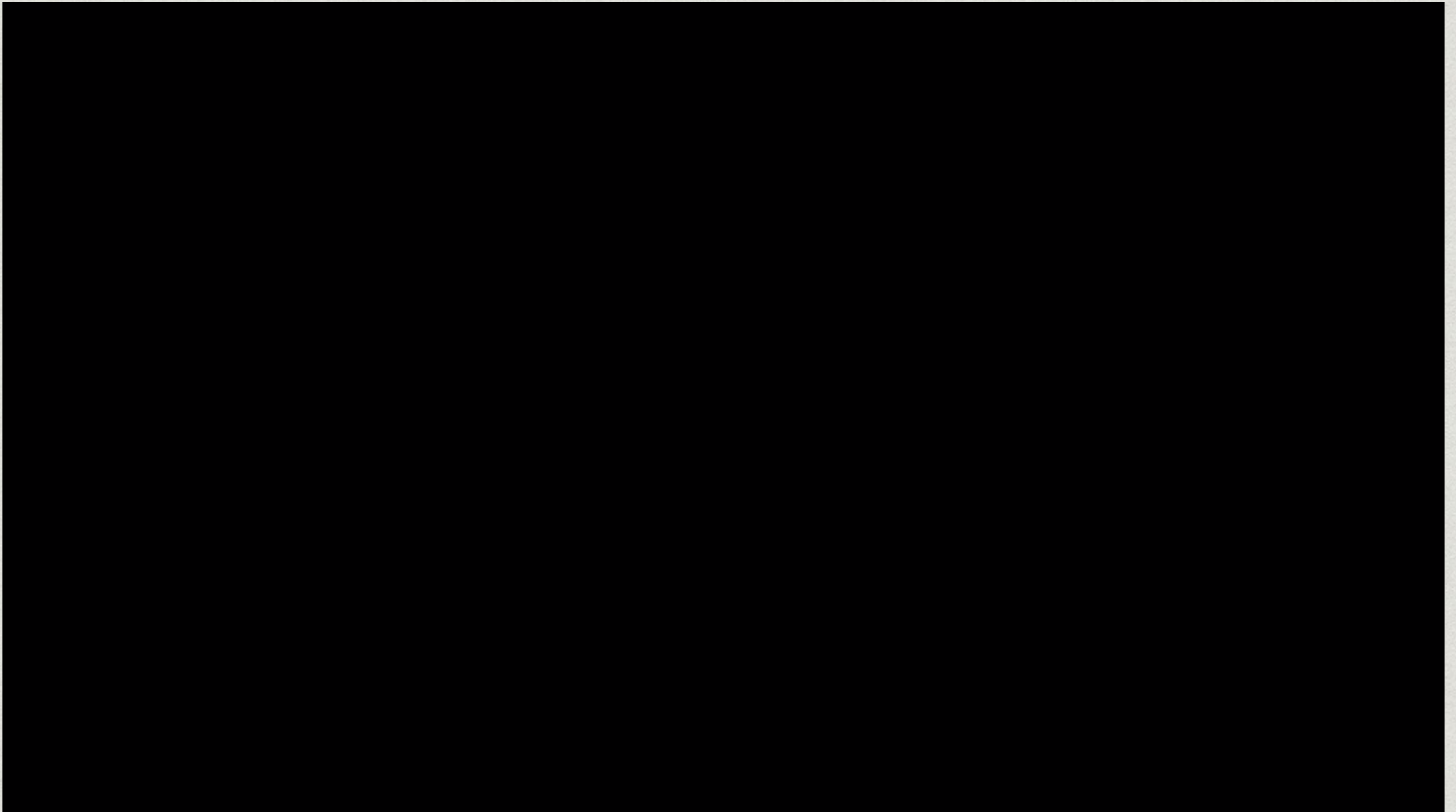
More tips

- * Choral music: edit (Mac: Use Preview), remove cover and blank pages, move composer biographical materials and program notes to the end of the song [you want to get right into music when it is digitally stored]
- * Save work in at least two places. Have a back-up strategy
- * Put items you need in the cloud (Dropbox, Google Drive, iCloud Drive).
- * Open with any number of apps. iOS has the best and most options.

Video: Scanning <8.5" x 11"



Video: Scanning >8.5" x 11"

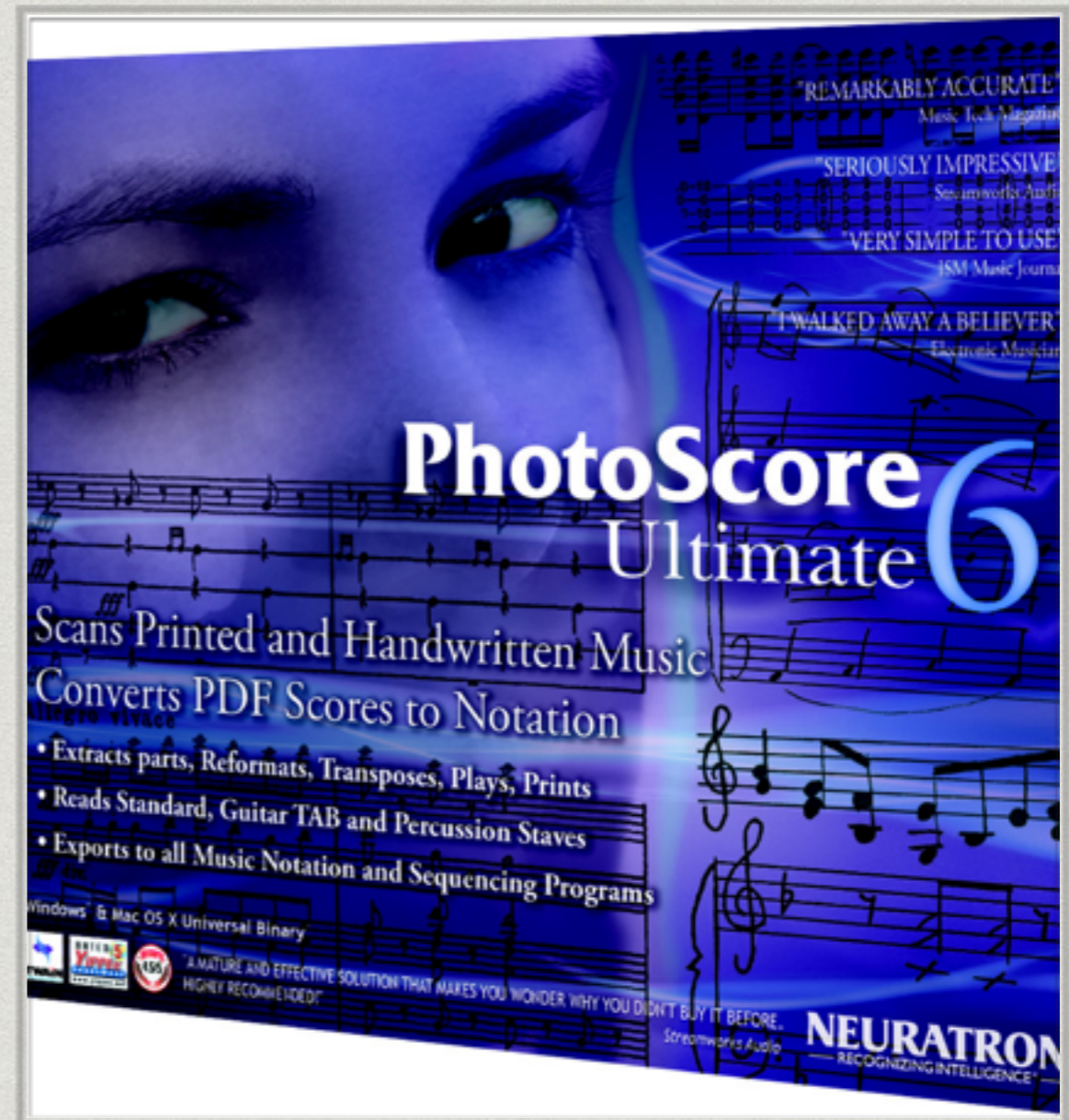


Paper to Digital Notation

- * Goal is to scan from sheet music to a program such as Finale, Sibelius, MuseScore, or Notion.
- * Two methods
 - * Obtain a PDF
 - * Use an app

Method 1: Use PDF

- * Obtain PhotoScore Ultimate from Neutron (\$249)
- * Open PDF, allow PhotoScore to interpret
- * Save resulting file as a MusicXML
- * Open MusicXML in digital notation software of your choice



It's a long shot, but...

- * If you have a PDF that wasn't a scan but was a file generated by a notation package (e.g. many files on CPDL), you can try to use PDFtoMusicPro by Myriad Software (\$200).
- * If you scanned your music, this won't work.



Method 2: Use an app

- * Purchase NotateMe on Android or iOS (\$40)
- * Purchase the PhotoScore in-app purchase (\$30)
- * Take pictures of each page. Make sure to have good lighting, and if Android, at least a 5MP camera (newer vs. older)
- * iPhones work, too, sometimes better! (Better camera)
- * Export as a MusicXML file
- * Open and edit in your favorite notation program



Regardless of method...

- * There will always be things to edit from the scan
- * The less clear the notation, the worse the scan
- * Complicated scores have less success
- * Percussion notation just doesn't scan correctly
- * I find lyrics to be troublesome...and I want lyrics in digital music (this is a change for me from my past)

More thoughts...

- * Don't forget about existing websites for public domain music (CPDL, IMSLP, PDF Band Music Library)
- * Copyright:
 - * You can make an archival copy
 - * You can convert a personal copy to digital
 - * 1:1 digital copying is against copyright law. If you choose to do so, make sure you have a paper copy of the music for every digital copy. This is important until the publishers all offer digital music for sale (Existing digital music—which often costs MORE—is required to be printed out or used in a proprietary app).
 - * A few publishers are making music available via PDF

More thoughts...

- * Copyright
 - * There is an odd reluctance to digitize music while photocopying remains rampant
 - * Editing of a song, even for voicing, is against copyright
- * Start with your current music—what you need. How do you eat an elephant?



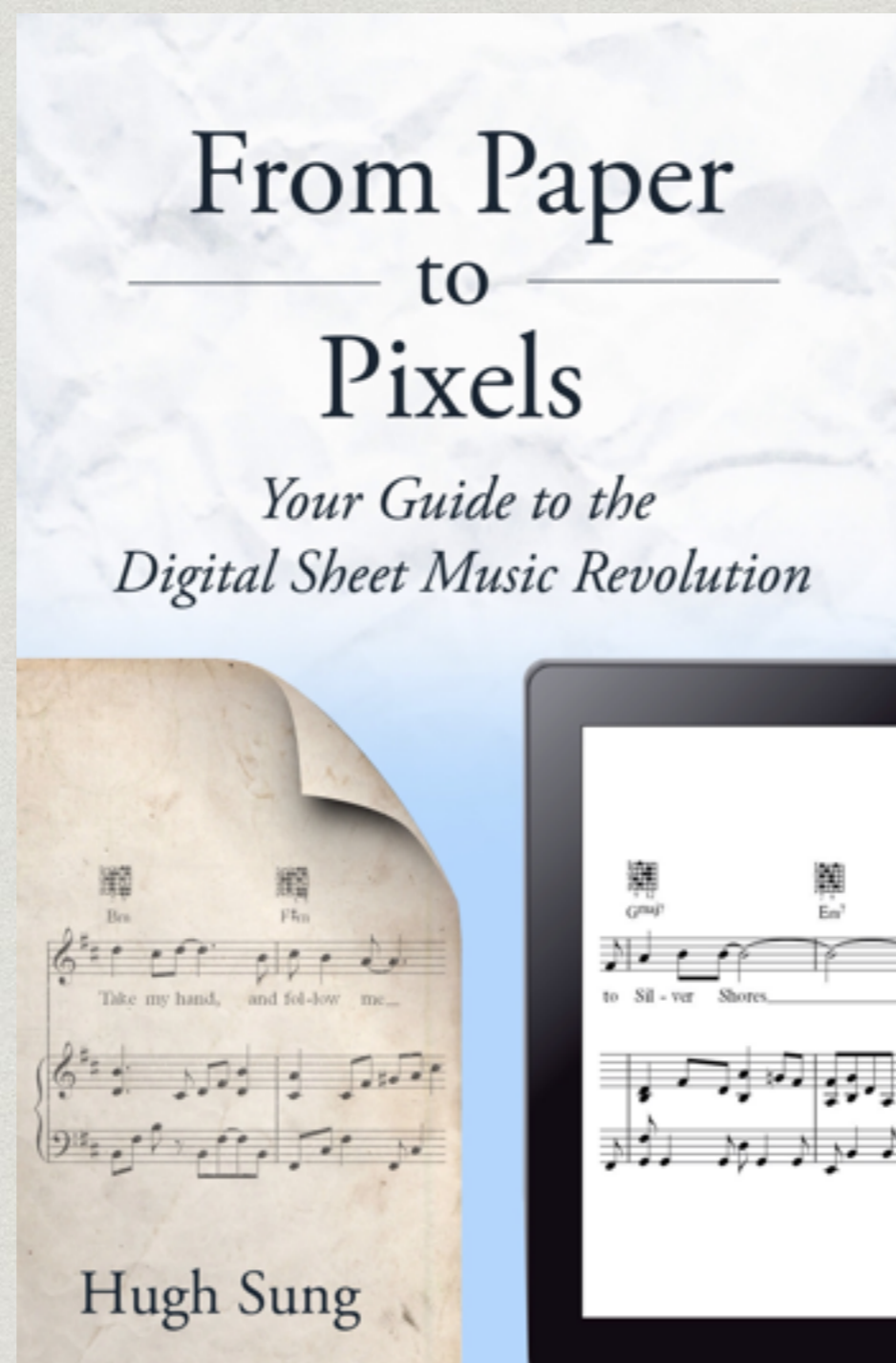
Additional uses of digital music

- * MusicXML to NeoScores (HTML 5 Digital Sheet Music Reader)
- * Arranging/editing/re-voicing
- * Accompaniment or rehearsal files (Notion)
- * Elimination of storage
- * Ease of distribution
- * No more lost music!
- * Organization

Additional uses of digital music

- * Less paper!
- * Touch-free page turning (AirTurn)
- * Performances in poor lighting (pit orchestra)
- * Outdoor performances (wind)
- * Reduces risk of loss due to “Acts of God” (termites, floods, fire)
- * Accessibility (impaired sight, independence for disabled musicians)
- * Mirroring
- * Digital annotation, linking of audio, recording, and more (Music Reading Apps)

A resource to check out...





QUESTIONS?

TECHINMUSICED.COM

CHRISTOPHER J. RUSSELL, PH.D.