# For the Love of Spreadsheets:
# Sound Designs Secret Weapon

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**#GAMEAUDIOGDC**

GDC 13
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2013

**Introduction:** Why Spreadsheets?

**Examples:** Practical Applications

**Tips and Tricks:** Formulas & Techniques

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# Groom Large Data Sets

# Color-code and Consolidate

# Concatenate the Pain Away

# Concatenate the Pain Away

| sound-effect { frame "1.0 | " | name " | something_01 | " | object " | thing_01 | " | vol " | -6.0 |
|---|---|---|---|---|---|---|---|---|---|
| sound-effect { frame "0.0 | " | name " | Something_02 | " | object " | Thing_03 | " | vol " | -6.0 |
| sound-effect { frame "9.0 | " | name " | Something_03 | " | object " | Thing_09 | " | vol " | -6.0 |
| sound-effect { frame "3.0 | " | name " | Sumthing_04 | " | object " | hung_00 | " | vol " | -6.0 |

$$=CONCATENATE(A1;B1;C1;D1;E1;F1;G1;H1;I1)$$

sound-effect { frame "1.0"     name "something_01"     object "thing_01"     vol "-6.0"}
sound-effect { frame "0.0"     name "Something_02"     object "Thing_03"     vol "-6.0"}
sound-effect { frame "9.0"     name "Something_03"     object "Thing_09"     vol "-6.0"}
sound-effect { frame "3.0"     name "Sumthing_04"     object "hung_00"     vol "-6.0"}

# Color-code and Consolidate

| Collision_Parameters | Shared Table | | |
|---|---|---|---|
| | <mMaterial1> | </mMaterial1> | |
| | <mSlowCutoff> | </mSlowCutoff> | |
| | <mFastCutoff> | </mFastCutoff> | |
| | <mLargeCutoff> | </mLargeCutoff> | |
| | <mFewCutoff> | </mFewCutoff> | |
| | <mManyCutoff> | </mManyCutoff> | |
| | <!-- CollisionParameters: | | |
| | | | |
| | <mCollisionParameters> | | |
| | | | |
| | <!-- mat1 mat2 slow fast large few many --> | | |
| **Material** | | | |
| **bone_chicken** | <!-- CollisionParameters: bone_chicken --> | | |
| | <CollisionParameters> | | |
| bone_chicken | <mMaterial1>bone_chicken</mMaterial1> | | |
| 1.0 | =CONCATENATE($B$3;A18;$G$3) | | |
| 7.0 | <mFastCutoff>7</mFastCutoff> | | |
| 3.0 | <mLargeCutoff>3</mLargeCutoff> | | |
| 3.0 | <mFewCutoff>3</mFewCutoff> | | |
| 5.0 | <mManyCutoff>5</mManyCutoff> | | |
| | </CollisionParameters> | | |

# Find & Replace with Wildcards
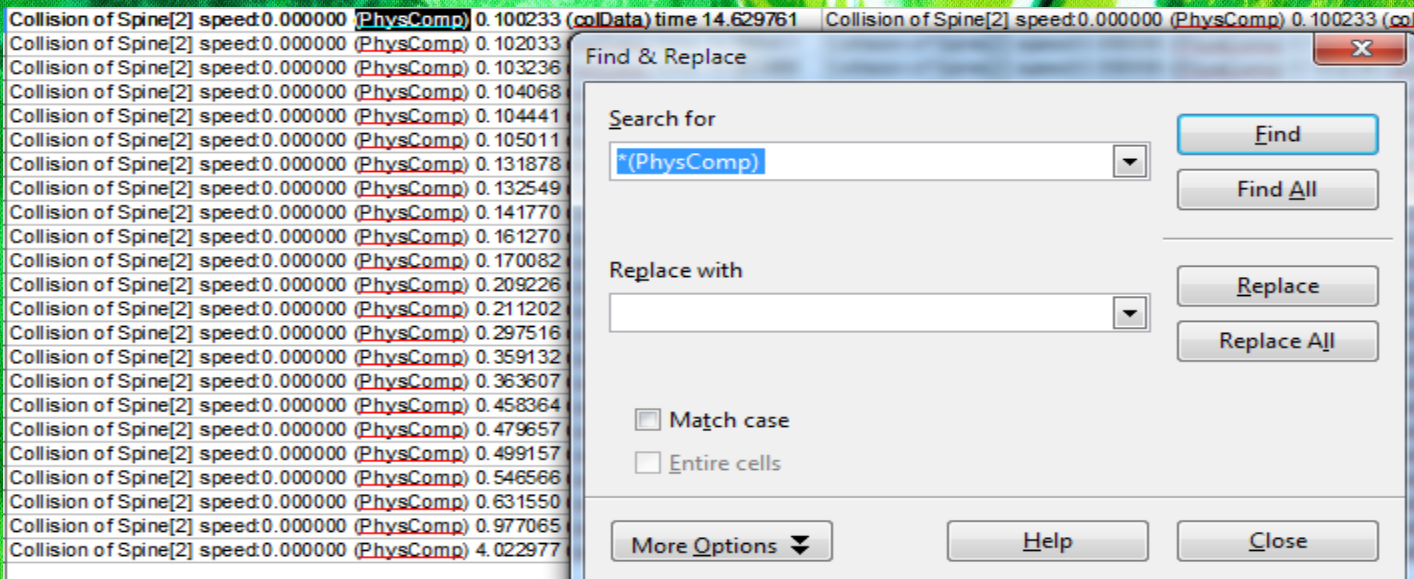
# Maths, Comparisons, Diffs

Excel provides many ways to count cells in a range that meet various criteria:

- **DCOUNT** function. The data must be set up in a table, and a separate criterion range is required.
- **COUNT** function. Simply counts the number of cells in a range that contain a number.
- **COUNTA** function. Counts the number of non-empty cells in a range.
- **COUNTBLANK** function. Counts the number of empty cells in a range.
- **COUNTIF** function. Very flexible, but often not quite flexible enough.

The **MATCH** function accepts 3 parameters:

- (1) lookup_value; this is the value you want to find.
- (2) lookup_array; this is the list that you want to search through.
- (3) match_type; this is optional and specifies if you want an exact match or a less/greater than match.

Highlight **Duplicate Values** Between Two Lists:

**- Conditional Formatting > Highlight Cells Rules > Duplicate Values**

# The Matrix

| 4 source layer | | Default | Concrete |
|---|---|---|---|
| biped_human_small | chr_foley_run.cue.xml | chr_fs_concrete_heavy.cue.xml | chr_fs_concrete_heavy.cue.xml |
| biped_human_small_light | chr_foley_walk.cue.xml | chr_fs_concrete_light.cue.xml | chr_fs_concrete_light.cue.xml |
| biped_human_small_scuff | | chr_fs_Concrete_scuff.cue.xml | chr_fs_Concrete_scuff.cue.xml |
| biped_human_small_land | chr_foley_land.cue.xml | chr_fs_concrete_land.cue.xml | chr_fs_concrete_land.cue.xml |
| heavy_ | chr_run_foley_run.cue.xml | chr_Heavy_fs_concrete_heavy.cue.xml | chr_Heavy_fs_concrete_heavy.cue.xml |
| heavy__light | chr_run_foley_walk.cue.xml | chr_Heavy_fs_concrete_light.cue.xml | chr_Heavy_fs_concrete_light.cue.xml |
| heavy__scuff | | chr_Heavy_fs_concrete_scuff.cue.xml | chr_Heavy_fs_concrete_scuff.cue.xml |
| heavy__land | chr_run_foley_land.cue.xml | chr_Heavy_fs_concrete_land.cue.xml | chr_Heavy_fs_concrete_land.cue.xml |
| officer_male | chr_ProtoRebel_foley_run.cue.xml | chr_ProtoRebel_fs_concrete_heavy.cue.xml | chr_ProtoRebel_fs_concrete_heavy.cue.xml |
| officer_male_light | chr_ProtoRebel_foley_walk.cue.xml | chr_ProtoRebel_fs_concrete_light.cue.xml | chr_ProtoRebel_fs_concrete_light.cue.xml |
| officer_male_scuff | | chr_MaleBoots_fs_concrete_scuff.cue.xml | chr_MaleBoots_fs_concrete_scuff.cue.xml |
| officer_male_land | chr_ProtoRebel_foley_land.cue.xml | chr_ProtoRebel_fs_concrete_land.cue.xml | chr_ProtoRebel_fs_concrete_land.cue.xml |

# Macros & VB Scripts

| | | |
|---|---|---|
| Something_Heavy | fs_common_default_run | fs_common_concrete_run |
| Something_Light | | |
| Something_Land | | |
| Something_Scuff | | |
| Super_Heavy | fs_common_default_run | fs_common_concrete_run |
| Super_Light | | |
| Super_Land | | |
| Super_Scuff | | |

Export

# Macros & VB Scripts

```
Rem Attribute VBA_ModuleType=VBADocumentModule
Sub Sheet1
Rem ' dumps the list of decals that makes up an entire decal response
Rem Sub DumpList(fileNum As Integer, baseRowNum As Integer, colNum As Integer, listCellSize As Integer)
Rem      Dim recordSize As Integer
Rem      recordSize = 1
Rem
Rem      If IsEmpty(Worksheets(1).Cells(baseRowNum, colNum)) Then Exit Sub
Rem
Rem      Print #fileNum, "            <SoundResponse>"
Rem      Call DumpXMLProperty(fileNum, 3, "mSourceNum", (baseRowNum - 2) / listCellSize)
Rem      Call DumpXMLProperty(fileNum, 3, "mDestinationNum", colNum - 2)
Rem      Call DumpXMLProperty(fileNum, 3, "mSourceName", FirstWord(Worksheets(1).Cells(baseRowNum, 1)))
Rem      Call DumpXMLProperty(fileNum, 3, "mDestinationName", Worksheets(1).Cells(1, colNum))
Rem      Call DumpXMLProperty(fileNum, 3, "mSoundName", Worksheets(1).Cells(baseRowNum, colNum))
Rem      Call DumpXMLProperty(fileNum, 3, "mScuffSoundName", Worksheets(1).Cells(baseRowNum + 1, colNum))
Rem      Call DumpXMLProperty(fileNum, 3, "mLandSoundName", Worksheets(1).Cells(baseRowNum + 2, colNum))
Rem      Call DumpXMLProperty(fileNum, 3, "mSlideSoundName", Worksheets(1).Cells(baseRowNum + 3, colNum))
Rem      Call DumpXMLProperty(fileNum, 3, "mSound", Worksheets(1).Cells(baseRowNum, colNum))
Rem      Call DumpXMLProperty(fileNum, 3, "mScuffSound", Worksheets(1).Cells(baseRowNum + 1, colNum))
Rem      Call DumpXMLProperty(fileNum, 3, "mLandSound", Worksheets(1).Cells(baseRowNum + 2, colNum))
Rem      Call DumpXMLProperty(fileNum, 3, "mSlideSound", Worksheets(1).Cells(baseRowNum + 3, colNum))
Rem      Print #fileNum, "            </SoundResponse>"
Rem
Rem End Sub
Rem
Rem Function FirstWord(inCell As String) As String
Rem      Dim strEndPos As Integer
Rem
Rem      strEndPos = InStr(1, inCell, " ", vbTextCompare)
Rem      If strEndPos = 0 Then
Rem          FirstWord = inCell
Rem      Else
Rem          FirstWord = Left(inCell, strEndPos - 1)
```

# Signal to Noise

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