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

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GAME DEVELOPERS CONFERENCE



### **Introduction:** Why Spreadsheets?

### **Examples:** Practical Applications

### **Tips and Tricks:** Formulas & Techniques



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# Groom Large Data Sets

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## **Color-code and Consolidate**

	Barris Contraction					e a la factoria						1 11				
# Cla	s SubClass	Walk	Attack	Die	List1	List2	Object MATERIAL 3	Object Sound Materia prystal	glass_large	DEAdoor DEAdoorse		metal_door	aluminum	metal_weak_hollow	dentingpipe2	pipe_large
1 Hun	nans Hero	HumanWalk01	HumanAttack01	HumanDie01	1 ArrowAttack01	61 Mouse over button s	sound fel tone dense	bone_largeorystalLense2 bone_largedea_lerse	glass_large glass_large			metal_door metal_door	aluminum_hollow dentingpanel2	metal_weak_hollow metal_weak_hollow	dentingpipe3 dentingpipe4	pipe_large pipe_large
2 Hun	nans Tower	N/A	TowerAttack01	TowerDie01	2 BalistaAttack01 (3 parts)	) 62 Click button.	fel_bone_rib	bone_large liens_orystal bone_large data_large	plass_large	dentinados	лах	metal_door	dentingpanel3	metal_weak_hollow	panelPopp erPice	pipe_medium
	nans Griffin	CreatureFly01	CreatureAttack01	CreatureDie01	3 BalrogAttack01	63Miss/invalid click.	a norton es sarto th	bone_large dea_halGlass bone_large glass	glass_medi glass_medi	um dentingtied um dentingtied		metal_door metal_door	emp_hall_panel canelPopper_fold	metal_weak_hollow metal_weak_hollow	smallie xol ce fel_lun g_thick	pipe_small plant_large
	nans Berserker	HumanWalk01	HumanAttack01	HumanDie01	4 CatapultAttack01	64 Exit sound (could be	a mage go strong steleton	bone_targeplass_safety	glass_medi	um dentingtied	Sport3	metal_door	panelPopper_stft	metal_weak_hollow	fel stalk	plant_large
	nans Warrior	HumanWalk01	HumanAttack01	HumanDie01	5 CatapultDie01	65 High score sound.	tel_bone_hand fel_bone_light	bona_small plass2 bona_small plass2	glass_medi glass_medi			metal_door metal_door	panelPopper2 panelPopper3	metal_weak_hollow metal_weak_hollow	fel_stalk_bendy fel_stalk_bendy2	plant_large plant_large
	nans Wizard	HumanWalk01	WizardAttack01	HumanDie01	6 CatapultMove01	66Turn Change (Your 1		bone_smallplass4	glass_medi	um fei_gate		metal_door	panelPopperPanel	metal_weak_hollow	fel_stalk2	plant_large
	ans Long Bows	HumanWalk01	ArrowAttack01	HumanDie01	7 CreatureAttack01	67 Time out (Your Turn		oables glass6 oables glass8	glass_medi glass_medi		socuop	metal_door metal_door	raxpanel2 fo din diletal	metal_weak_hollow metal_weak_hollow	plantru led ead large spankp lan t	plant_large plant_large
	nans Catapult	CatapultMove01	CatapultAttack01	CatapultDie01	8 CreatureAttack02	68Timer Countdown Sk	IOW (1SEC) ka scableA	oables plassperter	glass_medi	um metaldoor		metal_door metal_door	ultrameta I ultrameta Iblin	metal_weak_hollow metal_weak_hollow	CLO_hosebase	plant_medium plant_medium
	ans Pikes	HumanWalk01	HumanAttack01	HumanDie01	9 CreatureDie01	69Timer Countdown Fat	ist (5sec) max cable	oables plassees	glass_medi glass_medi		por.	metal_door	OL Oralling	metal_weak_solid	CLO tankh ose	plant_medium
10Hun		HumanWalk01 HumanWalk01	HumanAttack01 HumanAttack01	HumanDie01 HumanDie01	10 CreatureFly01 11 CrossbowAttack01	70SpellEffect01	na xcable	onbles plassemp onbles plassold	glass_medi glass_medi			metal_door metal_door	console_metal_breakable	metal_weak_solid metal_weak_solid	plant plantfollow	plant_medium plant_medium
	nans Assassin nans Gold Ring	N/A	N/A	RingConversion0	12 DwarfAttack01	70 SpellEffect01 71 SpellEffect02	rebar3	plassoid2	glass_medi	um Raxblasido		metal_door	co napilem etal	metal_weak_solid	plantrule2	plant_medium
	1305 Ringl ord	RinoLordWalk01	RingLordAttack01	RingLordDie01	13 Dwarf Die01	72SpellEffect03	wire	plassoid3 plassoid4	glass_medi glass_medi			metal_strong_hollow metal_strong_hollow	empRaling metalPanePopper	metal_weak_solid metal_weak_solid	plantsu led ead rubber	plant_medium plant_medium
14 Ore	Calify Calify	OrcWalk01	OrcAttack01	OrcDie01	14 DwarfWalk01	73 SpellEffect04		plassoid8	glass_medi	um deawal ism	all	metal_strong_hollow	metalPanePopperBo	metal_weak_solid	kash_vire	plant_small
15 Ore		N/A	TowerAttack02	TowerDie01	15ElfAttack01	74SpellEffect05		plassoldemp plassoldemp2	glass_medi glass_medi		all2	metal_strong_hollow metal_strong_hollow	sofimetal	metal_weak_solid metal_weak_solid	Vin eC baddervine	plant_small plant_small
16 Ore	Balrog	CreatureFlv01	BalrogAttack01	OrcDie01	16ElfDie01	75 SpellEffect08		plasspanel	glass_medi	um lax dentin	a soft	metal_strong_hollow	tle_console	metal_weak_solid	baddestfelvine	plant_small
17 Orc	Giants	OrcWalk01	OrcAttack01	OrcDie01	17 ElfWalk01	76 SpellEffect07		plasspanel3 plasspede stal	glass_medi glass_medi	um to <u>tofichis</u> um toChasmD	er wing oor	metal_strong_hollow metal_strong_hollow	weakmetal fangori	metal_weak_solid organio_hard	fel2_mokwall kasrook	rook_large rook_large
18 Ore	Black Orcs	OrcWalk01	OrcAttack01	OrcDie01	18EntAttack01	77SpellEffect08		plassraib last	glass_medi	um tewing		metal_strong_hollow	tel_te mel_plant	organio_hard	marble	rook large
19 Ore	Shaman	OrcWalk01	WizardAttack02	OrcDie01	19 EntDie01	78 Night change		plass 8 afety2	glass_medi	um denting		metal_strong_solid metal_strong_solid	fei soma oh_door fei soma oh_silla	organio_hard organio_hard	marble2 marble foor	rook_large rook_large
20 Ore		OrcWalk01	ArrowAttack01	OrcDie01	20 EntWalk01	Priority Environment	Constant Conve_centrance conve_entrance conve_profile fourne_constant fourne	Full forme restor.com.com/restore restor.com.com/restore restor.com.com/restore restor.com/restore.com/restore restor.com/restore.com/restore restor.com/restore.com/restore restor.com/restore.com/restore restor.com/restore.com/restore restor.com/restore.com/restore restore.com/restore.com/restore restore.com/restore.com/restore restore.com/restore.com/restore.com/restore restore.com/res				metal_strong_solid	tel_stoma.ch_silia_Large	organio_hard	rook	rook_large
21 Ore		a CatapultMove01	BalistaAttack01 (3 c	part CatapultDie01	21 FlamerAttack01	1 radan, kara 1 radan, kara 1 radan, kara 1 radan, kara	Carrier Commission			3333		metal_strong_solid metal_strong_solid	eggplant fei bladterDate	organio_soft organio_soft	stocolu m stonefloor	rook_large rook_large
22 Ore:	Troll	OrcWalk01	OrcAttack01	OrcDie01	22 GolemAttack01	tostan, kara	fauna tree green	rodon_karg_rauna_tree_green rodon_karg_waves_lake	<u>#</u> 1			metal_strong_solid	mushroom	organio_soft	briok	rook_medium
23 Ore	Goblin	OrcWalk01	OrcAttack01	OrcDie01	23 GolemDie01	Zinter av				8		metal_strong_solid metal_strong_solid	mushroom_b mushroom_o	organio_soft organio_soft	bri dwall cerbonite	rook_medium rook_medium
24 Ore:	Shadow man	OrcWalk01	OrcAttack01	OrcDie01	24 GolemWalk01	Zradan Jar Zradan Jar	terre trainis ferre trainis ferre brain blue ferre trainistics	rodon, zar jeve jonde rodon, zar jeve jour jue rodon, zar jeve joke jue rodon, zar jeve jreen	8	12		metal_strong_solid	mushroom as te mushroomaate?	organio_soft	carbonite2	rook_medium
25 Ore:	Ruby Ring	N/A	N/A	RingConversion0	1 25 HumanAttack01	Zradan zar	fauna tree, preen	rodon_ter_feune_spikes_blue rodon_ter_feune_tree_green				metal_strong_solid metal_strong_solid	to din olivembrane	organio_soft organio_soft	oonorete2	rook_medium rook_medium
26 Ore:	RingLord	RingLordWalk01	RingLordAttack01	RingLordDie01	26HumanDie01	7 radian, 480 7 radian, 480	rock_circle	rodon_car_fauna_trea_green rodon_car_rodo_circle rodon_car_welerfal_erge				metal_strong_solid	to din olivembrane Small	organio_soft	concrete3 dea statue	rook_medium rook_medium
	rves Dwarven King		DwarfAttack01	DwarfDie01	27 HumanWalk01	Zostan_AM		rocon_tar_who_carr		100 P		metal_strong_solid metal_strong_solid	spongy spong/2	organio_soft organio_soft	drywall	rook_medium
28 Dwa		N/A	TowerAttack03	TowerDie01	28 OrcAttack01	3 codon, cathar 3 codon, cathar	tod steam_yeens_foor	rodon_galhazod_beam_green rodon_galhazod_aleam_venta_floor	1.1	5555		metal_strong_solid metal_strong_solid	baddestoum baddestoumA	organio_soft organio_soft	imestone obelisk	rook_medium rook_medium
	rves Metal <u>Golem</u>	GolemWalk01	GolemAttack01	GolemDie01	29 OrcDie01	Scalar, music Scalar, music	Teurie Iree Brean	reden munet, feune (ree brevn reden munet fre beem				metal_strong_solid	badde stourn Abdt form	organio_soft	obsidian	rook_medium
	rves Double Axers	DwarfWalk01	DwarfAttack01	DwarfDie01	30 OreWalk01	Stadan, mula d	giow_green wind_desert	radon_murad_glow_green radon_murad_wind_deaent		비학원용을		metal_strong_solid metal_strong_solid	baddestoumC baddestmuou s	organio_soft organio_soft	kosihsiatue xbia1_cerbonite	rook_medium rook_medium
31 Dwa		SteamRollerWalk	0 SteamRollerAttack0	01 CatapultDie01	31 RingConversion01	Tradian, maita Tradian, maita Tradian, maita Tradian, maita Tradian, maita	cave_crystel_purple cave_catrystel_rest cave_catrystel_rest cave_restrance feature_trest_purple		5.			metal_strong_solid	baddestmuou sbreak	organio_soft	xbla1_rook	rook_medium
	rves Medic	DwarfWalk01	WizardAttack03	DwarfDie01	32 RingLordAttack01	Tostan, make Tostan, make	Carve_combie	radon_matra_cave_debris			. 5	metal_strong_solid metal_strong_solid	baddesimud baddesira nobody	organio_soft organio_soft	basesith statue	rook_medium
33 Dwa		DwarfWalk01	CrossbowAttack01	DwarfDie01	33 RingLordDie01	Traden, mate	fauna tree proje	rodon_moins_fauns_ines_pren		112222		metal_strong_solid	badde sisariaco	organio_soft		
34 Dwa		DwarfWalk01	CatapultAttack01 ElamerAttack01	DwarfDie01 DwarfDie01	34 RingLordWalk01 35 SpriteDie01	Tradan, mate	portal_unite portal_unite valerfail_medum		43	1155555	55555	metal_strong_solid metal_strong_solid	baddesisariaco2	organio_soft	kas bioTre e	tree
35 Dwa	rves Miners	DwarfWalk01	DwarfAttack01	DwarfDie01	36 Sprite Walk01	Toppon, make		human lutha cince or incur	1			metal_strong_solid			smallTreeB fallTreeA2	tree
	rves Sharoshot	DwarfWalk01	DwarfAttack01	DwarfDie01	37 SteamRollerAttack01		clore actingua clore	Normen, Sychol, Johns, José José Normen, Josha, Johns, Julia Normen, Josha, Johns, Jila Normen, Josha, Jernan, Johnson Normen, Johns, Jernan, Johnson Normen, Johns, Jernan, Johnson Normen, Johnson, Jernan, Johnson				metal_strong_solid metal_strong_solid			tallTreeA2nobreak	tree
	rves Mitheral Ring	N/A	N/A	RingConversion0	38 SteamBollerWalk01	Ehuman Lushs	Convertigents	human, Jysha, panel Jacob human, Jysha, Jacobia, Blue			2342582	metal_strong_solid metal_strong_solid			tallTre estrong bit die tooAbeam	tree woodhard_large
	rves RingLord	RinoLordWalk01	RinoLordAttack01	RingLordDie01	39TowerAttack01	Shuman_Lught	a terrine screen	human_lycho_terminal_screen		291254	1555855	metal_strong_solid			bridde wood	wo och and large wo och and large
40 Elve	Eleven Lord	ElfWalk01	ElfAttack01	ElfDie01	40 TowerAttack02	Shuman Jacks Shuman Jacks Shuman Jacks	an green bridge an waves bridge an waves bridge	human_landan_prose_initige human_landan_sec.es_bridge human_landan_sec.es_two_lange human_landan_wind_city		1233334		metal_strong_solid metal_strong_solid			bridgewood2 bridgewood2	wo oth and large wo oth and large
41 Elve		N/A	TowerAttack04	TowerDie01	41 TowerAttack03	Shuman Londo		human_bodon_wind_city	1	9999999	5 <u>5 5 5 5 5 5 5</u>	metal_strong_solid			kas on ropy	wo odh and Jange
42 El V		CreatureFlv01	CreatureAttack02	CreatureDie01	42 TowerAttack04	10 human_page	ark free ange	human, navyark, Sna Jarga human, navyark, Sna Jarga	54	****	8888555	metal_strong_solid metal_strong_solid			kasterkring kasterrigade	wo odh and _binge wo odh and _binge
43 Elve		UnicornWalk01	UnicornAttack01	UnicornDie01	43 TowerDie01	10 human 10 human 10 human 10 human 10 human 10 human	acts news_fishering acts screen_white acts screens_large acts screensho_icle_large	human_newyork_nean_filekeng human_newyork_screen_white human_newyork_screens_large				metal_strong_solid			kasbarrioade2	wo oth and large
44Elve		WispWalk01	WispAttack01	WispDie01	44 UnicornAttack01	1 10human_news	atk speceship_ide_large	human_newyork_apeceahlp_idle_jarge		an a	-	metal_strong_solid metal_strong_solid			stronow cod upperhouse	woldh and large woldh and large
45 Elve	s Enchantress	ElfWalk01	WizardAttack04	ElfDie01	45 UnicomDie01	1 11 castan - Burnar	c este destricts c est a contrast c est a cont	redoru, Surter, Jave, Jakos Post, Surter, Jave, Jakos Post, Surter, Jave, Post, Sono Post, Surter, Jave, Jave, Jave Post, Surter, Jave, Jave, Jave Post, Surter, Jave, Jave, Jave Post, Surter, Jave, Surter, Su	3	Contraction of the local distribution of the		metal_strong_solid			kas bark kas bark 2	wo oth and me dum
46 Elve		ow:ElfWalk01	ArrowAttack01	ElfDie01	48 UnicornWalk01	1 11 redon sumer	fauna green pod	rodon_sumon_fsuns_green_pod	81	BEEEEE	+++++++-=	metal_strong_solid metal_strong_solid			kas_bark2 kas_shiperwood	woodhard_medium woodhard_medium
47 Elve		EntWalk01	EntAttack01	EntDie01	47 WispAttack01	1 11 rodon sumor	terminal station	redon_sumon_fauna_tree_purple		20		metal_strong_solid			kas_sniperwood2	wo odh and me diu m wo odh and me diu m
48Elve		ElfWalk01	ElfAttack01	ElfDie01	48 WispDie01	1 12 poten, summer	cave_debris	rodon_voresh_cave_debris		23		metal_strong_solid metal_strong_solid			plywood do owneer can criz	woodhard medium
49Elve		SpriteWalk01	ElfAttack01	SpriteDie01	49WispWalk01	1 12rodon voresh 12rodon voresh			0.			metal_strong_solid metal_strong_solid			stronggreenwood2	woodhard medium woodhard medium
50 Elve			ElfAttack01	ElfDie01	50 WizardAttack01	12 radion version				a		metal_strong_solid			wood wood2	wo oth and me dium
51 Elve			N/A	RingConversion0	1 51 WizardAttack02	1 12 (2020, UCRA) 1 12 (2020, UCRA)		radon voresh sve bubble		8. 4.	28.34688	metal_strong_solid metal_strong_solid			woldbanel bridge	wo odh and me du m wo odh and me du m
52Elve	IS RingLord	RingLordWalk01	RingLordAttack01	RingLordDie01	52WizardAttack03			hadan_varesh_vind_hat	2	888525		metal_strong_solid			bri doe bea m	woodhard medium
					53/WizardAttack04	1 12 human_shire 1 12 human_shire	di realizza di contra contra di contra realizza gravan facuna trasa gravan	human, dhina, daha animi yake human, dhina, daya na ginani yake human, dhina, fauna, yaketa, ginaen human, dhina, fauna, yaketa, ginaen	1 101	<u>ព្រមត្ថត្ថ</u> ត្	********	metal_strong_solid metal_strong_solid			bil dae den se we akoreen wood	woodhard medium woodhard small
4		(0 /		68	5 5 5 1 1 - O 1	12human_china 12human_china	fauna tree green					metal_strong_solid			barkooli	wo ods off_small
		16 (Lets add another	1	78		12human_shine	not an and a state of the state	human uhina solar oola human uhina valarfal large human uhina valarfal large human uhina valarfal large			-	metal_strong_solid metal_strong_solid			we all wood	woodsoft_small
o Maps with ba	ickground sounds m	aype o each?	-	108		12human_china	varias laka	human_china_vax.es_ake				metal_strong_solid				
				124		1 1 1 Mart cales	crystal_bive crystal_pick crystal_pick crystal_picryta	enterit paties prysis (bits)			-	metal_strong_solid metal_strong_solid				
				124	58MonsterDeath01	14 and and 14 an	pla, sryatal dark rock, rotation	salent_cales_rock_rolation								
					59MonsterVictory01											
					60PlayerVictory01	1 13 human nano 1 13 human nano 1 13 human nano 1 13 human nano	auth fauna inea green auth valeriel metum auth valeriel and	Norman, new year (hy read) new years Norman, new year (hy read) and (hy read) and Norman, new year (hy read) and (hy read) Norman, new years (hy read) and (hy read) Norman, new years (hy read) and (hy read)								
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## **Concatenate the Pain Away**

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heel		foot-effect { frame "0.0"				gear	spined	gear-effect { frame "0.0					foot-effect { frame "0.0" name "heel" _ Joint "r_heel" _ vol "-6.0"}
heel	l_heel	foot-effect { frame "0.0"	name "heel"	Joint "I_heel"	vol "-6.0"}	gear	spined	gear-effect { frame "0.0	" name "gear"	Joint "spined"	vol "-12.0"}		gear-effect { frame "0.0" name "gear" Joint " <u>spineb</u> " vol "+12.0"}
heel	r heel	foot-effect { frame "0.0"	name "heel"	Joint "r_heel"	vol "-6.0"}	gear	spined	gear-effect { frame "0.0					foot-effect { frame "0.0" name "toe" _ Joint "r_ball" _ vol "-6.0"}
heel	l heel	foot-effect { frame "0.0"	name "heel"	Joint "I_heel"	vol "-6.0"}	gear	spined	gear-effect { frame "0.0	" name "gear"	Joint "spined"	vol "-12.0"}		sound-effect { frame "0.0 " name " <u>sfx-noc-run-leans</u> " joint "r knee" vol"-8.0 "}
	-			-									foot-effect { frame "0.0" name "heel" Joint "[ heel" vol "-6.0"}
toe	r ball	foot-effect { frame "0.0"	name "toe"	Joint "r ball"	vol "-6.0"}	npc-run-?	r knee	sound-effect { frame "0	0" name "sfx-n	pc-run-Jeans" J	oint "r knee"	vol "-8.0"}	gear-effect { frame "0.0" name "gear" Joint " <u>sphec</u> " vol "-12.0"}
toe	l ball	foot-effect { frame "0.0"	name "toe"	Joint "I ball"	vol "-6.0"}	npc-run-P		sound-effect { frame "0					foot-effect { frame "0.0" name "toe" Joint "I ball" vol "-6.0"}
toe	r ball	foot-effect { frame "0.0"	name "toe"	Joint "r ball"	vol "-6.0"}	npc-run-?		sound-effect { frame "0					
toe		foot-effect { frame "0.0"				noc-run-f		sound-effect { frame "0					
	-			-	-		-				-		
scuff	r_ball	foot-effect { frame "0.0"	name "scuff"	Joint "r_ball"	vol "-6.0"}	gear	spinec	gear-effect { frame "0.0	" name "gear"	Joint "spinec"	vol "-12.0"}		foot-effect { frame "0.0" name "heel" joint "[_heel" vol "-6.0"}
scuff	ball	foot-effect { frame "0.0"	name "scuff"	Joint "I_ball"	vol "-6.0"}		soineb	gear-effect { frame "0.0					gear-effect { frame "0.0" name "gear" Joint "spined" vol "-12.0"}
scuff	r ball	foot-effect { frame "0.0"	name "scuff"	Joint "r_ball"	vol "-6.0"}	gear	spinec	gear-effect { frame "0.0	" name "gear"	Joint "spines"	vol "-12.0"}		foot-effect { frame "0.0" name "toe" Joint "I ball" vol "-6.0"}
scuff	l ball	foot-effect { frame "0.0"	name "scuff"	Joint "I ball"	vol "-6.0"}	gear	spineb	gear-effect { frame "0.0					sound-effect { frame "0.0 " name " <u>sfx-noc-run-leans</u> "  oint "r knee" vol"-8.0 "}
													foot-effect { frame "0.0" name "heel" Joint "r_heel" vol "-6.0"}
turn		foot-effect { frame "0.0"				plant	r_ankle	foot-effect { frame "0.0"	name "plant"	Joint "r_ankle"	vol "-6.0"}		gear-effect { frame "0.0" name "gear" Joint " <u>spineb</u> " vol "12.0"}
turn	Lankle	foot-effect { frame "0.0"	name "turn"	Joint "Lankle"	<pre>vol "-6.0"}</pre>			foot-effect { frame "0.0"					foot-effect { frame "0.0" name "toe" Joint "r ball" vol "-6.0"}
turn	r ankle	foot-effect { frame "0.0"	name "turn"	Joint "r_ankle"	" vol "-6.0"}	plant	r ankle	foot-effect { frame "0.0"	name "plant"	Joint "r_ankle"	vol "-6.0"}		foot-effect { frame "0.0" name "heel" Joint "  heel" vol "-6.0"}
turn	Lankle	foot-effect { frame "0.0"	name "turn"	Joint "Lankle"	vol ~-6.0"}	plant	Lankle	foot-effect { frame "0.0"	name "plant"	Joint "Lankle"	vol **-6.0**}		gear-effect { frame "0.0" name "gear" Joint "spines" vol "-12.0"}
	-			-									foot-effect { frame "0.0" name "toe" Joint "I ball" vol "-6.0"}
						roll	soinea	foot-effect { frame "0.0"	name 'roll'	Joint "spinea"	vol "-6.0"}		sound-effect { frame "0.0 " name " <u>sfx-noc-run-leans</u> " joint "r knee" vol"-8.0 "}
toe	r ball	foot-effect { frame "0.0"	name "toe"	Joint "r_ball"	vol "+6.0"}	roll	spineb	foot-effect { frame "0.0"					foot-effect { frame "0.0" name "heel" Joint "r_heel" vol "-6.0"}
heel	r heel	foot-effect { frame "0.0"	name "heel"	Joint "r_heel"	vol "-16.0"}	roll	spinec	foot-effect { frame "0.0"					gear-effect { frame "0.0" name "gear" Joint " <u>spineb</u> " vol "-12.0"}
gear		gear-effect { frame "0.0"				roll	spined	foot-effect { frame "0.0"	name "roll"	Joint "spined"	vol "-6.0"}		foot-effect { frame "0.0" name "toe" Joint "r ball" vol "-6.0"}
													foot-effect { frame "0.0" name "heel" Joint "[ heel" vol "-6.0"}
toe	ball	foot-effect { frame "0.0"	name "toe"	Joint "Lball"	vol "-6.0"}								gear-effect { frame "0.0" name "gear" Joint "spined" vol "-12.0"}
heel	heel	foot-effect { frame "0.0"	name "heel"	Joint " heel"	vol "-16.0"}			Heel sound - Toe Joint					foot-effect { frame "0.0" name "toe" Joint "I ball" vol "-6.0"}
gear	somec	gear-effect { frame "0.0"	name "gear"	Joint "spined	" vol "-12.0"}	heel	Lball	foot-effect { frame "0.0"	name "heel"	Joint "Lball"	vol "+6.0"}		sound-effect { frame "0.0 " name " <u>sfx-noc-run-leans</u> " joint "r knee" vol "-8.0 "}
						gear	someb	foot-effect { frame "0.0"	name "gear"	Joint "spineb"	vol "-12.0"}		foot-effect { frame "0.0" name "heel" Joint "r heel" vol "-6.0"}
heel	r_heel	foot-effect { frame "0.0"	name "heel"	Joint "r_heel"	vol "-6.0"}	noc-run-	r_knee	sound-effect { frame "0				vol "-8.0"}	gear-effect { frame "0.0" name "gear" Joint " <u>spheb</u> " vol "-12.0"}
gear		gear-effect { frame "0.0"				heel	r_ball	foot-effect { frame "0.0"					foot-effect { frame "0.0" name "toe" joint "r_ball" vol "-6.0"}
toe	r_ball	foot-effect { frame "0.0"	name "toe"	Joint "r_ball"	vol "-6.0"}	gear		foot-effect { frame "0.0"					foot-effect { frame "0.0" name "heel" Joint "[_heel" vol "-6.0"}
						noc-run-P	knee	sound-effect { frame "0	0" name "sfx-n	pc-run-Jeans" j	oint "i_knee"	vol "-8.0"}	gear-effect { frame "0.0" name "gear" Joint "spined" vol "-12.0"}
heel		foot-effect { frame "0.0"											foot-effect { frame "0.0" name "toe" _ joint "[_ball" _ vol "-6.0"}
gear		gear-effect { frame "0.0"				heel		foot-effect { frame "0.0"					sound-effect { frame "0.0 " name " <u>sfx-npc-run-leans</u> " joint "r_knee" vol "-8.0 "}
toe	ball	foot-effect { frame "0.0"	name "toe"	Joint "Lball"	vol "-6.0"}	gear	spineb	foot-effect { frame "0.0"					foot-effect { frame "0.0" name "heel" Joint "r_heel" vol "-6.0"}
						noc-run-P	r_knee	sound-effect { frame "0				vol "-8.0"}	gear-effect { frame "0.0" name "gear" Joint " <u>spineb</u> " vol "+12.0"}
							ball	foot-effect { frame "0.0"	name "heel"	Joint "Lball"	vol "-6.0"}		foot-effect { frame "0.0" name "toe" Joint "r_ball" vol "-6.0"}
						gear		foot-effect { frame "0.0"					foot-effect { frame "0.0" name "heel" Joint "[_heel" vol "-6.0"}
						noc-run-P	knee	sound-effect { frame "0	0" name "sfx-n	ipo-run-Jeans" j	oint "I_knee"	vol "-8.0"}	gear-effect { frame "0.0" name "gear" Joint " <u>spinec</u> " vol "-1.2.0"}
													foot-effect { frame "0.0" name "toe" Joint "[_ball" vol "-6.0"}
							l_palm	hand-effect-right { fram					sound-effect { frame "0.0 " name " <u>sfx-noc-run-leans</u> " joint "r_knee" vol "-8.0 "}
						grab		hand-effect-left { frame					foot-effect { frame "0.0" name "heel" Joint "r_heel" vol "-6.0"}
						grab	L_palm	hand-effect-right { fram	e "0.0" name "(	grab" joint "[_pa	alm" vol "-6.0	0"}	gear-effect { frame "0.0" name "gear" Joint " <u>spineb</u> " vol "+12.0"}
						grab	r_palm	hand-effect-left { frame	"0.0" name "gr	rab" joint "r_pal	im" vol "-6.0"	"}	foot-effect { frame "0.0" name "toe" Joint "r_ball" vol "-6.0"}
													foot-effect { frame "0.0" name "heel" Joint "[_heel" vol "-6.0"}
							l_palm	hand-effect-right { fram					gear-effect { frame "0.0" name "gear" Joint " <u>spinec</u> " vol "-1.2.0"}
						brush		hand-effect-left { frame					foot-effect { frame "0.0" name "toe" joint "[_ball" vol "-6.0"}
								hand effect right { fram					sound-effect { frame "0.0 " name " <u>sfx-npc-run-leans</u> " joint "r_knee" vol "-8.0 "}
						brush	r_palm	hand-effect-left { frame	"0.0" name "br	rush" Joint "r_pa	alm" vol "-6.0	0"}	foot-effect { frame "0.0" name "heel" Joint "r_heel" vol "-6.0"}
STRUCTURE OF	AND SHOOD CONTRACTOR		Contraction of the second s	1000 States - 100		and a state of the	CONTRACTOR OF CONT		COMPANY STREET, STREET, ST	and the second second second	120000000		

## **Concatenate the Pain Away**

sound-effect	{ frame "	1.0		name "	something_01	a.	object "	thing_01	8	vol "	-6.0
sound-effect	{ frame "	0.0	11	name "	Something_02	н	object "	Thing_03	Эл	vol "	-6.0
sound-effect	{ frame "	9.0		name "	Something_03	н	object "	Thing_09	н	vol "	-6.0
sound-effect	{ frame "	3.0		name "	Sumthing 04	н	object "	hung_00	n.	vol "	-6.0

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

sound-effect { frame "1.0" r sound-effect { frame "0.0" r sound-effect { frame "9.0" r sound-effect { frame "3.0" r

name "something\_01" obj name "Something\_02" obj name "Something\_03" obj name "Sumthing\_04" obje

object "thing\_01" vol "-6.0"} object "Thing\_03" vol "-6.0"} object "Thing\_09" vol "-6.0"} 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>	
	CollisionParam</th <th>eters:</th>	eters:
	<mcollisionpar< th=""><th>ameters&gt;</th></mcollisionpar<>	ameters>
	mat1 mat</th <th>2 slow fast large few many&gt;</th>	2 slow fast large few many>
Material		
bone_chicken	Collision</th <th>Parameters: bone_chicken&gt;</th>	Parameters: bone_chicken>
	< <u>CollisionPar</u>	ameters>
bone_chicken		<mmaterial1>bone_chicken</mmaterial1>
1.		=CONCATENATE(\$B\$3;A18;\$G\$3)
7.		<mfastcutoff>7</mfastcutoff>
3.		<mlargecutoff>3</mlargecutoff>
3.		<mfewcutoff>3</mfewcutoff>
5.	0	<mmanycutoff>5</mmanycutoff>
	<th>rameters&gt;</th>	rameters>

**Find & Replace with Wildcards** 

Collision of Spine[2] speed 0.000000 (PhysComp) 0.100233 (colData) time 14.629761 Collision of Spine[2] speed 0.000000 (PhysComp) 0.100233 (colData) Collision of Spine[2] speed:0.000000 (PhysComp) 0.1020331 Collision of Spine[2] speed:0.000000 (PhysComp) 0.103236 Collision of Spine[2] speed:0.000000 (PhysComp) 0.104068 Collision of Spine[2] speed:0.000000 (PhysComp) 0.104441 Collision of Spine[2] speed:0.000000 (PhysComp) 0.105011 Collision of Spine[2] speed:0.000000 (PhysComp) 0.131878 Collision of Spine[2] speed:0.000000 (PhysComp) 0.132549 Collision of Spine[2] speed:0.000000 (PhysComp) 0.141770 Collision of Spine[2] speed:0.000000 (PhysComp) 0.161270 Collision of Spine[2] speed:0.000000 (PhysComp) 0.170082 Collision of Spine[2] speed:0.000000 (PhysComp) 0.209226 Collision of Spine[2] speed:0.000000 (PhysComp) 0.211202 Collision of Spine[2] speed:0.000000 (PhysComp) 0.297516 Collision of Spine[2] speed:0.000000 (PhysComp) 0.359132 Collision of Spine[2] speed:0.000000 (PhysComp) 0.363607 Collision of Spine[2] speed:0.000000 (PhysComp) 0.458364 Collision of Spine[2] speed:0.000000 (PhysComp) 0.479657 Collision of Spine[2] speed:0.000000 (PhysComp) 0.499157 Collision of Spine[2] speed:0.000000 (PhysComp) 0.546566 Collision of Spine[2] speed:0.000000 (PhysComp) 0.631550 Collision of Spine[2] speed:0.000000 (PhysComp) 0.977065 Collision of Spine[2] speed:0.000000 (PhysComp) 4.022977

Search for

\*(PhysComp)

Find & Replace		×
Search for *(PhysComp)	•	<u>Find</u> Find <u>A</u> ll
Reglace with	•	Replace
Ma <u>t</u> ch case		
More Options <b>¥</b>	<u>H</u> elp	Close

### 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

#### MARCH 25–29, 2013 GDCONF.COM

# **The Matrix**

	<u>a se </u>		
	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
heavyscuff		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



Something_Heavy	fs_common_default_run	fs_common_concrete_run
Something_Light		
Something_Land		
Something_Scuff		
Super_Heavy	<u>fs_</u> common_default_run	<u>fs_</u> common_concrete_run
Super_Light		
Super_Land		
Super_Scuff		
Export		
Export		



```
Rem Attribute VBA ModuleTvpe=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)
       Call DumpXMLProperty(fileNum, 3, "mDestinationNum", colNum - 2)
Rem
Rem
       Call DumpXMLProperty(fileNum, 3, "mSourceName", FirstWord(Worksheets(1),Cells(baseRowNum, 1)))
Rem
       Call DumpXMLProperty(fileNum, 3, "mDestinationName", Worksheets(1).Cells(1, colNum))
       Call DumpXMLProperty(fileNum, 3, "mSoundName", Worksheets(1).Cells(baseRowNum, colNum))
Rem
Rem
       Call DumpXMLProperty(fileNum, 3, "mScuffSoundName", Worksheets(1).Cells(baseRowNum + 1, colNum))
Rem
       Call DumpXMLProperty(fileNum, 3, "mLandSoundName", Worksheets(1),Cells(baseRowNum + 2, colNum))
       Call DumpXMLProperty(fileNum, 3, "mSlideSoundName", Worksheets(1),Cells(baseRowNum + 3, colNum))
Rem
Rem
       Call DumpXMLProperty(fileNum, 3, "mSound", Worksheets(1).Cells(baseRowNum, colNum))
       Call DumpXMLProperty(fileNum, 3, "mScuffSound", Worksheets(1).Cells(baseRowNum + 1, colNum))
Rem
Rem
       Call DumpXMLProperty(fileNum, 3, "mLandSound", Worksheets(1).Cells(baseRowNum + 2, colNum))
       Call DumpXMLProperty(fileNum, 3, "mSlideSound", Worksheets(1),Cells(baseRowNum + 3, colNum))
Rem
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)
       If strEndPos = 0 Then
Rem
           FirstWord = inCell
Rem
Rem
       Else
Rem
            FirstWord = Left(inCell, strEndPos - 1)
```

## **Signal to Noise**

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