GAME DESIGN BACHELOR 1
SUJET PRODUCTION 2019-2020 [B1PRD2019]

Révision du 15/05/20
Par NICOLAS LOTH (auteur et éditeur principal)

PRODUCTION

RECHERCHES, CONCEPTION, DEVELOPPEMENT & DOCUMENTATION : **DESIGNER & DEVELOPPER UNE SEQUENCE DE GAMEPLAY DE TYPE « WARE »**

TABLE DES MATIERES

PRESENTATION

AVANT-PROPOS

1. LA NOTION DE « WARE »

En référence au jeu Nintendo « WarioWare » (voir [annexe]), la notion de « Ware » est utilisée pour désigner un ensemble de jeux, généralement courts voire très-courts, intégrés les uns à la suite des autres pour constituer des niveaux et dont l'expérience, la complexité, les thématiques abordées et la direction artistique différent selon l'intention (ludique, récréative, compétitive, sérieuse, séparatrice, etc.), le support (intégrés au sein d'un autre jeu ou jeu à part entière), la plateforme de publication (mobile phone, handheld/static gaming platforms, browser) et évidemment la cible – et ce autant du point de vue vidéo-ludique que marketing.

2. TYPOLOGIE CONNEXE AU « WARE »

Si la référence de la dénomination des jeux « Ware-like » (ou « Wares ») reste le jeu *WarioWare*, le Game Design a su élargir celle-ci pour en garder le principe, mais ne pas rester conditionné au format du jeu d'origine.
Ainsi, on peut dégager différents types de jeux connexes au principe du « Ware », dont les terminologies seront utilisées dans le cadre de cette production :

- **Micro Game (5-10 secondes) :** jeu très court, généralement de gameplay « Action » au rythme soutenu et limité dans le temps, contenu dans un ensemble « seamless ». *WarioWare* est un ensemble de micro-games.

- **Mini-game (< 5 minutes) :** jeu à certains des éléments 3C presque toujours statiques, dont l'accessibilité se veut universelle en se construisant sur un couple action/puzzle, et dont les mécaniques essentielles relativement simple et exécutée assez rapidement – mais pas forcément limitée dans le temps. Le mini-jeu peut être contenu dans un ensemble ou exister de manière autonome (*Gwent de Witcher WH* vs *Heartstone*). Certains studios et franchises (puzzle games, 3 match, runners) ont construit leur succès sur ce principe.

- **« Gameplay Sequence » (temps variable) :** phase de gameplay en continuité temporelle avec son conteneur mais en rupture 3C, généralement utilisée comme outil de mise-en-scène et d'emphase, principalement trouvées dans les jeux sous la forme de séquence timing/réflexes (QTE)

SUJET

1. CONTEXTE

Vous avez été récemment intégré les équipes d'un studio de développement mobile assignées au développement d'une nouvelle production : **un jeu de type « Ware » pour mobile**, dont l'intention est de **réactualiser le genre** et de se positionner comme modèle de référence, en proposant un format flexible s'adaptant à diverses stratégies (*buzz game, serious game, economical game, social game*, etc.), autant au niveau de sa cible que de son contenu.

Pour cette première occurrence, le studio décide de cibler les **adolescents européens/occidentaux**, au profil **joueur enthousiaste « Time-Filler »** (préfère les jeux mobiles pour combler des moments de disponibilités en dehors des sessions de jeu intenses et/ou sociales). La stratégie du studio est aussi de **proposer du contenu de qualité qui saura faire du « buzz »** (thèmes et propos singuliers qui attisent la curiosité) pour cette première occurrence, afin de générer une **communauté en compétition amicale et fidélisée**.

Les premières directives de votre direction créative sont d'**orienter la production vers un contenu fort en incarnation et détachement (immersion)**. De plus, avant de valider la ligne créative, votre Direction Créative souhaite passer en revue plusieurs propositions avant de lancer définitivement la production.

Ainsi, vous avez la responsabilité de l'une de ses propositions et pour ce faire, vous décidez de concevoir un segment témoin de ce « Ware » qui se composera de 6 **micro-jeux**, et qui devront pouvoir s'intégrer à terme au sein d'une séquence plus longue. Vous devrez donc proposer votre Direction Créative **plusieurs jeux parfaitement jouables** qui devront **illustrer votre vision de l'expérience de jeu générale** : différents types de gameplay et de difficultés, gestion de la progression du joueur et de l'ergonomie, vision artistique et narrative, ajout de fonctionnalités, etc.

Votre échéance se situe à 4 semaines, avec des jalons à respecter, et vos propositions seront soutenues à l'oral.

2. OBJECTIFS

- **Analyse** et définition d'une **expérience utilisateur** adaptée à des **contraintes** éditoriales
- **Conception** et **documentation** d'un segment type « Ware » en vue de sa validation par la DC
- Définition et constitution d'une **direction artistique** en adéquation avec l'expérience utilisateur
- Production de **documentation technique** pour les 6 micro-jeux (minimum) qui composeront le **segment type**
- **Programmation** de 3 micro-jeux jouables (minimum)
- Montage d'un support de **présentation** synthétique pour **soutenance orale**

3. LIVRABLES

Ci-dessous, il est fait mention pour les formats des livrables de « parties » (chapitres) et non de « pages », ce qui signifie qu'il n'y a pas de minimum ou maximum particulier attendu en termes de volume (nombre de mots, paragraphes, etc). En partant du principe que la police de caractère utilisée sera comprise entre 10 et 14 points, une « partie /chapitre » « type » minimum doit occuper la moitié d'une page A4 au minimum pour être considérée comme suffisamment substantielle (images et schéma inclus).

+ **Dossier de Conception :**
  - 1 **page de garde** : nom prénom, classe, visuel et titre de votre jeu & le sous-titre obligatoire ci-dessous : **« Projet de production Bachelor 1 Game Design, ETPA Rennes 2019-2020 »**
  - 1 partie **« Cadrage »** : rappel du contexte (sujet, contraintes) et des spécifications (genre, plateforme, cible, techno)
  - 1 partie **« Analytique »** : références et analyse du genre « ware » et de ses types connexes
  - 1 partie **« Expérience Utilisateur »** : présentation, références et justifications, contraintes et potentiels identifiés, portée du jeu ('*scope*')
  - 1 partie **« Concept »** : synopsis incluant la philosophie de la progression du joueur (game flow), description/schéma d'une partie idéale, illustrations et références commentées
  - 1 partie « **3C » (incluant le Design UI)** : schéma et description de l'interface, maquettes commentées
  - 1 partie « **Art »** : analyse du public lié au concept, références de l'existant, synthèse de propositions justifiant l'originalité du graphisme retenu pour le public-cible
  - *Toute partie supplémentaire pertinente si jugé nécessaire*

+ **Document technique**, à produire pour chaque micro-jeux (donc 6 minimum) :
  - 1 partie « **Vue d'ensemble** » : nom et pitch du jeu (genre, cognition et challenge(s))
  - 1 partie « **Gameplay »** : description et schématisation des mécaniques et dynamiques du jeu
  - 1 partie « **Look&Feel** » : maquettes/sketches/illustrations représentant des captures du jeu illustrant ses composantes (art, UI, gameplay, narration, etc.) – un ensemble constituant un prototype visuel
  - 1 partie « **Données »** : listing et justification des données et paramètres de jeu ('*metrics*') qui influent sur les composantes de l'expérience du joueur, définition et nomenclature des fonctions et/ou des variables associées (éventuellement)

+ **3 micro-jeux jouables :**
  - Genre de gameplay : **action-puzzles** (gameplay différent pour chaque jeu)
  - Temps de partie : **10 secondes** (+5 secondes de tolérance si justifié)
  - Contrôles : **2 inputs max** ; directions + contrôle au choix (peuvent être utilisés indifféremment dans chaque jeu)
  - Score et éventuelles préférences de jeu sauvegardées entre les scènes

+ **Support de présentation orale :**
  - 1 diapositive page de garde (informations identiques à la partie « page de garde » du document de conception
  - 1 diapositive « **Cadrage** » (informations identiques à la partie « Cadrage » du document de conception
  - 1 diapositive « **UeX** », synthèse de la partie « Expérience Utilisateur » du document de conception
  - 1 diapositive « **Concept** », synthèse de la partie « Concept » du document de conception
  - 1 ou 2 diapositives « **3C** », synthèse de la partie « 3C » du document de conception
  - 1 ou 2 diapositives « **DA** », synthèse de la partie « 3C » du document de conception
  - 1 ou 2 diapositives « **Post-Mortem** », synthèse des difficultés rencontrées et des solutions potentiels

4. FORMATS

+ **Documentation de design** :
  - Fusionnés en 1 seul porte-document PDF A4 (chapitré, entête avec nom/prénom/classe, pieds-de-pages numérotés)
  > Nomenclature : **GDB1_Production1920_GDD_[NomPrénom].pdf**

+ **Documentation technique (1 document numéroté par micro-jeu) :**
  - Fusionnés en 1 seul porte-document PDF A4 (chapitré, entête avec nom/prénom/classe, pieds-de-pages numérotés)
  > Nomenclature : **GDB1_Production1920_GDTD#_[NomPrénom].pdf** (remplacez **#** par le numéro du document)

+ **Jeux :**
  - Réalisés avec Phaser 3, technologies utilisables HTML, CSS, JS, JQuery 3.5
  - Rendu fichiers de travail logiciels Adobe
  - Code-source **exécutable** et **commenté**

+ **Support de présentation** :
  - Document de type « diapositives » (Powerpoint, Impress, Google Slide, etc.)
  > Nomenclature : **GDB1_Production1920_GDC_[NomPrénom].pdf**

5. RENDUS

+ **Pour tous les documents demandés, à toutes les échéances :**
  Dans un **dépôt public** sur votre compte **gitHub**, répondant à la nomenclature suivante :
  GDB1_Production1920_[NomPrénom]

  > **POUR INFORMATION :** pour toute question ou requête en dehors des créneaux assignés au suivi de la production, merci d'adresser un email au intervenants concernés. Ci-dessous la liste des emails à utiliser IMPERATIVEMENT.

  - **Questions pédagogiques :**
    f.barre@ecolescreatives.com
    s.dubois@ecolescreatives.com
    s.tonon@ecolescreatives.com
    t.garance@ecolescreatives.com
    n.loth@ecolescreatives.com
  - **Questions administratives :**
    s.haubois@ecolescreatives.com
    h.arenz-legorgeu@ecolescreatives.com
  - **Objet email :**
    PROD GDB1 1920 : [VotreSujet]

PLANNING

Pour toute la durée de la période de production, les encadrants, à disposition aux créneaux renseignés dans les emplois du temps, pourront être sollicités pour tout problème rencontré mais ne pourront apporter des solutions, en dehors de circonstances exceptionnelles, que dans la limite de leurs prérogatives pédagogiques.

PERIODE	SEM.	DATE	HEURE	OBJET
Préproduction	1	**18/05/20**	9h	Remise du sujet, Q&A
	2	**25/05/20**	9h	Encadrement et accompagnement du lancement de projet Réflexions initiales, recherches analytiques et références
	3	**04/06/20**	9h	Revue des résultats du *brainstorm*, validation des choix de Design
		04/06/20	18h	Envoi du lien du dossier de dépôt GitHub par email aux intervenants
Production	3	**05/06/20**	09	Passage en Production, mise-en-place et suivi de la réalisation
	4	**10/06/20**	18h	**Rendu du Document de Design**
		10/06/20	18	**Rendu du PDF de présentation du projet de logo et des intentions graphiques** (dessins préparatoires, projet nom, positionnement graphique, persona) étayé d'un ***mood board*** et **de dessins de recherches**
		10/06/20	18h	Rendu maquettes au format « copie écran »
		11/06/20	13h	**Rendu *sprites* d'animation**
Préparation jury	5	**17/06/20**	9h	Finalisation des jeux, documents de présentation et préparation de l'oral
		17/06/20	15h	Envoi/dépôt du support de présentation et des versions révisées/finales des documentations Derniers « push » sur les dépôts Git
Jury		**18/06/20**	8h	**Présentation orale individuelle** Les modalités du jury seront déterminées en cours de production (réglementations Covid-19) = amphithéâtre vs visio-conférence
Retours	5+	-	-	Dates et modalités des retours seront communiquées durant la production

EVALUATION

1. GRILLE D'EVALUATION

CATEGORIE	ELEMENT	VAL.
GAME DESIGN	Pertinence et qualité des recherches et de l'analyse du genre « Ware » (en considérant les différents types connexes au Ware)	4
	Pertinence UeX, concept et 3C (adéquation à la cible, à la ligne créative et cohérence de l'expérience générale)	4
	« Game Vision » (vision d'ensemble, des contraintes et potentiels, systèmes additionnels, leviers économiques et sociaux, etc.)	2
DOCUMENTATION TECHNIQUE	Pertinence et qualité explications des mécaniques de jeu	4
	Pertinence et qualité schématisation des mécaniques de jeu	3
	Pertinence et qualité des éléments visuels additionnels (croquis)	2
	Pertinence et exploitabilité des *metrics* (identification, explication et nomenclature des variables)	1
	Multiplication par nombre de jeux documentés (minimum 6) et moyenne (*)	
DIRECTION ARTISTIQUE	Titre du jeu : pertinence et cohérence avec l'univers graphique du jeu	2
	Fond : cohérence graphique entre le jeu choisi et le public visé	2
	Jeu : cohérence et lien entre les différentes phases des jeux	2
	Dossier de conception : qualité et pertinence de la mise en page (lisibilité, compréhension, lien graphique)	4
ART	Qualité globale du graphisme	4
	Harmonie des couleurs et de l'ambiance, homogénéité dans les différents jeux	3
	Pertinence et originalité en réponse au concept et à la cible	3
2D	Technique (savoir refaire correctement ce qui a été vu en classe, pertinence de la méthodologie)	5
	Rigueur et organisation (propreté et clarté des fichiers de travail et des documents)	3
	Respect de la consigne (utilisation des logiciels Adobe, respect des contraintes habituelles liées à la création d'image numérique, format et ratio mobile portrait ou paysage au choix, rendu fichiers de travail et dossier, *screenshots* d'écrans/maquettes finales)	2
PROGRAMMATION	Pertinence des moyens techniques mis en œuvre & conception orientée objet	4
	Chaque jeu-scène est exécutable, sans bug, et adaptée à l'implémentation	3
	Qualité & structuration du code (clarté, maintenabilité, commentaires)	2
	Utilisation de git tout au long du développement pour la gestion des versions (pas juste pour le rendu)	1
COMMUNICATION, BUREAUTIQUE & GESTION DE PROJET	Pertinence de la présentation et des échanges avec le jury	4
	Qualité du support de présentation	2
	Expression écrite et orale (qualité grammaire, orthographe)	2
	Implication, leadership	2
	TOTAL	**70**

2. METHODE D'EVALUATION

EVALUATION	Excellent	Bon	Moyen	Mauvais (fait)	Mauvais (pas fait)
LETTRE	A	B	C	D	E
FACTEUR	1	0,75	0,5	0,25	0

Calcul de la notation de chaque élément :	(*) Calcul de la note pour la doc. tech. :	Calcul de la note globale :
[PointsCatégorie] = [ValeurElément]*[FacteurEvaluation]	([PointsDoc1]+[PointsDoc2]+[PointsDoc3]+ [etc]) / [NbTotalDeDocuments]	([PointsCatégorie]+ [PointsCatégorie]+ [PointsCatégorie]+[etc]) / [NbCatégories] **Résultat x2 (pour obtenir une note sur 20)**

ANNEXES

"What WarioWare can teach us about Game Design"

Chaim Gingold reviews *WarioWare.*
Nintendo: *WarioWare Inc.: Mega MicroGame$*. Nintendo R&D1 2003. (Gameboy Advance).

Introduction

The story: Wario, realizing there is lots of money to be made in video games, decides to found his own game company. The resulting game: Play through a rapid-fire series of bizarre micro games. Each *WarioWare* level consists of 24 micro games, each about 5 seconds in length.

Wario Ware is a game about games. Some of its micro games are straight re-implementations of earlier Nintendo classics, but *WarioWare* also parodies older games such as *Super Mario Bros* [7] and *The Legend of Zelda* [8]. *WarioWare* exhibits and distorts many game design conventions we take for granted. The Dungeon Dilemma game at the end of the Orbulon level, for example, seems to adhere to the conventions of a computer role playing game, but something is off:

The menu system looks like a computer role playing game interface, but the menu options, "success" and "failure", are not be found in a genuine RPG. The conventions of an RPG have been transformed into an action game: the cursor moves between menu items on its own accord, and you have to push the button to stop it at the right option. *WarioWare* is crammed full of parody, subversion, and quotation of game clichés and conventions. *WarioWare* plays with game design idioms, and in doing so foregrounds game conventions. As a result, *WarioWare* has a great deal to teach us about game design.

WarioWare's most obvious departure from conventional game design is its discontinuities, which illustrate the effects of continuity on game experience. *Wario Ware's* ultra-compressed games contain only a minimum number of ingredients. These miniature games illustrate how complex games are generally built out of simpler ones. *WarioWare's* nonsense and absurdities also explore the relationship between fiction and rules.

In a sense, WarioWare is an *Understanding Comics* [4] of video games: a text that uses the representational strategies of a medium to reflect upon that same medium. But where *Understanding Comics* is discourse on comics, written in the language of comics, *Wario Ware* is more like Chuck Jones's meta-cartoon *Duck Amuck* [2]. *WarioWare* and *Duck Amuck* violate convention, and in doing so draw attention to how cartoons and games are both constructed and interpreted.

Continuity

Just as a micro game starts to make sense, it ends, and you are dropped into an altogether new game. Micro games last about 5 seconds, so you must quickly figure out what game is being played, what you're supposed to do, and how you do it. *WarioWare's* discontinuities point to how continuity is usually used to create coherent and playable games.

A video game is a world with its own fiction, nouns, verbs, goals, and controls. An unstable fiction makes interpreting goals and controls confusing. Part of the cognitive friction *WarioWare* creates by changing games so fast, is that you can't map nouns and verbs from one game to the next. One game may contain a snowboarder, and you figured out that by pushing left and right on the directional pad you could guide her through a gate, but the next game has no snow boarder, gate, or even snow.

It is often unclear what state of affairs you want to bring into being. These are games, after all, and in games you have to accomplish some goal, otherwise you lose. *Wario Ware* helps us out by labelling micro games as they start. Stomp!, Avoid!, and Collect! are examples of such labels, but they are often little more than vague clues as to what you need to do, or how you do it.

The next problem is figuring out how to affect the world on your screen. How do the Game Boy Advance buttons map to actions in the game world? In one game left and right on the directional pad map to the left and right motion of an object, but in the next game they'll do nothing, and the A button will cause a needle to punch into a disc and stop its rotation.

These surprises highlight the cognitive benefits of playing in a consistent world. They also tell us something about the role of the player character. Sometimes a *WarioWare* micro game will start, and I'll understand the fiction, goal, and controls, but fail to map myself into the right object. My goal is to keep a creature under a spotlight, and I often guess incorrectly as to whether my directional buttons move the spotlight or the creature . If I were consistently mapped to a particular character, such as Mario, there would be no such confusion. Player characters organize controls, goals, and fiction into consistent and coherent bundles. When I'm playing *Super Mario Bros.*, I understand that as Mario, my inputs always affect Mario, my goals are the same as Mario's, and that Mario, who looks like a man, is probably affected by gravity and sharp objects. When the world or player character aren't radically transforming, and retain their form over time, goals and controls remain coherent over time.

Scale

Every medium has its short form. We have examples of short films, music, and written stories. *WarioWare* demonstrates the ultra-short form of video games: the five second micro game. What happens when the size conventions of video games are pushed to their limit?

Wario Ware's micro games are carefully bounded in several dimensions. First, the space in which these games are played is tiny. Most of them occupy a non-scrolling space the size of a Game Boy Advance screen. Second, the time allotted for each micro game is short. Third, the goal you have to accomplish is incredibly simple: collect these coins, walk to that goal, or push the A button at the right moment. Lastly, the input mechanisms are simple. There are no triple jumps or back flips to master. Most games use only the A button for player input, and many others use only the left and right directional buttons.

By pushing the formal boundaries of game complexity to a bare minimum, *WarioWare* foregrounds the essential elements of what makes a video game a video game. Once you've taken out everything you can in order to make the smallest video games possible, what's left over? *WarioWare's* micro games seem to say:

1. **Fiction.** Examples: I'm a lizard and I eat things; I'm a man and can walk; I'm a race car that races; I'm a hand and can grab things that are falling.
2. **Goal.** Examples: Catch!, Jump!, or Avoid!
3. **Agency.** Examples: Push the A button to catch, stop, or move something.

This list of minimal features more or less maps to Jesper Juul's definition of a game [10]. The elements all these games have, something that Juul's doesn't, is fiction. The fictions that *WarioWare's* micro games present are critical to understanding micro game goals, and to the overall aesthetic. *Wario Ware* is fun and comprehensible in spite of its discontinuities precisely because of its fictional representations. But how else does *WarioWare* help us make sense of its chaos?

Sense and Nonsense

What prevents *WarioWare*, with all its formal experimentation, from degenerating into unplayable chaotic nonsense? Why does *WarioWare* make any sense at all?

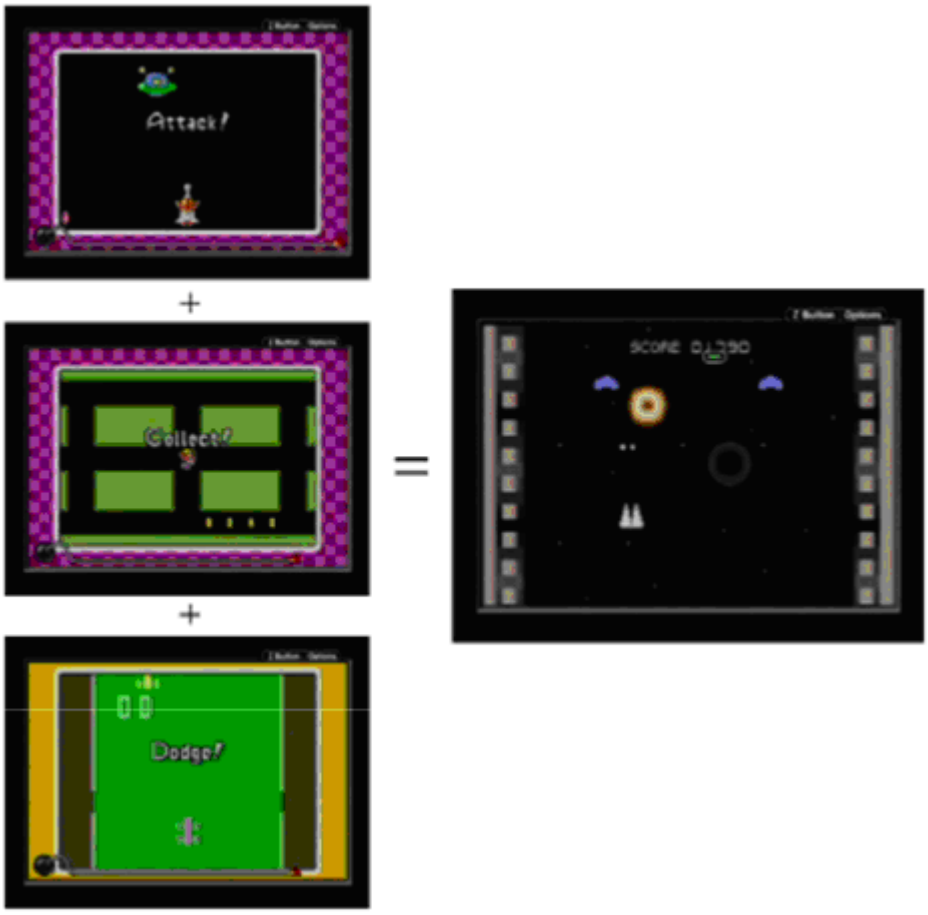
First, the simplicity of each micro game means it can be rapidly learned and tuned into. If I were suddenly dropped into a random moment of *Final Fantasy 7* [11] for three seconds, I would probably fail. *WarioWare's* micro games, on the other hand, are so simple in terms of fiction, goal structure, and agency, that they are quickly grasped.

Another component of *WarioWare's* playability is that you've played all these micro games before, or something like them. Sometimes you literally play another game, such as *F-Zero* [6]. Other times, the micro game is an analogue, as in Collect!, where you maneuver a character through a maze to collect coins. The meta-game of *Wario Ware* is identifying the game on the screen, and mapping it to your knowledge of video games. Broad knowledge of video games makes you a better *WarioWare* player.

Finally, clear and consistent boundaries mark the discontinuities between micro games. *WarioWare* uses a highly stylised animation to mark the ends and beginnings of micro games. The most confusing moments, the transitions between games, are carefully called out. In fact, more visual and aural jazz happens between the micro games than in the micro games. Drawing attention to the boundaries that separate micro games helps us tune out of one game and into the next. One can imagine how rearranging a game with only subtle transition cues ways would be far more confusing. I'm playing *Super Mario Bros.*, and with no transition to mark it, the coins have become poisonous, and Mario is invincible in the face of all enemies. The results would be disastrous. Making the discontinuities bigger makes them more obvious, and harder to trip over.

Building Blocks

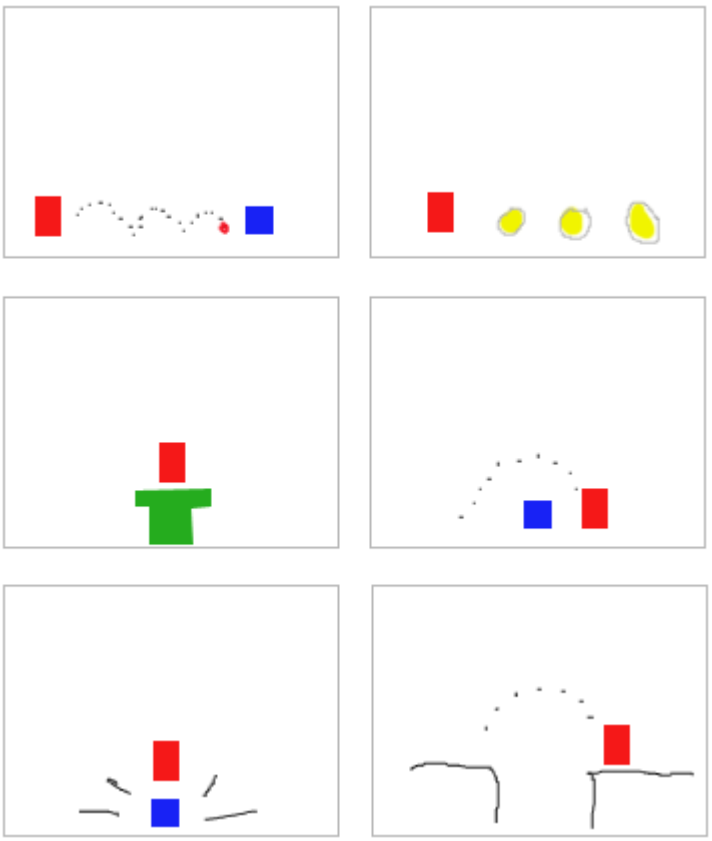
Clearly marked game boundaries, and the micro-scale of each game, bring the atomicity of each game to the foreground. The micro games are short, small, and simple, and the boss games, by comparison, are long, big, and complex. Boss stages and micro games, however, share many game design elements. Galaxy 2003, the boss at the end of Dribble's level, seamlessly integrates the earlier micro games Shoot!, Avoid!, and Collect!. Galaxy 2003 is a conventional overhead scrolling shooter: players shoot at enemies, avoid colliding with them, and collect power-ups. Boss games, it seems, are compound collections of micro games.



The Galaxy 2003 boss game is made of the micro games Attack!, Collect!, and Dodge!.

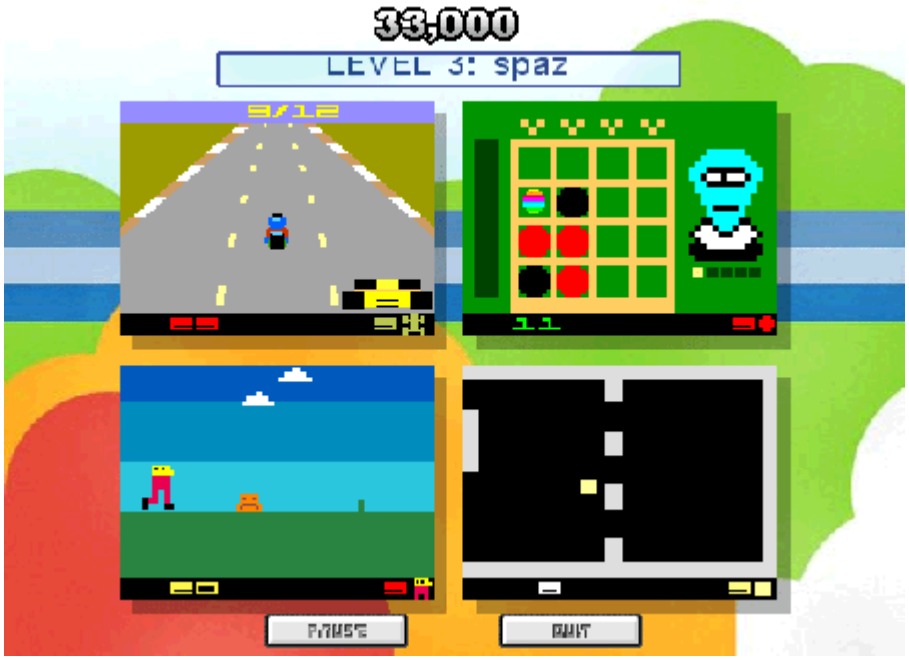
If we take a series of micro games and dissolve their boundaries, we end up with a *WarioWare* boss game. These boss games are more or less equivalent to complete, modern games. Galaxy 2003, for instance, is a structurally complete overhead shooter. *WarioWare* demonstrates how complex games can be built out of simple components.

This building block structure is also evident in other games. *Super Mario Bros.,* for example, can be decomposed into *WarioWare* sized micro games. Shooting enemies, collecting coins, entering pipes, dodging enemies, stomping enemies, and leaping across chasms are all micro-activities inside of *Super Mario Bros.*. Most of these micro-activities, in fact, appear in *WarioWare* as micro games.



Author's illustration of Super Mario Bros.'s micro-activities decomposed into WarioWare sized micro games: Shooting fireballs, Collecting coins, Entering pipes, Dodging enemies, Stomping enemies, and Jumping over holes.

How are micro games synthesized into bigger games? Are there any patterns or regularities in how games integrate their building blocks into new wholes? Gamelab's *Arcadia* [3], like *WarioWare*, is a game built out of clearly demarcated micro games:



Arcadia, by gameLab.

Wario Ware and *Arcadia* unify their sub-games differently. In *WarioWare*, component games come one after the other, separated in time, but occupying the same space. *Arcadia's* micro games happen at the same time, but occupy different spatial frames. Most games, such as *Super Mario Bros.* and *Wario Ware's* bosses, ask players to do multiple activities simultaneously, and overlap their component games in both time and space.

Let's look at how *WarioWar* recursively decomposes into its component games from the top down. *WarioWare* is unified by the fiction that Wario has made a game company, and you are playing his games. To beat the game, you must complete each level in sequence.

Each level of *WarioWare* is integrated by a fiction, such as playing a bunch of cell-phone games, or escaping from the police:

The cell phone fiction that unifies the micro games of the "Jimmy" level.

These fictions, however weak, thematically unify a level. To complete a level, players must win a sequence of micro games. Sequencing micro games and giving the player a goal of working through the entire sequence, gives each level a unified win-condition. To lose a level, players fail to finish four micro games, which creates a unified failure state. The end of each level is marked with a boss, which frames each level as a whole.

As discussed earlier, each boss is a tightly integrated set of micro games. While each level of *WarioWare* combines its component games sequentially, the bosses integrate sub-games through simultaneity. In the Galaxy 2003 shooter boss, for example, players juggle dodging enemies, shooting enemies, and collecting power-ups. *WarioWare* bosses unify their component micro games by making the player balance simultaneous activities. Like the multiple chances players get within a level, players get often get multiple chances within a boss game. These chances, however, take a different form. In Galaxy 2003, your space ship evolves as you collect power-ups, and devolves as you take damage. In the Punch-Out boss at the end of Jimmy's level, each blow you take depletes one of your hearts.

This structural stance, imagining games as collections of permutable components, leads us to some interesting places. First, by decomposing games into their component parts and then comparing those pieces, we have a basis for comparing complex games. Reversal, for example, is an activity that happens in both *Pac-Man* [5] and *Super Mario Bros Pac-Man's* power pellet, which reverses the chase relationship between *Pac-Man* and the ghosts, is isomorphic to the invincibility star of *Super Mario Bros.* The importance of such an analytical approach has been argued for by Doug Church [1].

By adding a historical dimension, one could map out a family tree of games. This would reveal how game designers have parsed the structure of earlier games, and reused those pieces. Thinking of games as unified strands of discrete forms would let us understand how game designs are recombined, inherited, and mutated over time.

Fiction & Rules

The fictions of *WarioWare's* games are diverse, to say the least. This is another domain in which *WarioWare* breaks rules. *Wario Ware* is filled with bizarre and rapidly shifting fictions like sniffing mucus, brushing teeth, walking on whales, and keeping cats out of the rain.

As a set of design decisions, the relationship between fiction and rules in *WarioWare* is quite interesting. Since fiction in *Wario Ware* seems to have so much free play with respect to game rules, we should be able to learn something about the necessary and optional linkages between fiction and rules. When is fiction free to be nonsensical, and when must it firmly connect to rules?

The relation between fiction and rules on each level ranges from disconnected to connected. Jimmy's cell-phone level is a workable fiction for understanding the rules that links its micro games: each game is a cell phone game. Others fictions are total disconnects from the level mechanics. Dr. Crygor's level marks the transition between games with a zooming into and out of a high-tech toilet bowl. Lives are represented as rolls of toilet paper. Both the connected and disconnected fictions, however, thematically unify each level and strongly mark the transitions between micro games. When moving from game to game, two fictional breaks occur: once, as we pop out from our last micro game into the level fiction, and again as we push into a new micro game. Nonsense is just as good as sense for signalling the switch between micro-worlds.

While the fiction for a particular game may seem arbitrary, the relationship between each game's fiction and its rules is not. If the fiction of The Brush Off, where players move a toothbrush back and forth over a mouthful of teeth, was changed to a map of Denmark moving back and forth over a bumblebee, that game would be less playable. A goal state (it is desirable to clean dirty teeth), controls (usually one drives the toothbrush, not the teeth), and inputs (left and right, aligned with the direction and location of the toothbrush), are all immediately communicated by the fictional representation. Not only that, but playing a toothbrushing game is silly and fun. While entertaining and outrageous, *WarioWare's* micro game fictions are strongly linked to rules.

The level fictions, by not fictionally integrating the micro games, reinforce each micro game's separateness, and promote the idea that we must come to terms with each micro game on its own. Even the cell-phone fiction, the most coherent of all the connecting level fictions, reinforces each game's separateness, as each game is represented as a new email on your cell phone. The micro game fictions, by closely integrating with their rules (toothbrushes clean teeth; men in karate outfits chop wood blocks), accelerate our comprehension of each game. If one were to break the coherency between each micro game's fictions and rules, *WarioWare* would be unplayable, because it demands rapid recognition and comprehension of micro games.

WarioWare's diverse fictional strategies explore and demonstrate the free play between fiction and rules available to game makers. In some ways, fiction is arbitrary, and nonsense can even be used to enhance usability. While fiction has a certain amount of free play, it is ultimately grounded in a need to explicate rules. By pushing fictional possibility to its limits, *WarioWare* demonstrates how ludicrous game fictions can get, while reminding us of the symbiotic relationship between rules and fiction.

Conclusion

In terms of game design, *WarioWare* is a very interesting game. It pushes the boundaries of game size and complexity, the speed at which we can adapt to new games, and game fictions, to the breaking point. Through these formal experiments, *WarioWare* demonstrates how complexity can be achieved through combining micro games into bigger games, the range of free play between fiction and rules available to designers, and the role of continuity in games.

WarioWare, finally, is fascinating because of its message to game scholars: we can reflect upon games by making them. Experimental games are a powerful tool for thinking about and communicating ideas about games.

About the author

Chaim Gingold is a game designer on *Spore*, Will Wright's current project at Electronic Arts/Maxis. He has a masters degree from Georgia Tech's Information Design & Technology program. His masters thesis, *Miniature Gardens & Magic Crayons: Games, Spaces, & Worlds*, analysed the work of master game designers Will Wright and Shigeru Miyamoto.

Bibliography

[1] Church, Doug, "Formal Abstract Design Tools." *Gamasutra*, July 1999.

[2] *Duck Amuck*. Director: Chuck M. Jones. Warner Bros, 1953. 7 minutes.

[3] GameLab, *Arcadia*. 2002. Shockwave game. http://www.gmlb.com/games/arcadia.html

[4] McCloud, Scott. *Understanding Comics.* New York: HarperPerennial, 1994.

[5] Namco, *Pac-Man*. 1981. Arcade game.

[6] Nintendo, *F-Zero*. Nov. 1990. Super NES game.

[7] Nintendo, *Super Mario Bros.* Sept. 1985. NES game.

[8] Nintendo, *The Legend Of Zelda*. 1987. NES game.

[9] Nintendo, *WarioWare*, Inc: Mega Microgames. 2003. Game Boy Advance game.

[10] Juul, Jesper. *Half-Real: Video Games Between Real Rules And Fictional Worlds*. PhD dissertation, IT University of Copenhagen, October 2003.

[11] SquareSoft, *Final Fantasy VII*. Sony Computer Entertainment America, 1997. PlayStation game.