



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Swansea
College of Art
Founded 1853

BA/MARTS COMPUTER GAMES DESIGN

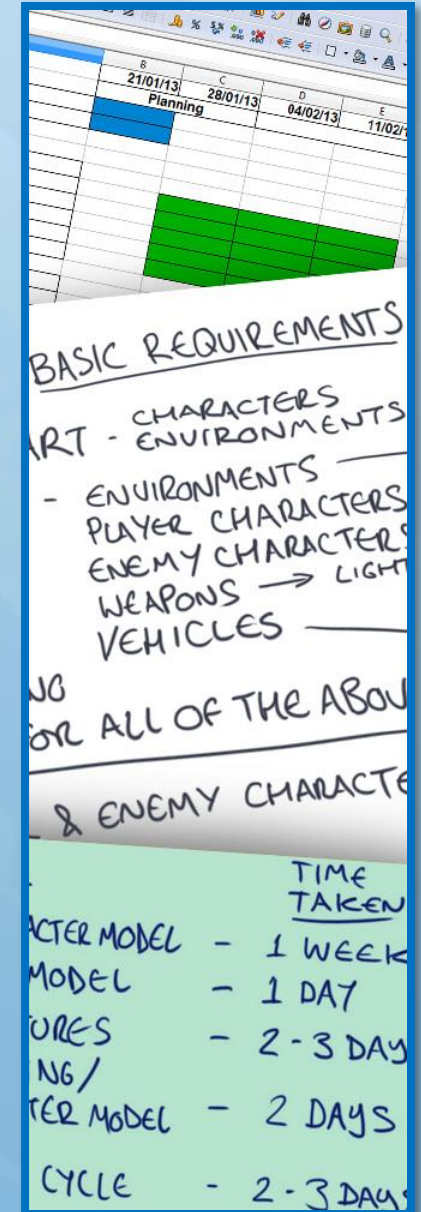
CREATIVE PRACTICE 3

PLANNING A DEVELOPMENT PROJECT

RICH MORGAN

Planning a game development project

- Initial Planning
- Feature List
- Breaking down tasks
- Assigning Tasks
- Dependencies
- Scheduling
- What to do with the data
- Milestones



Initial planning

The design framework laid at the beginning of the project will determine the course for the entire project's development.

It is important to remember at this step that nothing is set in stone, but you should attempt to be as accurate as possible.

Feature List

First, analyze the design document and determine the game's list of requirements.

Then, split out each of these into a list of features that will be necessary to implement the requirement.

Feature List

ALIENS vs. BRO'S

BASIC REQUIREMENTS:

- CONCEPT ART - CHARACTERS
ENVIRONMENTS
- 3D MODELS - ENVIRONMENTS → BUILDINGS
PROPS
ROCKS
TREES
PLAYER CHARACTERS
ENEMY CHARACTERS
WEAPONS → LIGHT/MED/HEAVY
VEHICLES

* UV UNWRAPPING
TEXTURES FOR ALL OF THE ABOVE → AIR
SEA
LAND

- RIG PLAYER & ENEMY CHARACTERS

*ANIMATION

WALK CYCLE
IDLE

Breaking down the tasks

Take each feature and work with your leads in each area (art, animation, programming, sound, level design, etc) to break it down into tasks.

These tasks will be performed by each department, group or person, depending on the size of your team.

ART

CONCEPTS
TEXTURES
HUD DESIGN

LEVEL DESIGN

WHITE BOX ENVIRONMENT
TEST SCALING/DESIGN
IMPORT ASSETS &
SET DRESSING

ANIMATION

RIG CHARACTER
RIG NPC/ENEMIES
CREATE WALK CYCLE
CREATE DEATH ANIM
CREATE WEAPON FIRING

SOUND

FOLEY
MUSIC
EFFECTS
VOICE ACTING

PROGRAMMING

WRITE SCRIPTS FOR:
VEHICLE CLASS
PLAYER CLASS
ENEMIES

Breaking down the tasks

You will typically need to assign roles to cover each of the following areas of your project:

- Design (Game development and planning)
- Art and Animation (Concepts, assets, etc.)
- Technical (Engine Implementation)
- Audio*

* This is not as important as the other areas on the BA/MArts CCGD Course – collaboration with Music Tech students may be the best course of action!

ART

CONCEPTS
TEXTURES
HUD DESIGN

LEVEL DESIGN

WHITE BOX ENVIRONMENT
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WRITE SCRIPTS FOR:
VEHICLE CLASS
PLAYER CLASS
ENEMIES

Assigning tasks

The lead of each group should then create initial estimates for time required to complete each task, and then assign them to team members.

Once this is complete, they should work with the team to ensure that these estimates are correct and reasonable.

Assigning tasks

Do not assume that an initial estimation will be adequate to complete the task – check with team members to find out if what is being asked is reasonable!

<u>TASK</u>	<u>TIME TAKEN</u>
COMPLETE CHARACTER MODEL	1 DAY
UV UNWRAP MODEL	
COMPLETE TEXTURES	
WEIGHT PAINTING/ RIG CHARACTER MODEL	
CREATE WALK CYCLE	
IMPORT INTO GAME ENGINE	

Assigning tasks

Do not assume that an initial estimation will be adequate to complete the task – check with team members to find out if what is being asked is reasonable!

<u>TASK</u>	<u>TIME TAKEN</u>
COMPLETE CHARACTER MODEL	- 1 WEEK
UV UNWRAP MODEL	- 1 DAY
COMPLETE TEXTURES	- 2 - 3 DAYS
WEIGHT PAINTING/ RIG CHARACTER MODEL	- 2 DAYS
CREATE WALK CYCLE	- 2 - 3 DAYS
IMPORT INTO GAME ENGINE	- 1 DAY

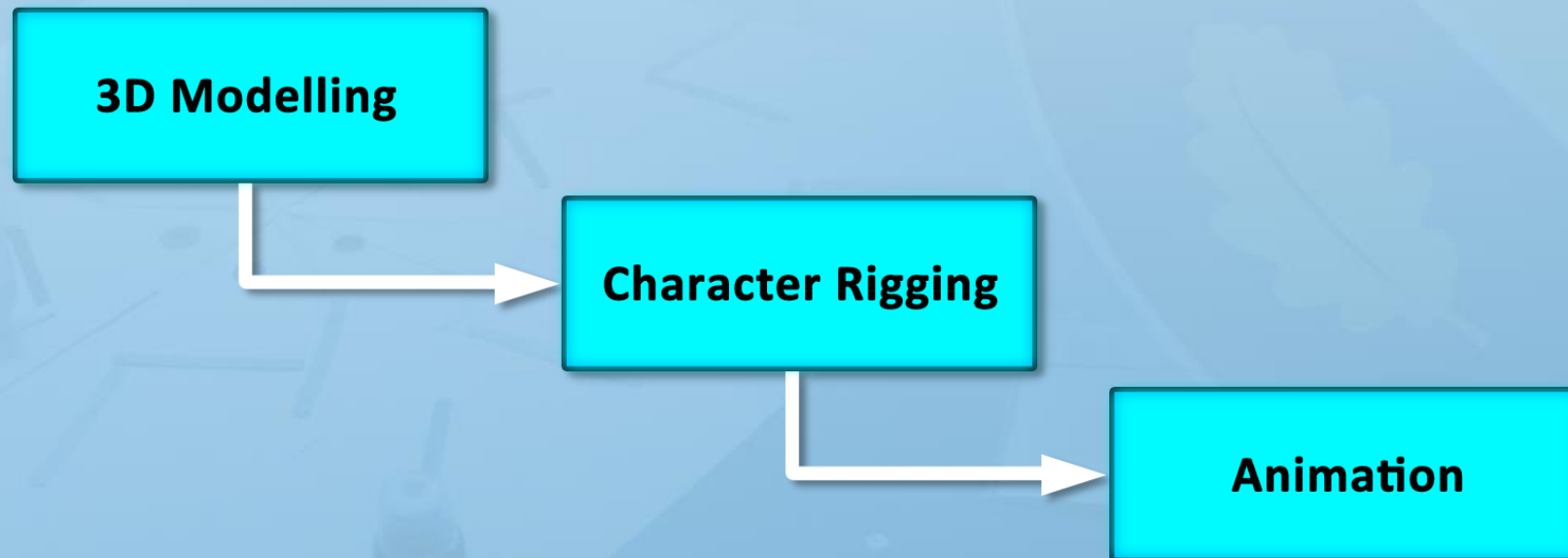
Dependencies

These initial task estimates must then be placed into a software package such as Excel by the project manager to help with efficient management.

Once the tasks are added, the project manager and development team must look at the tasks and match dependencies between team members to ensure that the timing of creating a feature does not result in conflicts or impossible relationships.

Dependencies

Impossible relationships prevent tasks from being completed within necessary timeframes and will have a significant impact on project development.



Dependencies

For example, in order to fully implement a 3D character in a game, you would not schedule character animation before the models are completed and rigged, making the task impossible to complete.



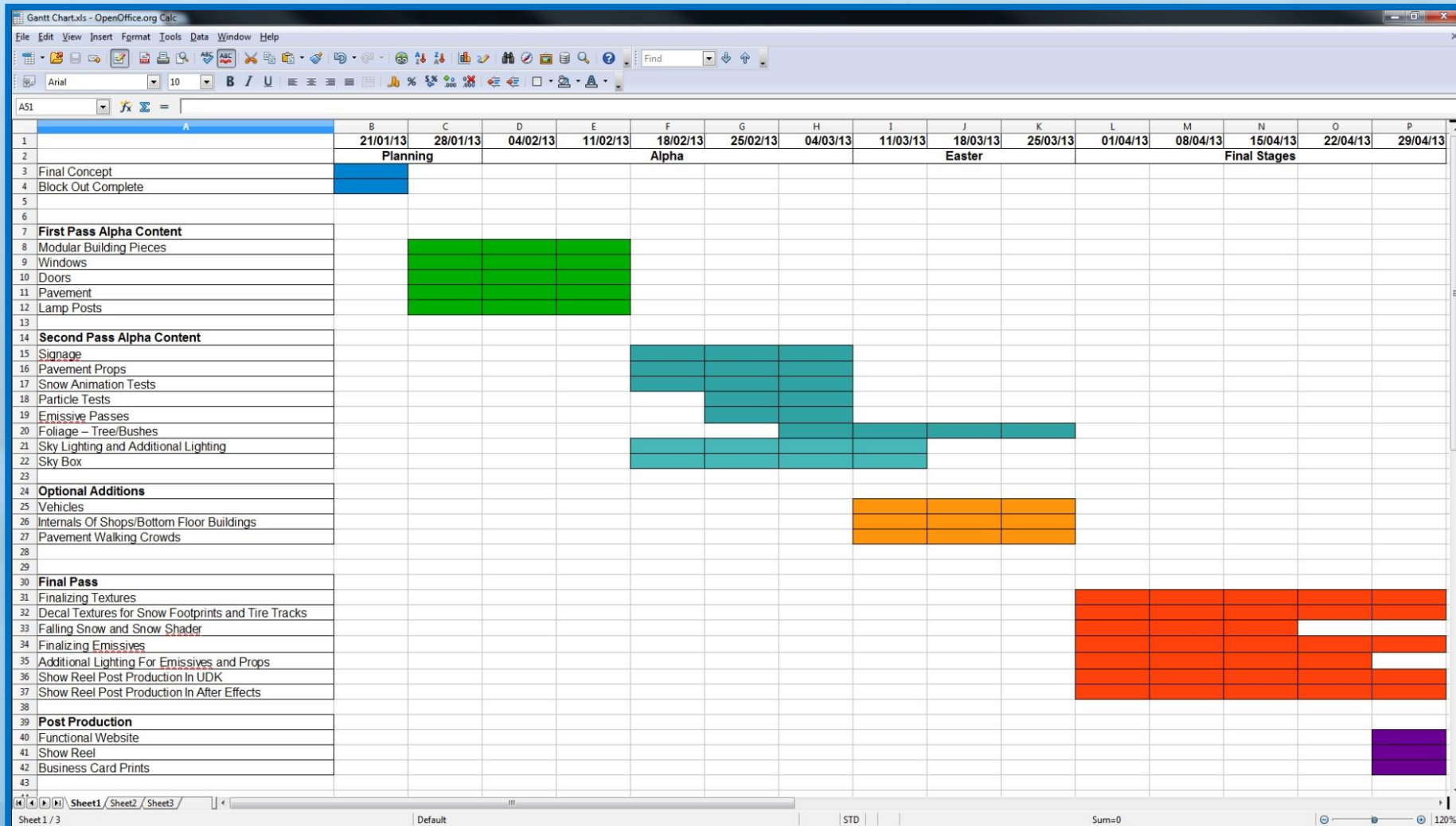
Scheduling

Scheduling tasks is where things get particularly complicated, but this also highlights why the need to do project management exists in the first place.

The project manager will have to assign an estimated start and completion date for each task in the project, taking dependencies into consideration.

Effective scheduling can be achieved with the use of Gantt charts that act as a convenient visual reference for the development team.

Scheduling - Gantt Chart (example)



What to do with the data

By looking at this project plan, you have the ability to determine if a feature is going to be costly in time (and in the games industry, money).

A decision can then be made about whether the feature is necessary for the game to succeed.

What to do with the data

You may decide that pushing a feature to an update - or even a sequel - makes more sense than trying to develop it at the risk of missing deadlines and disrupting general project development.

Additionally, by tracking how long you've worked on a feature you can determine if it is time to either try a new technique to solve the problem, or cut the feature for the good of the project.

Milestones

A frequent use of project planning involves the creation of milestones.

Milestones indicate where certain elements of functionality, a time period of working on the project, or percentage of tasks have been completed.

For internal project tracking, milestones are useful for planning purposes, and giving the team specific goals to aim for.

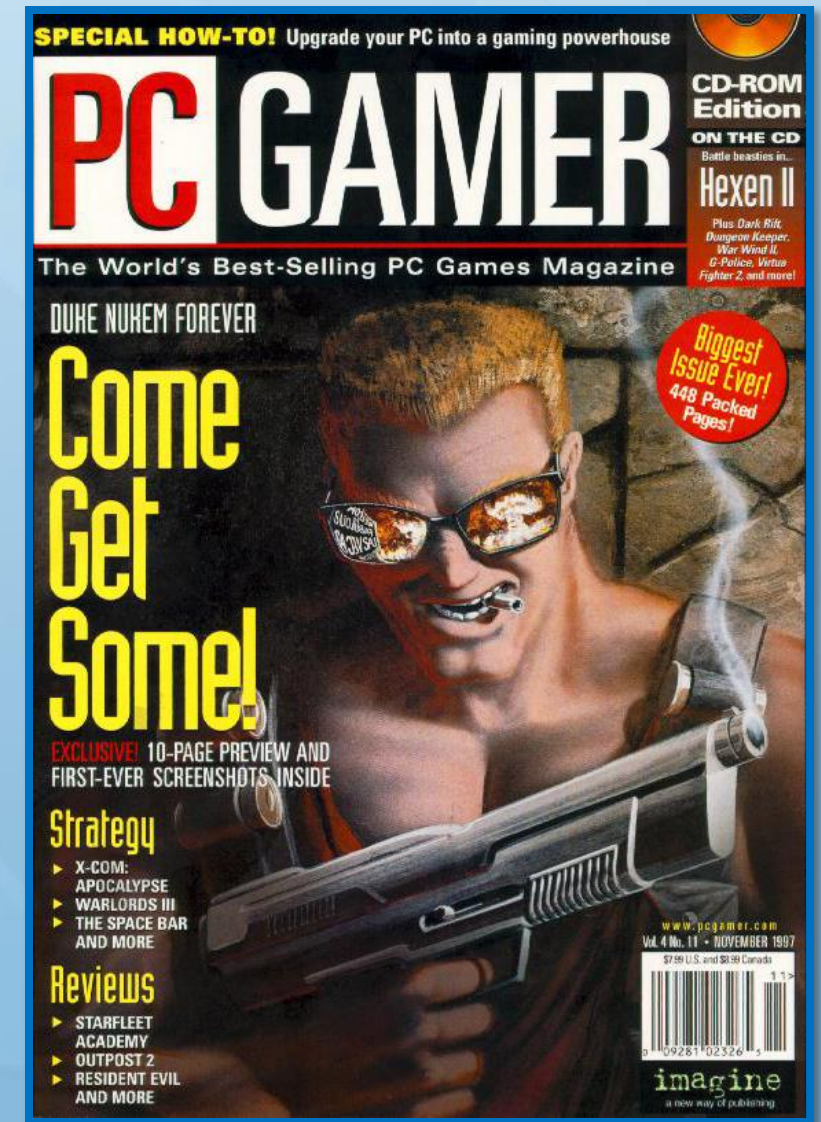
Milestones

When working with a publisher, project milestones frequently determine how and when the developing studio is paid for their work.

Summary

Project planning is regarded by many as a nuisance – that time devoted to this area could be better spent on actual development.

However, developers who pre-plan projects and hit their milestones are the ones who succeed in the long run.



Discussion

- How do you think planning will be of benefit to the team?
- How do you think planning will be of benefit to the project?
- What are possible negative impacts and consequences of poor planning for game development?

Exercise

- In groups:

Use your project to begin construction of a project plan.

- Break down the game into roles and tasks you think would be necessary in order to complete the project.

Bibliography

Schultz, W. (n.d.) *How to Plan a Game Development Project* [online]

Available at:

<http://gameindustry.about.com/od/game-development/a/How-To-Plan-A-Game-Development-Project.htm>

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