

F# Project - Sound Synthesis

Project Brief

| | | | |
|------------------------|-------------------|-------------------------|-----------------|
| Client: | Algosup | Project Manager: | Karine VINETTE |
| Project Name: | Sound synthesizer | Stream: | Primary Stream |
| Client Contact: | Name Email | Prepared By: | Desvaux Brendon |
| Ref | XX-YYYY | Date Produced: | 16/11/2021 |

Project Description

The aim of this project is to create a sound synthesizer that can be used to create programmable music. The ultimate aim of this project is to be able to play music from code.

Background

This project was inspired by Sonic Pi (<https://sonic-pi.net/>) and other live coding music packages.

Project Objectives

| Business Benefit | Description |
|--------------------------|--|
| <i>Easy to use</i> | <i>The customers can program sounds easily</i> |
| <i>Easy to visualise</i> | <i>Only commands with documentation</i> |
| | |

Scope

| | |
|---------------------|---|
| In Scope | <i>Unit test, waves creation, savings, readings from the disk and from code, MP3 compression, FSX</i> |
| Out of Scope | <i>Language choice, night mode</i> |

| Project Team | | |
|--------------|--|---|
| Role | Name | Required Skills |
| Team manager | Karine Vinette | Communication, Organisation, problem solving, décision making for team... |
| Tech leader | Brendon Desvaux | Communication, Organisation, problem solving, décision making for technologies... |
| Devs | Malo Achimbaud/ Martin Lorut-Gauriat/ Nicolas Mida/ Alexandre Bobis | F#/Fable |

| Deliverables | | | | |
|--------------|---|------------|--------------------|-------------------|
| Ref. | Description | Dependency | Required By Date | Responsible Party |
| 1 | Create and Play a Basic Note | Etape 1 | 14 January 2022 | Devs |
| 2 | Basic Filters, Envelopes, and Chords | Etape 2 | 21 January 2022 | Devs |
| 3 | Frequency Analysis and Advanced filters | Etape 3 | 28 January 2022... | Devs |
| 4 | MP3 Compression | Etape 4 | 11 February 2022 | Devs |
| 5 | Creating "How to" documentation | Etape 4 | 11 February 2022 | Devs/Tech leader |

| Milestones | | | | |
|------------|------------------|-------|-------------------|----------|
| Re f. | Description | Date | Responsible Party | Duration |
| 1 | Design thinking | 10/01 | Management team | 3 days |
| 3 | Waveforms | 10/01 | Dev team | 2 days |
| 4 | Save/read | 11/01 | Dev Team | 2 days |
| 5 | Filters | 21/01 | Dev Team | 5 days |
| 6 | Advanced filters | 28/01 | Dev Team | 5 days |

| Milestones | | | | |
|------------|------------------------|-------|-----------------|---------|
| 7 | MP3 compression | 04/02 | Dev Team | 5 jours |
| 8 | MP3 filters | 11/02 | Dev Team | 3 jours |
| 9 | Tests | 11/02 | Dev Team | 2 jours |
| 10 | "How to" documentation | 11/02 | Management team | 3 jours |

| Project Stakeholders | |
|-------------------------|-------------------------|
| Key Stakeholders (name) | Description of interest |
| Algosup | ... |
| Robert Pickering | ... |
| Clients | ... |

| Risks | | | | |
|----------|-----------------------------|---------------------------|--------|--|
| Ref. | Description | Likelihood (=Probability) | Impact | Mitigation Strategy |
| 1 | MP3 compression | High | Medium | |
| 3 | Cross platform problems | Low | Medium | Only work on windows Find new libraries |
| 4 | Fable not usefull | Medium | High | Change to a non Fable project |
| 5 | Run out Time —> Scope Creep | Medium | Medium | Reduce Scope / Project Management |
| 6 | Low ressources online | Low | Medium | Use books |

| Budget | | | |
|----------|-------------|-------------------------------|------------------|
| Ref | Description | Resource, Hardware or License | Amount (ex. GST) |
| 1 | | ... | ... |
| 2 | | ... | ... |
| 3 | | ... | ... |
| 4 | | ... | ... |

Approvals**Document Written by WLIS :**

| Name | Title | Signature | Date | Comments |
|-----------------------|-----------------|-----------|------|----------|
| Karine Vinette | Project Manager | | | |

Document Reviewed by WLIS:

| Name | Title | Signature | Date | Comments |
|------|-----------------|-----------|------|----------|
| | General Manager | | | |

Project Brief Approved by Client:

| Name | Title | Signature | Date | Comments |
|------|-------|-----------|------|----------|
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< Signed document should be scanned and saved in the project folder >