Park Station Manufacturing

# Software Design Template

Version 1.0

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## Document Revision History

| Version | Date | Author | Comments |
| --- | --- | --- | --- |
| 1.0 | 01/14/2025 | Daniel Loranger | Initial Revision |

## Executive Summary

This manufacturing company wants to start producing video clips on how customers can use their products for training and educational purposes. They would like to use high-quality video editing software that is only available for Mac, because Macs have better desktop publishing capabilities. The challenge is that the company uses Windows exclusively at this time.

## 

## Requirements

* Utilize the MAC based video editing software
* Enable the company to produce and distribute training and educational videos
* Output to be intuitive to Windows users
* Distribution platform must accept a high-quality video format that is cross-platform compatible.

## Design Constraints

* Desired video editing software is exclusively MAC
* The established user-base is exclusively Windows
* Videos need to be as universal as possible for maximum compatibility with customer devices
* Video editing user must be trained or familiar with the video editing suite of tools.
* Video editing tool cannot be changed, must work with existing video input and output formats
* Tool-set development must be capable of running on a Windows-based OS machine that hosts a virtualized MAC environment.

## Recommended Architectural Model

The recommended architectural model is a Client-Server model, which disconnects the user from the editing tools thru a network connection allowing them to use existing windows infrastructure.

## Rationale

The design requirements specify the MAC based video editing software must be used. However, the software is only available on a MAC OS, which is currently not supported on the company’s network / IT infrastructure. To support this work-flow, it is proposed to develop a solution that can be run in a virtualized MAC environment such as VMWARE or similar virtual hardware setup. This will allow the IT infrastructure to remain purely windows based, while also allowing a user familiar with both operating systems to utilize the desired video editing software. *This prevents a major disruption to the IT department.*

Given the video editor <new person?> is unlikely to be both a producer and a consumer of the video files, it is important that the solution output a video format that is cross platform compatible, ideally including mobile devices for maximum customer accessibility. This will ensure that it can be edited and maintained in the MAC native environment for editing purposes, while also being a format that windows/mobile users can work with. Modern Internet compatible file formats are strongly encouraged as many platforms exist for video hosting such as YouTube that can also transcode for alternate resolutions, add subtitles, etc.

For deployment safety, it is recommended the final solution be instantiated on a virtual server that is routinely backed up. This ensures that should the computer station hosting the editing environment is not a single point of failure in the infrastructure. This virtualization approach also allows a second station to be cloned from the first and up and running quickly if a second user needs to utilize the tools, or they can be shared across time-zones for international development efforts.