XMDV Teleshopping

Snapshot 2

William Greenwood

20th March 2025

Contents

List of Figures

Note: *Digital version available at* https://data.ozva.co.uk/snapshot2.pdf.

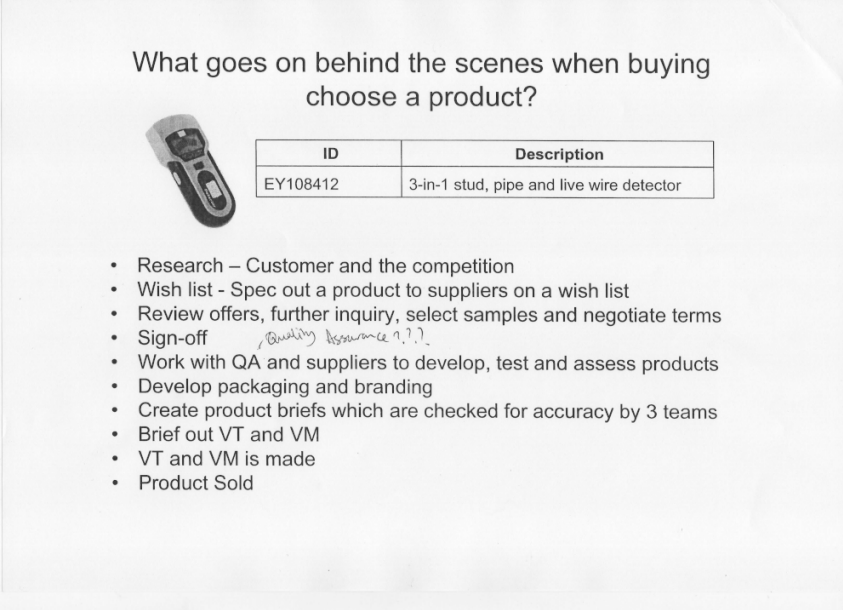

Figure 1: What goes into a product line.

1 Introduction and update

Welcome to snapshot 2, for XMDV Teleshopping. The project is on track and all is well, but no time to look at the stars this time.

Recently on the 7th we did our full studio practice. It went amazingly and everyone did there jobs excellently. We where on schedule for the most part and where able to practice some of the more important sections without the Anchor present.

From that point we started selling and didn't stop until we had to strike set. The Anchor was amazing and we all learned lots about how our workflows could be improved (as well as to give David a bottle of water under the desk for in-between products.)

2 Research

After the initial idea was pitched in the first few final year project sessions, I decided to look into if I could find any academic research on regarding teleshopping. As an industry, it's not in a rush to document itself. Sioux told me she doesn't put it on her CV and no one else does, "Its embarrassing" she tells me, and I can find no company documents or industry best practices.

Thankfully she was able to pass on the horror stories through word of mouth and a few key peices of paperwork, examined like a dig site.

2.1 Primary research

I have been generously given some industry documents: on-boarding material, spreadsheets etc. All has informed my own paperwork, especially the item manifests, in the way that the producer and presenter are explicitly aware of the purchase price, as well as the gallery price[1].

I made the decision to work in percentage over raw cost for the GFX control system, allowing easier dropping of the price without the GFX operators all using calculators.

It was also interesting to see that in many cases, the company make a loss on certain products where necessary. This is because they pay the suppliers 3 or so months after the products arrive. Selling within this window allows them more stability with cash on-hand and failing to sell an amount of product means that that value is stored in a warehouse somewhere.

I do want to mirror Teleshopping, it both look and in production, so getting my head around how it all worked behind the scenes helped massively.

[1] This is the price set by finance as the minimum ideal price to end on.

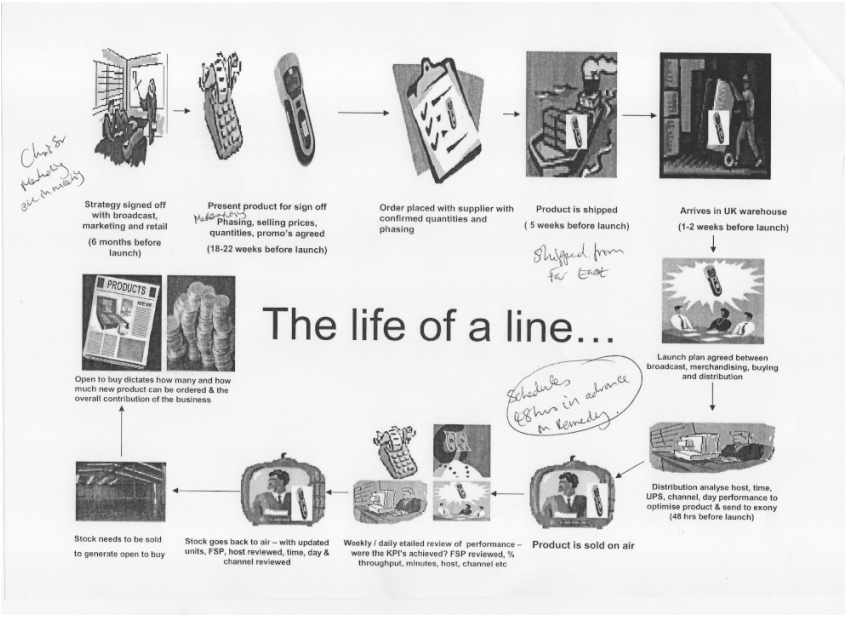

Figure 2: The lifecycle of a line.

2.2 Secondary research

Some notes on my inspirations, influences and academic research.

2.2.1 Notes on similar projects

[sic] Blaseball Blaseball was an experience. It is something that I'm not sure has ever happened before and may never happen again. It was perfect storm of engagement so live that it can never be relived. It fundamentally changed the way I think about art.

It was a website where there where constant simulated Baseball games in simple text with no images or audio. Upon joining the site you could support a team[2], voting to inform their decisions, but overall you where simply an observer.

For some reason, most likely influenced by the pandemic, it collected a relatively small (still quite large) audience of incredibly obsessive and creative people. So to describe it as a website is totally accurate, but it was also 2 bands, a musical, a radio station, a research organisation who published regular papers on the game and a collection of Twitter accounts.

The Commissioner of Blaseball (Fictional Parker MacMillan IIIII) regularly tweeted out when the site broke or otherwise to foreshadow the terrible events of the season. All in such a tastily laconic way it was difficult to stop watching. There was also a huge momentum in the Discord, with thousands of people all watching and coordinating at once.

I remember sitting with 2 laptops and my phone in front of me. The discord on one, the website on the other and the Commissioners Twitter up on my phone, watching simple text flick by with barely containable excitement.

The publishers also regularly released the "Blaseball Round-up", a mock sports show, on YouTube. This is the biggest influence of XMDV Teleshopping[3].

It is also my proof that there is an audience for this strange place between satire, esotericism and horror. It is hopefully some strand of this audience I hope to capture.

In 2023, Blaseball ended for good, the company stopping its production due to the difficulty of developing their engine in real-time. Because it was so closely managed, you cant go back. The fans have moved on (or tried to) and there is a gap in the market again.

TLDR: You had to be there, but it was great.

XMDV Radio In 2023, After my second session in the radio studio, me and Jack Christian-Sims (my current director) made a radio show called XMDV Radio. It was a esoteric mash up of everything we where working on. It's the namesake of Teleshopping and inspired, at the time I came up with the idea, my thinking. This is why the very first person I screen-tested was Jack.

[2] Go Fridays! Rest in violence!
[3] https://youtu.be/9NgdpzVbvrM

Its difficult to put into words the feel of the whole thing, and I don't think listening to the finished product really gets it across[4]. It was a really unique feeling to produce and record with Jack, and its something I've been pursuing since.

2.2.2 Notes on teleshopping

These feature notes where originally made on TJC in 2022, since then I've added to them from QVC and Ideal World.

Camera Notes There is usually one moving camera. The host may sometimes walk around the set for large items and a camera is needed to follow them as they move around, as well as for close-ups at the request of the host. For small products, a separate static close-up of the host's hands can be cut to. Usually used for jewellery. There is also always some cutaway, a gentle montage of the product, or VT.

Depending on the station, the crew is sparse, especially on camera. In the setup above, only one camera-person is required.

Device Notes

Unplanned price drops "This wasn't meant to be on our show", Talking to the producer over comms or off-screen to "check" if a price drop is *too far*, "That was a bit naughty, I hope we don't get in trouble"

Citing improvable statistics "Never seen something like this ...", "Don't tend to"

Linking the purchase to something good "[sic] Every time you make a purchase, I get a meal"

Scarcity "Which one is most popular?", "Not many left [because the mines are being shut]", "We've got callers holding already", "I'm going to give you a chance now to buy before we price drop to get ahead of the crowds"

Far too high to far too low Shock value

GFX Notes

Product information Top left of screen. Contains item number (for use when selecting the product over the phone. Also for internal use[5]), item rating, short item description and item variants (and those variants item code extensions).

Pricing, stock and remaining Bottom left of screen, sometimes connected to the bottom of "Product information". Contains quantity remaining, amount already sold, the current sale price, the current multi-pay options[6] and the cost of P&P.

Contact information Bottom, sometimes on a "crawler". Contains "congratulation" messages to recent buyers, names of people currently on hold, messages sent into the studio by viewers, recent announcements, upcoming announcements, information on how to order, phone number, website and the timer.

Upcoming programmes Bottom right of screen. Contains upcoming deals or shows, sometimes also contains the phone number[7].

There is also a particular rhythm to how the GFX are unveiled. For the most part this is consistent across products, shows and stations.

When the product is first presented, there is almost no information about it on screen (this is the "Product information" box above, but there is also no phone number and the lines are not yet "open"). The host then introduces it and tells the viewers just how *good* it is. This goes on for a while before the price is finally revealed. This initial price is massively inflated from the real price of the product. The host continues to sell, mentioning how they've got us (the viewer) an amazing deal.

This is when the first price drop happens.

Then the phone lines finally open and the product begins to sell.

At this point the host can continue dropping the price as far they feel is necessary to sell as much of the product as is practical[8].

As soon as the phone lines are opened, the number is to be kept on screen at all times, over cutaways or promo montages.

[4] https://www.youtube.com/watch?v=ZTTpdLE2PNo

[5] Used to keep track of products on paperwork. Number is sometimes taken from the product itself (item code, batch number, etc).

[6] Sometimes called "Budget-pay" or "EZ Pay" (abbreviated to EZ on paperwork).

[7] Note that in my case, there is no phone number. The audience interacts via the Twitch integration.

[8] The host is aware of how much of the product is in stock, a preferred sell price, a lowest viable sell price and whether the product will make a later appearance. If the product is making a later appearance, the host may choose not to sell out.

2.2.3 Academic research

I was able to find one interesting paper regarding teleshopping, called "Neuroselling". It's fascinating research that uses EEG data alongside eye-tracking to work out the affect on certain "indexes" each graphical element has.

Metric	AWI		WPI		BATR		BAR	
	r	p	r	p	r	p	r	p
Time spent on logo	0.404	0.010	0.420	0.026	-0.342	0.064	-0.309	0.096
Time spent on discount	0.039	0.839	0.605	<0.001	-0.035	0.847	-0.093	0.607
Time spent on price	-0.352	0.078	0.409	0.028	0.112	0.562	0.055	0.776

Table 2: Pearson correlations matrix between eye-tracker data and EEG metrics.

AWI Approach Withdrawal Index is the difference of α powers between the right and left prefrontal channels. Positive AWI is correlated to "cognitive approach" to the stimuli over "cognitive withdrawal".

WPI Willingness to Pay Index is the γ difference between the left and right pre-frontal channels. Its correlated (as the name says) with the participants "Willingness to pay".

BATR Has been proposed as a measure of cognitive engagement[9].

BAR Has been proposed as a measure of cognitive "arousal".

As you can see, the only measurements that are significant ($p < 0.05$) are under the WPI metric, as well as the AWI correlating with time spent on the logo. All these measurement seem intuitive, with more time spent on any of the measured elements increasing the Willingness to pay.

Something of note is the time spent on the logos affect on BATR cognitive engagement. Despite being insignificant by a small margin, looking at the logo for long periods of time actually *decreased* engagement.

The implications of the paper are small in my case, but the study is interesting. Based of the paper I did add a further 3 discount badges, but whether that actually increases the WPI is outside the scope of this Snapshot.

2.3 Contributor research

At the time of the first snapshot, the Anchor was not yet confirmed, although I had done one screen-test. This was with Jack Christian-Sims, who I decided was not good enough. He would be far more useful as my visual director in the gallery. He turned out to perfectly fit this role despite no studio experience.

I later picked David Smith for a prospective screen test[10] and he turned out to be the perfect pick. This was only cemented in the practice session where he continuously performed far better than I could every have imagined.

2.4 Location research

As mentioned regarding the practice sessions (ref), I have been thinking about where to set teleshopping for a long time, although the University's TV studios have always been the most desirable. There is little to write about this location "research" because most of it has happened during both TV Studio modules, being able to try out roles and get comfortable.

The TV Studio itself (studio A) is already almost fully outfitted for teleshopping and very little has been required from me to get it set-up correctly. There are a couple places where I've had some special requirements though.

My own GFX system is far removed from the user-friendly and production focused one already in the gallery, although both are HTML based. Getting this setup and working was one of the key goals of the practice session on the 7th, and I had arranged for the broadcast engineer (Ash) to help out with getting it wired into the desk. After some troubleshooting (while I was on the floor) this was all setup and functional, there where no further issues and configuration was saved or otherwise documented to make it easier for next time.

The layout of personnel in the gallery was also of note. I imagined it would be easiest to arrange people during the practice session while the floor where setting up. The problem is that there are 3 more roles in the gallery, each without a station. I considered that we might be able to put a table in the sound room, but it would have impeded communication. Ash suggested that we might be able to move the whole gallery desk forward and have them on the other side of it. I'm currently trying to get hold of a floor-plan of the gallery from the building manager to better lay this out before the shoot day.

[9] The way this is more complicated and has been removed for "brevity".

[10] The screen-test is available here: https://data.ozva.co.uk/screensmall.mp4

During a studio show last trimester, I was told by one of the technicians that the studio had bought loads of tablets in an attempt to go paperless, but that the people in charge of running shows where being slow to take them on. I liked the idea of being mostly paperless (although in honesty, without a camera script required by each member of the cast, I don't actually require too much paperwork). I borrowed one of the tablets from the studio to test how it integrated with the GFX system, which was a success. I plan to use these in the latter practice to see how the crew works with them. I am prepared to go back to using all-paper documentation should the crew decide it would be best for them (for ease or accessibility reasons).

2.5 Audio specific research

I underwent a surprisingly large amount of audio research, which then turned to dust in my hands.

2.5.1 Generative

Initially, I sat down with Joe Fowler, audio artist, to talk through the ideas that I was having and figure out what might work.

We where both on the same page about the most corporate music that I could get my hands on. I had recently been playing around with training my own AI models[11] because of the distortions that you can get from it. The effect is unlike any other because it is not subtractive, its not additive, it fundamentally affects the input sound and, more importantly, it gets the maths wrong sometimes.

I managed to get hold of around 52 hours of Seeburg 1000 background music[12] and began to train a WaveGlow model[13]. This took a week of on-off training on a RTX 3090. I did manage to get some great audio out of this system, particularly in moments where it hallucinated loud tones out of thin-air, this would be used to support the "clock-tick" sound effects.

On the whole the experiment was unsuccessful and unnecessary and instead of training some magical model that could hallucinate me endless Muzak, I ended up training an unreliable WaveGlow model on strange training data. I believe that this could have been fixed by reducing the resolution of the spectrograms, thereby making the model have to make up more information to generate the audio, but as with all things "generative", It's never as good as you think it'll be.

I also realise that it was the complete wrong tone of music, and we should ideally be going for more modern stock corporate music.

I went back to Joe to talk about my findings, we talked about how it could be done reactively, how we could distort it in real-time. We talked about tape loop destruction[14],

and then I said

2.5.2 Hey what about CDs

Me and Rebecca sat cross-legged next to the DVD player in the lecture-hall I'd taken over for the teleshopping pre-shoot briefing, with a piece of 60 grit sandpaper between us. We where trying to get something interesting out of a CD I'd burned with 15 pieces of the most corporate music I could get my hands on. I had two copies, one clean and one that said "XMDV Fucked up" in marker on the front.

Joe and me both agreed that it would be an interesting experiment. He told me that because of the way the format worked, with error correction, If we messed it up too bad it would play fine and then not play at all. We did manage to get an intermittent skipping[15] and a strange-but-subtle digital crackle.

It was an interesting effect, and deserves more though, but will most likely be uses alongside other effects.

3 Pre-production

3.1 Production design

Most of the "set design" of teleshopping was done by me, in floor plans, in tone, in the clock. The products are notable in that they have actually been pursued and created by my set-design team (who should probably be called my product-design team).

[11] There are some ethical considerations here, but this is research and development and my models are not public so I'll forgo this.

[12] A company that supplied background music for industry and offices, similar to Muzak.

[13] This is a network that reinterprets Mel spectrograms as audio, used conventionally for text-to-speech systems. The plan was to feed it images it could miss-interpret and hallucinate Muzak. https://github.com/NVIDIA/waveglow

[14] https://www.youtube.com/watch?v=mjnAE5go9dI

[15] This was regular, about half a second of silence and then a second of music. It amuses me that a higher grit sandpaper was probably needed, perhaps 120 or 240.

3.1.1 Set design

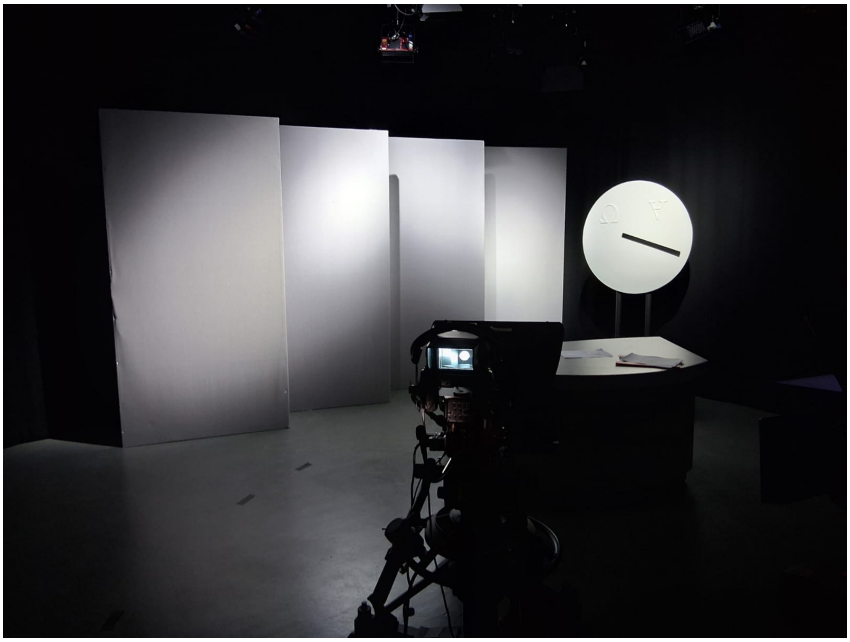

Figure 3: The set layout in the practice session on the 7th.

All the usual considerations where taken into account with the design of the set, including the size of the flats, the size of the desk, the position of the cyclorama and the position of the lighting grid (in relation to the layout of the set). There is also the position of THE THREAT to consider. A to-scale lighting grid and floor-plan was made and used by myself to come up with a prospective floor-plan, this was used by set-design and the director on the day of the practice to lay out the set. Which changed little, mostly the position of the cameras. This was because the floor-plan did not take into account which of the cameras was wide-angle and which had auto-cue screens.

There are still 2 more additional elements to finalize in terms of the set design. I am in change of both of these. The lazy-Susan and The Threat (for more on The Threat see Section 6.1).

Lazy-Susan A lazy-Susan is far simpler than the clock, but in many ways it is far more effort. With the clock, It's a textbook use-case of a stepper motor and Raspberry Pi. Complicated only in such a predictable way that you can't really fail as long as you know what your doing: Because there's only one way to do that. With the lazy-Susan though, is simply a motor spinning a wheel, and there are so many ways to do this that its difficult to find the most effective one.

Motors generally don't spin that slow, so gearing of some kind would be required, I have multiple motors laying around, but all are either too powerful or too weak. Machining custom gears or belt drives is a waste of time for something so simple, so would have to be bought off the shelf. Considering the required weight limits and spinning speed is difficult to gauge and calculate.

It is very possible that a modified record player would be the best path, but this is weight limit dependant, record players only being designed for a few grams of weight, albeit a wooden turntable along with a product. Another option would be to purchase a geared motor off the shelf, but this is time-consuming and expensive and should be left till I can fully rule out a record player.

THE THREAT The plan is to use a standard 8" by 4" to make the shape of The Threat. I imagine the actual shape of the thing will be remarkable simple or more like automatic drawing. Ideally I envision a perfect black shape, similar to that of Vantablack. It is not viable to get large amounts of specialist pure black paint, but other alternatives are available.

I learned from a hobby astronomy forum that paining with chalkboard paint (a very matte black) and then coating the surface with sand or course sawdust creates a surface that absorbs light effectively[16]. I have secured the transport for the 8x4 with a member of the set design team and it should be ready with plenty of time before the final shoot. As mentioned in Section 6.1, The Threat will not be revealed until the final shoot.

[16]They use this on the insides of home-made telescopes, where the sides of the telescope tube should absorb as little light as possible.

Note: The Doomsday clock The Doomsday clock has turned our far more beautifully than I predicted, but there are one or two things I'm not happy with. First of all, It was totally reliable in the practice session, I found this surprising. It has in the past failed to work for a reason that I could not work out, I suspect something to do with the network. If there is a problem that has gone undiagnosed, I expect it to become apparent in the practice sessions, where we will be using the clock.

There is also the problem of the jerky motion, which I am not happy with. Although it looked fine in the studio, it was on a small screen and I was running around. This would be solved by a gearbox in addition to the motor, which can be bought for £20-40. I am currently weighing up the options and will discuss with the director.

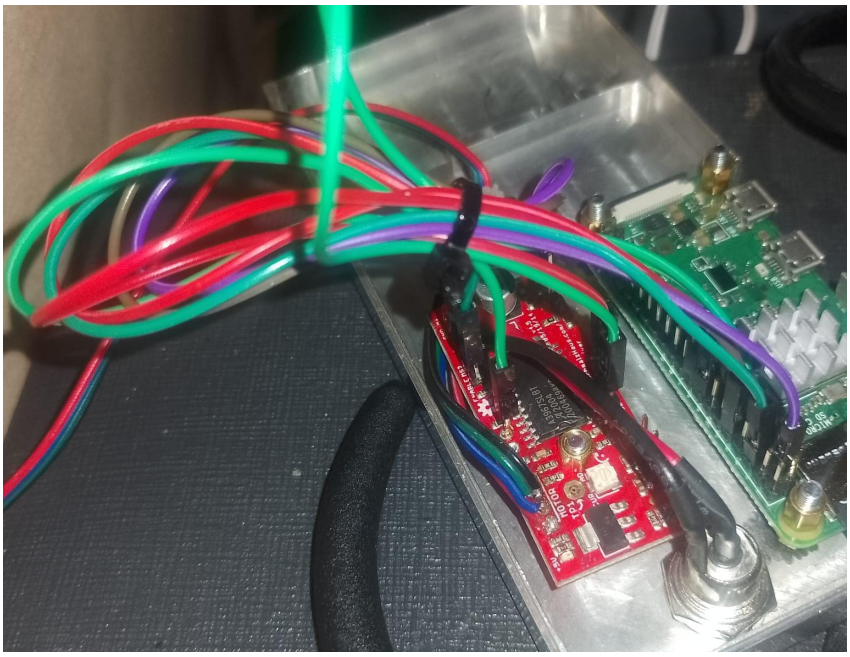

Figure 4: The insides of the Doomsday clock.

3.1.2 Product design

The idea generation and the product design for XMDV has so far been the responsibility of myself and the set-design team. The team are all amazing and talented people.

There have been moments where one of them has showed me what they've made and It has worried me slightly that they don't quite understand the vibe here. Although this could very easily be my fear of not being in control of everything.

I'm happy to proved my notes along with this document on each different product, and will provide the current working item manifest (note that it is not every product, just the ones that are cleared for the Anchor to know about for the practice sessions).

In terms of trying to communicate this "vibe", we have a shared Pintrest board[17] and I have been organising group production sessions where I can give guidance or direction.

In terms of materials, many of the products have most of their "design" in the packaging. When the item list begins to grow and some designs are finalized, I plan to talk to the on-campus Ricoch print center about getting the designs on the appropriate material.

[17] https://pin.it/6JrhfPm4v

4 Production management and paperwork

Figure 5: Practice session on the 7th.

4.1 Risk assessments, Compliance and Consent

Risk assessments for each of the practice sessions as well as the final shoot are now approved and supplied with this document.

There where fewer considerations than I though thankfully, and the only special-case was the mention of sharps for the final shoot.

Ethical compliance in the form of a student declaration of block approval is provided alongside this document. A contributor consent form is signed and with the contributor, I plan on collecting and scanning it on the first lecture-hall practice session (30th March 2025).

A blank contributor consent form is included with this document for consideration because of certain information added not present in the one included in snapshot 1. In-particular, the stressed mention that one can back out at any time and that this has been arranged with the producer appropriately. I also added mention of the acknowledgement that things will happen that the contributor is not aware of.

PTO FOR PRODUCTION SCHEDULE.

4.2 Production schedule

I have set XMDV related items in red and soft goals in blue.

Week 10		
Monday	17/03/25	
Tuesday	18/03/25	
Wednesday	19/03/25	
Thursday	20/03/25	Snapshot review & "Good Morning Live" rehersal (TVS) & Set-design meeting
Friday	21/03/25	"Craft It Up" final show (TVS)
Saturday	22/03/25	
Sunday	23/03/25	

Week 11		
Monday	24/03/25	"Auto Tune-in" Practice session (RS)
Tuesday	25/03/25	
Wednesday	26/03/25	THREAT built
Thursday	27/03/25	
Friday	28/03/25	"Good Morning Live" shoot (TVS)
Saturday	29/03/25	
Sunday	30/03/25	XMDV Practice Session 1

Easter (1/3)		
Monday	31/03/25	"Foxes Among Vines Int. Shoot" (film)
Tuesday	01/04/25	"Foxes Among Vines Int. Shoot" (film)
Wednesday	02/04/25	"Foxes Among Vines Int. Shoot" (film)
Thursday	03/04/25	
Friday	04/04/25	
Saturday	05/04/25	
Sunday	06/04/25	

Easter (2/3)		
Monday	07/04/25	Start essay, all products confimed & half finished
Tuesday	08/04/25	
Wednesday	09/04/25	Lazy-susan completed
Thursday	10/04/25	XMDV Practice Session 2
Friday	11/04/25	
Saturday	12/04/25	
Sunday	13/04/25	

Easter (3/3)		
Monday	14/04/25	Piano Boat recording session (R4)
Tuesday	15/04/25	
Wednesday	16/04/25	THREAT in position in the TV Studios
Thursday	17/04/25	XMDV Practice Session 3 (backup)
Friday	18/04/25	
Saturday	19/04/25	
Sunday	20/04/25	

Week 12		
Monday	21/04/25	Record all VT's, finishing touches to products & final commit to GFX system
Tuesday	22/04/25	
Wednesday	23/04/25	
Thursday	24/04/25	XMDV Final Shoot
Friday	25/04/25	
Saturday	26/04/25	
Sunday	27/04/25	

Week 13		
Monday	28/04/25	Utter Live 24/7
Tuesday	29/04/25	Deadline

4.3 Diversity

I am aware that with such a small team, representation figures may not necessarily reflective of a positive working environment for all, however, the team I've put together performs well under most metrics.

In the BBC's 2020-23 Diversity and inclusion plan, they define their new representation targets, these have been used below for comparison.

Measure	BBC Target	BBC Measured	XMDV Measured
Gender	48.3%	50%	53%
BAME	20%	15.1%	0%
Disability	12%	9.4%	20%
LGBTQ+	8%	8.8%	20%

Realistically this has no bearings on the project at this scale, but it is an interesting insight.

5 Technical notes

Figure 6: Practice session on the 7th.

5.1 Practice studio setup

The TV studios are large, expensive, spaces, where time is a premium. I was lucky enough to get 4 hours practice time alongside 4 hours of shoot time but felt this might not be enough. Sioux advised that I get my contributor early to start training them as much as possible on the particular rhythm of teleshopping, and I felt the best way to do that would be to anneal them in products over multiple sessions and many hours.

I have, of course, been thinking about this idea for a long long time, and my expectations have only grown. But there was a time when I was prepared to make up my own make-shift studio in some residential space or a lecture hall. Is is this second idea, the one of taking over a lecture hall with cameras that became the most appealing for the practice sessions.

It occurred to me that everything major piece of kit in the TV studio has some smaller analogue elsewhere within the university. The vision mixer has the ATEM Mini in the radio studios, the sound desk has the Rode-casters for podcasting and the cameras could be swapped out for any of the kit stores cameras able to output HDMI (all of them to my knowledge).

All of this kit I have been able to acquire[18] or book for the three practice sessions planned (see Section 5.4 for information on the third. See Section 4.2 for the scheduling of the sessions).

Currently the plan is to have a number of key personal, present at each session, and a number of non-essential personnel who may be present at one session or the other (for information on coordination, see Section 7.3).

5.2 Combined GFX system advancements

The first version of the GFX system was built on a strange foundation of what I knew at the time. With what I thought would be simply one client (the GFX front-end) and one admin (the GFX controller) I chose to use json files to store the data powering the system. I did look into proper database solutions, but this seemed like overkill at the time.

The choice for the method of altering these files was PHP, I had recently written a handful of small tools in it and it seemed simple and intuitive.

There were 4 json files and a plain-text file:

- `data.json` contained the majority of the data, including the current text for all elements, the product id, the pricing alterations...
- `clock.json` contained the clock's movement speed, movement function and current position (as well as the now-scrapped lighting control system).
- `sigil.json` contained static information to do with the phrases encoded within the sigils and the magic square used to generate them.
- `items.json` contained static information about the different items being sold. This would also later be used to automatically generate the item manifests.
- `note` (plain-text) was the producers note, passed onto the anchor via the auto-cue system.

With one client writing to the files and one reading from the files all at the same time, this was not safe at all. This was "fine" and I did not come across any issues in testing. However, on paper it is blatantly unsafe.

This was rectified using lock files, where before either reading or writing the client would check for a lock file then pause until it was removed. This, I imagined, might cause even more issues if one client was unable to finish the write and disconnected before removing the lock file. This would deadlock the system, requiring manual intervention, but this risk was accepted with the intention of a rewrite.

The PHP happened to, very predictably, get out of control fast. Each of the features that I added felt more and more like I was patching in lazy code, fixing all the obvious mistakes and then doing it all again. It was pointed out to me that the control panel would have to be cut up between multiple operators for ease of use. At this point, coming back to the system after around 5 months, I knew I'd need a better solution.

I had recently learned to use the Flask package with python to build both a blog and radio station for an indie label. I had also, for the same radio station, been forced to tackle SQLite due to the strangeness of WSGI web apps. This is exactly the tooling I needed.

The current setup is far safer. The calls to static files have been consolidated to two API calls, one static and one dynamic, where the static one is cached. This streamlined the PHP, from handling each data-point as an edge case, to simply passing on data from the SQLite database and doing some post processing for some server-side necessities. Not only is this more efficient and readable, but also allows me to add features with flexibility.

For example, if the client-side sends a key that's not recognised, it is simply filtered out without raising an exception, and on request, the server simply processes and serves each key in the database. This database is sanity checked on server start, and regenerated from the schema should any error be detected. Each post processing operation, if needed, is cued by the key of the data-point. For example, with the "end_timer_x" keys, if the client sends a key that starts with "end_", then the value sent is added to the current UNIX time before being committed to the database. In this way, a control-panel element can be added with some arbitrary "value" attribute which is the amount of time in seconds till that timer should stop.

The HTML pages have been reorganised and the JS refactored and streamlined for speed. Across the board, the footprint of the code has been massively reduced. Certain controls are also more intuitive. Previously many changes could be made at once and I imagined it might be easy to forget the previous state of the controls (the current state of the display) therefore I decided to mark the past state in red on each panel.

The timer panel is also more feature-rich, reading out the current time on each timer[19].

[18] The building's broadcast engineer was able to lend me a spare ATEM Mini for testing.

[19] Of note is that fact that this time calculation happens locally, dependant on the client and server clock, so it is imperative that all the times are synced correctly.

The aesthetics of the system where redesigned before the practice session with the advice of the set design team[20].

5.2.1 Studio session (7th)

The distribution of the controls across the control panel was of some note. Initially, I split up the controls based on purpose into the following categories for the practice session, It was my intention that things would need to be changed but it immediately became clear that only one of the operators had almost all of the responsibility. This was "pricing", which included current item, all 4 discounts, the amount of product sold, the currency and all the notes to the anchor.

This is what practice sessions are for though and it was good for the operators to get a chance to suggest alterations to the system.

Something that the narrative engineer suggested based off the practice sessions was an additional arbitrary text display, which could be typed in at the whim of the narrative team.

"Something loud, like it flashes on screen". This was implemented easily and quickly, similar to the auto-cue note, thanks to the new back-end design.

The Anchor also had some pointers about what features would be good in the auto-cue system. The current price (with discount applied), the current discount and potentially an indicator of the next product.

5.2.2 Document preparation

During the planned in-person lectures at the "start" of the project, I built into the GFX system the document preparation for the show, which automatically generated PDF, EPUB and MOBI versions of the call-sheet and item manifests. At this point I was under the impression that the TV studio had eReaders, not tablets. This was janky (as with the rest of the system) and worked well, but had no appeal to me.

During the rewrite, I learned more about the template rendering package used by Flask called Jinja2, and this would allow me to not just generate all the docs dynamically, but also (when used alongside LaTeX) allow me to make beautiful and useful documentation. This not only saves me the work of manually laying-out a call-sheet for all upcoming sessions (as well as item manifests and itineraries) but also means we are quicker to adapt should something have to change last minute.

Whether this actually saves me time over doing it by hand is up to the reader to decide and, although it was painless to integrate into the system, I suspect I mainly did it for "fun".

5.3 Training

It has occurred to me, through both the TV Studio modules, that in the run up to a run-though, there's not all that much to do for most, and far too much for some others. Particularly the gallery staff depend on the floor to be ready to go, or at least to be at their direction, as soon as they take their seats.

During the practice session, I attempted to keep everyone busy by having all hands on the floor for the setup, but a meek or otherwise unassertive director and set-design lead[21] left many of the crew standing on the sidelines offering empty critiques or though-food in an attempt to be helpful. At this point I sent all unnecessary people to their stations and we continued to be behind schedule but without all the eyes.

For this reason, during the further practice sessions, everyone has been assigned a pair, and during any dull spots they are to teach them their job and how to use their respective piece of equipment.

This is still to happen, and it may turn out mild, but my hope is that this not only keeps everyone focused and working, but also gives me the safety blanket that should we have a single absence per department, there is a replacement for them and we can continue with the show.

In addition to this, training is either inherent to how we're practicing, or has been arranged with the tech team where relevant (such as for the sound operator).

5.4 Response and backup planning

5.4.1 VT inserts

When the products are made, we plan to film a collection of short VT inserts of each product on the lazy-Susan. Possibly with some baked-in pans and fades. This would be used when either the product is too big to fit on the lazy-Susan (such as the paining of the moon), is too intensive to make 2 of (such as the human thigh) or when a safety option is needed. This can be designed to loop, and simply sit on one of the servers as a backup option for the director to call at a moments notice. It does necessitate appointing an engineer, but I was planning on this anyway so that is not a problem.

[20] Personally, I believe that the design and layout of the GFX system is, in a way, "set design" and we moved each panel and discount badge like furniture.

[21] I blame neither of them, it was their first and second times in the studio respectively, and they are excellent at their jobs otherwise.

5.4.2 System integrity

Part of the reason that I built the OzVa server in the first place was to have extreme and granular control over my files, as well as the stability and feature-richness of open-source, command line tools. I had, so far, had zero unplanned down-time until the 15th March 2025, when the server was unavailable for the whole working day. It is possible that this was a DNS problem, but it is also possible it was a problem with the hardware itself. Suspiciously, without any intervention, OzVa was back online the next morning.

For this reason, I have decided to put a backup of the entire GFX system on a server belonging to a friend, with an OzVa subdomain pointed towards it, able to be switched over should OzVa go down for any reason. This server is not as optimised as my own for real-time GFX with low latency, so performance may be subotimal, but this should not affect the viewing experience in some extreme way and would be the difference between bringing the stream back up in a matter of minutes, or failing to complete the project all-together (should we lose OzVa).

I am currently collecting some data on the expected latency difference between the two servers.

It goes without saying that the studio practice session (on the 7th March) went without a hitch graphically (at least with no undocumented errors[22])

6 Structure

6.1 Notes on the beginning and the end

This was conceived by myself and the directors late one meeting. This entire section is forbidden and not to be communicated to the anchor. The end of the stream follows the following structure.

1. The final item is brought up on the GFX, it is for an item called "Everything". Floor manager 1 begins to move all the locked off cameras backwards and off to the sides of the studio (Cameras 1, 3, 4 and 5). Floor manager 2 takes position behind the set for the appearance of The Threat. The gallery cuts all unnecessary communication with the Anchor, at the discretion of the producer.
2. The GFX overlay is faded out fully for the first time.
3. The lighting operator triggers the finale cue which dims all lights on the Anchor.
4. Camera 2 begins to move backwards very slowly as far as possible, with FM 1 cable bashing where needed.
5. Lighting advances the next 4 cues at the direction of the director and the producer, each turn off one of the 5 lights currently pointing at the set.
6. The producer cues FM 2 to reveal The Threat. Lighting then triggers the final cue casting the set fully into darkness.
7. The vision mixer cuts to black fully and the live-stream is ended.

This was practiced as much as possible, as soon as possible, on the 7th, with a stand-in for both the Anchor and The Threat.

[22] There was one small "500 response" meaning server error, but I suspect this was to do with one of the GFX operators putting a single-quote character in the auto-cue note field, an error that is documented and fixed in a commit to the repository that I did not push before the practice for stability reasons.

6.2 Editorial vision and storytelling

Figure 7: Gallery on the practice session (7th).

The crew I have assembled for XMDV is eclectic, stretching across multiple departments, and they each seem to see it through their own lenses. The directors (both off the film course) continue to claim that I should have some way of telling the audience a bit more about whats happening (who is The Threat etc.), the set-design team keep telling me that the set was too bare in the practice and it looks "nothing like" teleshopping and my cameraman seems to think I'm making a comedy.

I have tended to sway towards them and listen to their feedback, they're all people I trust, but I have decided this is not necessary. They're all right, of course, but I am not making teleshopping, or a film, or a comedy. Give me a rule and I'll break it, and I am in no rush to explain myself. The entire reason this project falls under "multi-platform media" when it seems to me very clear that it is TV studio, is so that I can break the rules, and as a result I have been able to have vastly more studio time, vastly more freedom and a far more relaxed schedule. All things that will improve the final product. Why was my last snapshot a homoerotic fan-fiction? Because I break the rules.

I am not going to ruin one of the most beautifully sparse and minimal (and beautifully lit) sets I've ever worked on by littering it with "potted plants" and, again, I am in no rush to explain myself. Not for the crew, not for the audience. The audience... I wonder what they think about all this?

6.3 Audience

> XMDV Teleshopping plays off a fascination with the surreal and esoteric, with a focus on people aged 18-35 with a slight male lean and a slight LGBTQ+ lean. For these people, and many of any age, teleshopping represents a bizarre sub-genre of television. At best, curious; At worst, manipulative.

This is from Snapshot 1, and remains true. It seems to me that the platform, in this case precludes the audience, which later defines itself.

If I where making, say, a magazine show about boats; I might first figure out my audience (say 35-50 year old men) before then identifying my platform (most likely the channel "Dave" in this case).

With a platform like Twitch, though, which has everything from Polish *Osu!*, to Americans in hot-tubs, it seems a little different[23].

Should XMDV have more room to breath, as well as some more multi-platform engagement and more content across the board, I have no doubt that it's audience would find it.

There is of course the chance that this audience doesn't exist. See Section 2.2.1 for my argument against this.

[23] It is almost as if Twitch becomes more of a medium than a platform, with the "categories" and "tags" used by Twitch to classify content becoming the platforms. This makes selecting the right category and tags vital to our success.

7 Crew and Cast

We are now fully crewed up other than the engineer (a minor role). There is one more cast member to find, the replacement anchor for one of the products (forbidden information). But this is a 30 second bit, and may get scrapped.

Heads	
Producer	William Greenwood
Director	Narrative producer
Narrative engineer	Finn Downton
Set-design lead	Tegan Blake-Barnard
Gallery	
Sound operator	Rebecca Dixon
Vision mixer	Eleanor Haughton
GFX Operator	Brynn Yates
Set-design ⇒ GFX Operator	Lydia Wilkinson
Set-design ⇒ GFX Operator	Leigha Blanchard
Set-design ⇒ GFX Operator	Daisy Devoe
Floor	
Floor Manager 1	Heather Digwood
Floor Manager 2	Olivia Gillett
Camera operator	Leo Garside-Holdich
Lighting operator	Alex Roberts
Cast	
Anchor	David Smith

7.1 Set-up responsibilities

Set design lead and Director are in charge of all floor crew (excepting the lighting operator) in the setup phase. This is to allow a quick setup, and where necessary, adjustment of the set.

- The set design lead, Tegan, is to take responsibility for the layout of the set as a whole, placement of the walls, the lazy Susan, the clock &c.
- The Director, Jack, is to take responsibility for the positioning of the cameras, working with Set design for optimum placement.
- All other floor crew are to help move walls or other fixtures. They will then bring in the products or stand-ins, covering them up where necessary.
- Lighting operator is to setup lighting and make necessary adjustments.

The Narrative engineer is in charge of all gallery crew in the setup phase. This means:

- Getting all sounds loaded and the desk setup for the sound operator.
- Getting the GFX system set up to a blank state, calibrating the timer offset due to latency (as instructed in training) and checking that everything is fully functional, including the clock, reporting to the producer where it is not.
- Calibrating all cameras (as soon as lighting is stable) for the engineer.

As soon as The Anchor arrives, the set design lead is to be dispatched to bring them a copy of the item manifest (got from producer) and talk through with them what each item is.

7.2 Production responsibilities

Narrative engineer is to be responsible for the gallery as a whole should the producer be busy, but is primarily responsible for:

- The GFX controllers.
- The current text on screen.
- The flow of each sale, keeping on top of the anchors timings and giving him a push forward if needed.
- Responding to any requests from the anchor.

- The actions of the floor managers (moving products in and out, large story beats)

Director is to be responsible for the look of the show and all cuts. This includes:

- The vision mixer, calling shots and fades.
- The camera, close-ups and moves.
- The lighting operator.
- The engineer where necessary.

The Anchor is responsible for cuing in all price drops and all timers. The may also direct or otherwise request:

- A price drop.
- A timer on screen.
- A camera move (close up, come closer &c).
- A cut to the safety shot.
- A cut to a different camera.
- Any information on the product they feel they are missing.

All of these should be complied with to help the flow of the show unless absolutely necessary.

7.3 Coordination

I chose to coordinate with a number of Google Forms documents for both the main crew and the pre-production (set-design and directors) team. This worked well for gauging approximate availability over a large time-scale.

This was used to organise the initial full-team meeting as well as the practice session (for the criteria see Section 5.1).

For the real shoot-day, as well as the practice time in the TV Studio, I was simply given a time by the studio team.

8 Feedback

Over the production so far, I've received plenty of feedback and tips regarding the GFX system and the layout of the main GFX page, I am constantly making small adjustments to make this the best possible system.

In response to the feedback from snapshot 1, I looked through all appropriate categories on Twitch. The most appropriate (other than "Just Chatting") where: "IRL", "Art" and "Special events". I believe "IRL" to be the best choice. There is also the question of stream tags, which requires more though.

Conclusion

The project is on track, with the only concern being the design of the products and the securing of an engineer. Both are solved by forward thinking and time management. I have no real concerns to the moment, partly due to the amazing practice session on the 7th.