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Producing a CG planetarium show at Griffith Observatory

Dawn Fidrick
Griffith Observatory

Learning Objectives

Gain context for building a new studio pipeline and show.
Start planning an animation and VFX production and draft a production plan.
Building a team.

Description

This class will take a close look at how the immersive planetarium show *Signs of Life* was produced. We'll discuss how art and science are merged to create extraordinary content through a public private partnership. You'll learn how it was possible through the building of a new animation production studio inside the existing science institution, Griffith Observatory. We'll look at how a producer works from concept to completion, from development to final delivery and everything in-between. The class will show how Autodesk's Shotgrid software was implemented at the center of the production studio pipeline and how that enabled the team to create, track, review and render the show.

Speaker(s)



My career spans work in animation, VFX, live action feature, and short film as well as live theatrical production. The Hollywood Reporter called my producing debut feature *Other Madnesses* "a film that effectively gets under your skin". I have stage managed the legendary Blue Man Group at the Astor Place Theatre in New York City and contributed as a visual effects artist on *Star Trek Into Darkness*, *Iron Man 3* and *Wolverine*. I earned my MFA in Computer Art from the School of Visual Arts and my BFA in

Production Management from DePaul University. I am thrilled to have been the Producer and VFX Producer on *Signs of Life* premiering at Griffith Observatory in 2022. My production experience has made me a high performing leader. I have a deep understanding and working knowledge of physical production, animation, cg pipelines, and postproduction. I thrive in a collaborative space that cultivates creativity. Fundamentally, I am accepting of others, believe in the links between all things, take responsibility and have a great deal of stamina to lead teams and shows from concept to completion, on time and on budget.

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Introduction

This industry talk is intended to serve producers who are looking to build a new animation studio pipeline and/or a show production. It is meant to focus on the producer's role and give an overview of how she plans for all stages of CG animation production. We'll be learning through the lens of *Signs of Life*, the planetarium show created by and for Griffith Observatory.

The Challenge

In 2016 when I was invited to produce Griffith Observatory's new planetarium show. My employer wanted to make a show like none other. They knew this meant they'd need to build an animation production studio in house to accomplish the goal of delivering an original 8K full CG planetarium show.

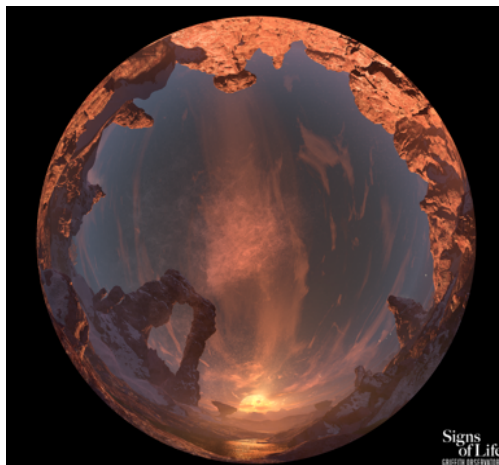
Producing

Producers are a special breed of leaders who take on a tremendous amount of responsibility while embodying a great deal of stamina, resilience and endurance. This is because creative and technical production endeavors will push you to your personal and professional limits.

Passion for Producing

Everything you've ever done is leading up to this movement. If there is nothing else that you take away from this handout, take this, throughout the journey of your life the more internal work you do to identify and align with your personality traits, talents and true self the happier you will be. **Quick Tip: Always be yourself, follow your bliss.**

Producing shows, specifically, complex fully animated scientifically accurate computer graphics is a tall order! Griffith Observatory's new planetarium show *Signs of Life* is a 35-minute show viewed on a 75-foot planetarium dome at a pixel resolution of 8192 by 8192. It is rendered photorealistic and projected at 60 frames per second. In the end, this means there are approximately 126,000 8K dome masters that make up the final image sequence. This took enormous coordination, collaboration and machine power to produce.



Dome master frame from *Signs of Life*

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Qualities of an Astronomical Producer

Producing animation requires a grand communicator with a fierce organizational mindset who can collect, categorize, budget and schedule large quantities of information. And more, the mastery in producing comes when the producer and her production team is able to inspire and articulate the production plan to the executive, creative and technical teams.

A producer's mind can see the upstream and downstream connections between information. Further, this information can be expanded and contracted in a macro and micro state within the animation production pipeline. My favorite astronomical visual example to illustrate this is [Charles and Ray Eames | Powers of Ten, 1977](#). **Quick Tip:** Look for the connections between all things.

List of Producer Traits:

- Achiever
- Collaboration
- Communication
- Compassion
- Connectedness
- Dedication
- Empathy
- Humility
- Includer
- Leadership
- Organization
- Patience
- Problem Solver
- Responsibility
- Sense of Humor



Award from Dr. E.C. Krupp, Director Griffith Observatory

Mental and Physical Health

Producing is demanding and has a way of consuming your life in its entirety if you let it. You'll need to take care of yourself by reserving, at minimum, 20 minutes a day of dedicated time to your health. Ideally more, but at least 20 minutes is essential. Find a mental and physical activity that works best for you and do it daily. I have never been the best at this, and it takes a lot of effort on my part to do it. If I can do it, you can too! I've found that a walk and stretch is my bare minimum. And throughout the week I will add in one or more of the following, sitting meditation, a swim, a bike ride, a hike, or even dancing in my living room! **Quick Tip: Practice belly breathing at the beginning and end of every day.**



Dawn Fidrick at Verdugo Pool in Burbank, CA

Gain context for building a new studio pipeline and show.

Who, what, when, where, why and how. These are the fundamental questions producers ask and answer every day throughout the duration of production. Sometimes you'll know the answers right away and be able to solve problems swiftly. Other times you'll need to investigate, and gather more information to move the production forward. **Quick Tip: Spend a lot of time in development pre-production gaining context.**

Gather Information

Be an observer and take note of everything from the smallest detail to the most obvious. There are no stupid questions. Leave no stone unturned. The more you learn early on to prepare and plan in pre-production, the smoother the production and post production stage will be.



Griffith Observatory is an iconic Los Angeles landmark that was established in 1935.

Ask A Lot of Questions

A producer's key objective is to gather as much context and understanding of the client and their expectations. This often requires that you ask a lot of questions to fully understand the entire scope of work. If you are working with a client that is not primarily in the business of content production, you'll have many more questions to ask.

Seed Relationships

Meet with everyone. Take time to get to know people. Find out what they like, how they work, what things they care about and how they think. It's in *your* best interest to take a *genuine* interest in people to understand what inspires them! Likewise, offer to share this information about yourself.

Take a Tour

Get to know the environment, surrounding location, and production studio space, its history and what gives it its meaning and purpose. Make a sincere effort to observe and understand how it operates and is maintained.

Research/Take Notes

Gather as much information you can about the company, institution, client, project and people. You'll continue this work throughout the entire production process, though the more you gather up front the better. This includes everything from learning from case studies, other colleagues, reference imagery, historical context, to documenting conversations and creative sessions.



Producer, Dawn Fidrick's *Signs of Life* Production Notebooks

Start planning an animation and VFX production and draft a production plan.

Planning is everything! There is a tremendous amount at stake in any production, therefore the greater the plan the greater the probability of a successful outcome.

Production Plan

The production plan is a set of documents that serve as your guide throughout all phases of production. It is created by the producer in collaboration with other key leadership very early on and the act of creating it essentially defines what, when, where, who and how the show will be made.

List of Assumptions

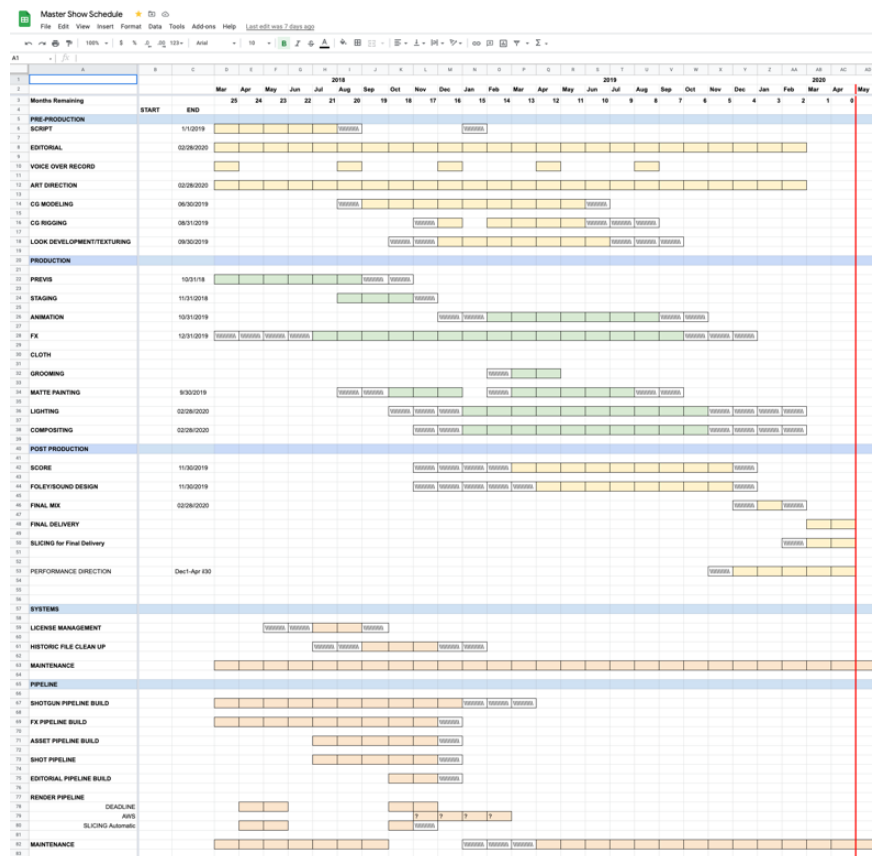
A producer's list of assumptions is a list of essential information that sets the show's corner pieces and defines its framework. You'll refer to it when articulating the scope of work to the client and new team members. It is also what you'll use when problem solving during production as it is the basis for the greater production plan. A few items on the *Signs of Life* list of assumptions are as follows: running time is between 30-35

minutes, 8K resolution, photorealistic CG, scientifically accurate, delivery optimized for the Samuel Oschin Planetarium, the show will be performed live by a presenter for a live audience, delivery is May 31, 2020, etc.

Create a Master Schedule and Budget

The Master Show Schedule is the show timeline's driving force. And therefore the delivery date will define the pace of production. It is essential to represent each stage of production, and all departments in detail as well as having a summary overview page of all milestones. At first, this schedule will be your best guess based on the information you've gathered in advance in collaboration with your team. As more parameters are defined and departments begin delivering assets the production team will continually refine the dates to keep deadlines accurate and realistic. Shotgrid is a fantastic tool to use for assigning tasks to artists, attaching due dates, tracking progress and projecting outcomes. We certainly used it to manage, track, view and archive *Signs of Life's* 45 shots and 234 assets.

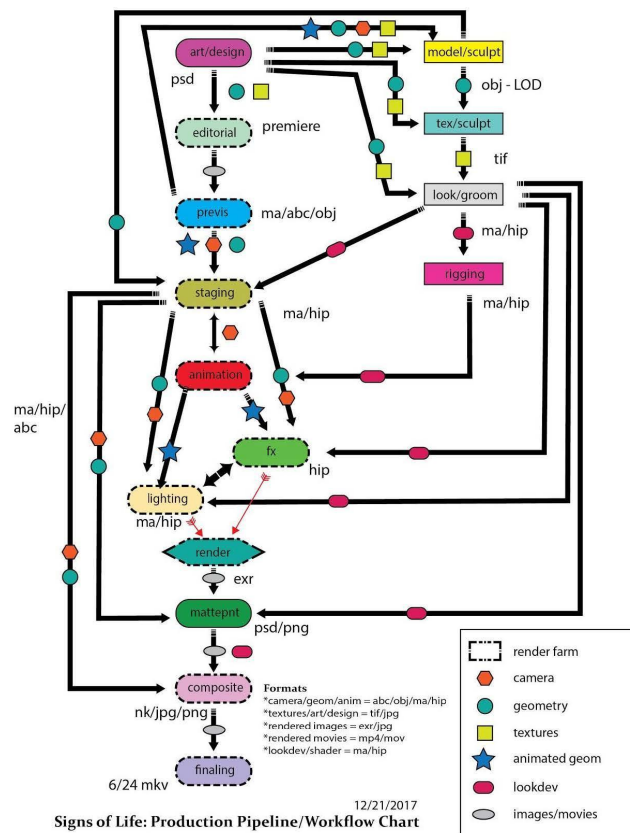
Further, the master schedule will inform the creation of the show's budget.



Producer, Dawn Fidrick's *Signs of Life* Initial Overview Planning Schedule

Create a Production Pipeline Schematic

An essential part of the pre-production planning for the studio build is to collaborate with the VFX Supervisor, Pipeline TD, Production Manager and Systems Administrator on developing and implementing the flow of assets and shots through the production pipeline.



VFX Supervisor, Gee Yeung's *Signs of Life* Production Pipeline Schmatic

Building a team

Individual people make up your team. Joining the *Signs of Life* team was an opportunity for individuals to contribute by collaborating on a rare production that is scheduled to have a decade-long run at Griffith Observatory.

Curating the production, technical and artistic team is the greatest piece of the producing puzzle and should be treated as such. You'll want to ensure you've allotted ample time and resources toward finding, attracting, employing and retaining the most diverse and densely talented individuals that match the needs of your show. The recruitment process is rewarding. It's an opportunity to connect with a large network of talented people across departments and even industries. You will find people to fit the current show and make connections for future projects.

When we set out to build the team for *Signs of Life* we made a conscious effort to select people that not only had the skill set and talent to be successful in the role, but more embodied a disposition that allows for creative collaboration. This largely means, people who have the ability to regulate their ego. Simply put, no jerks. After that, we were looking for people who were keen on educational and astronomy related content told from a narrative and cinematic perspective. Further, we loved to team up with individuals who embrace innovation and who were motivated to develop themselves professionally while creating the show. These traits were defined in advance by the leadership team for the purpose of creating a safe and nurturing environment for people to collaborate, experiment, fail, be inspired, and ultimately succeed in completing a show like no other that Griffith Observatory has produced. **Quick Tip: Empower others and lift them up.**

Additional Resources

Recommended Reading

[Producing Animation](#)

Written by Catherine Winder and Zahra Dowlatabadi

Edited by Tracey Miller-Zarneke

[Your Career in Animation](#)

Written by David B. Levy

Tools

[The Producer's Thinking Map](#)

(pdf version from Catherine Winder and Zahra Dowlatabadi's Producing Animation book)

[Animation Guild Contracts and Wages](#)