A Manual for TV Anime Series Production Assistants

Introduction

The production assistant (PA) role is an entry level position in the anime industry. The PA oversees the entire production process on an episode basis and is responsible for a variety of tasks (management, communication, coordination etc.) that ensure that the whole process moves forward without a hitch. Accumulating experience in this role may lead to positions such as Office PA*, Producer, Episode Director, Script Writer or TV Series Director (*an Office PA oversees the whole series rather than single episodes and spends most time at the studio office rather than coordinating staff and vendors scattered in different locations. For this reason in Japan it is called Production Desk staffer).

That is why it is preferable that PAs always keep a clear vision of their final goal (becoming a Producer, a Writer etc.) rather than willing to be a Production Assistant for all their life. It is actually quite difficult to stay a PA long term. It is not a 10 or 20-year career job. While you work as a PA, never forget what is your future dream job in the anime industry.

Also, use your time as PA to ascertain whether you want to work on the creative side or the management side of anime production. This is because, depending on what you plan to become, your daily job as a PA will differ. For instance, when reading a storyboard, PAs who aim to become Producers will mostly look at the number and length of shots composing the episode and strive to maximize the available resources (budget, staff etc.) in order to meet the schedule and quality requirements. Simultaneously, they will also consider if the storyboard is engaging enough to the target audience – in other words, if it is commercially appealing.

However, if you aspire to become an Episode Director, you will probably focus on how to make each shot more visually compelling and how to maximize the limited number of shots you have to work on in order to develop an engaging storyline with amazing visuals. In other words, you will focus mainly on the artistic side rather than the financial and organizational aspects of the production.

This booklet is aimed at explaining in simple terms the standard steps in the anime production process, based on information provided by Kazuya Masumoto of Studio Trigger in his *Collected Classroom Lectures on the Production Process in Animation Production* and has been compiled by The Association of Japanese Animations - Human Resources and Development Committee.

The work of a production assistant may vary from studio to studio, but we hope that this manual will serve as a useful handbook of some established practices. We hope that all of you will grow through your experience as Production Assistants and become the pillars of the anime industry of tomorrow.

The Association of Japanese Animations
Human Resources Development Committee

* This manual analyzes the role of the Production Assistant mainly in relationship to TV anime series. You should customize the information learnt through this manual to suit your Studio's production practices.

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1   The Basics of Japanese Anime

● Basic Information about the Japanese Anime Industry

In 2018 Japan released 332 TV anime productions (130,808 minutes total) and 74 animated theatrical features (6,186 minutes total).

In addition, a number of OVAs (Original Video Animation) for the home video market and anime titles ordered by streaming services were also produced. While many of them are hand-drawn, in recent years an increasing number of anime feature characters created with 3D Computer Graphics.

In 2016 there were 622 studios in Japan involved in the production of anime, including major studios operating as primary contractors, others that undertook production as subcontractors and a number of companies specialized only in certain processes - animation, background art, compositing, editing or computer graphics. Japanese animation exists thanks to the mutual cooperation between all these studios and a large number of in-house and freelance creators, and also by involving foreign vendors.

● Anime Formats

The most popular formats for anime are Weekly TV Series, One-Shot TV Specials, Theatrical Features, OVAs (Original Video Animation) - technically called "videograms" or more commonly Home Video in English, but called by the tricky word Packages in Japan - and anime exclusive to Streaming Services and/or dedicated apps.

Nowadays, it is not uncommon for an anime to be broadcast on TV and distributed online or through streaming platforms simultaneously. Sometimes studios also try new marketing strategies, such as a limited release in theaters or direct sale of premium Blu-ray editions at the same time of the TV broadcast.

● Basic Terminology: Units

In this paragraph we explain the basic units used in the world of anime.

Animation is a sequence of still images that gives the illusion of movement due to slight variations in each subsequent picture, similar to flipbook animation. A single still image is called a Frame. They are so called because each still image along a reel of film looks like a framed picture. The motion in animation is still based on 24 Frames per Second (the same as most live action movies).

A "shot", generally called in Japan Cut, is a set of frames, typically lasting until the camera is switched. While the English term "shot" comes from cinematography (meaning the section of a film reel shot by the cameraman), in Japanese it originates from the editing process – before online editing, the film reels were physically cut and reconnected together to make the final movie. In this booklet we will use the term Cut, as "shot" is seldom used in Japan. A 30 minute anime may consist of up to 250 to 350 Cuts per episode.

A Scene is a sequence of Cuts set in the same environment. You may have heard expressions such as a "classroom scene" or a "home scene". Generally, a sequence of Cuts is considered one Scene until the viewpoint switches to another place.

A TV series is composed of multiple installments (Episodes) that are recurrently broadcast on TV. One-Off or One-Shot Episodes or, more commonly in Japan, TV Specials are TV movies made with animation.

Japanese broadcasters use to measure the length of a series by units called *Cours* from the French word for "course". A TV series with one *Cour* (10-13 weekly Episodes) lasts three months, while a TV series with four *Cours* (52 or so weekly Episodes) lasts one year.

It may happen that one series is developed into multiple Seasons. Generally in Japan these are referred to as Part 1, Part 2 etc., but recently the American expression Season 1, Season 2 etc. is also used. Sometimes different seasons are called with different titles altogether.

In addition, the entire work is sometimes referred to as a Series.

● Profits and the Ripple Effect of Anime Marketing

As you are about to earn a living in the world of anime, it's important that you know how anime make profit. Currently, the largest share of anime produced is Japan is made for TV broadcast. There are two distinct business models for TV anime: Children & Family anime, generally airing from the morning hours to early evening, and Late-Night anime. The main budget for Children & Family anime usually comes from the broadcaster, who collects revenues by selling commercial airtime - mostly to advertisers involved in the sale of children products and anime-related gadgets. Further income to the broadcaster and the other investors may come from licensing fees for toys and other tie-ins.

The business model of Late-Night anime is very different. Multiple companies would jointly invest to form a Production Committee, with each company serving as a rights administrator for its own specialized business. Corporations representing many different industries, such as home video publishers, animation studios, print publishers, record companies, consumer goods manufacturers, game developers and streaming services, usually participate in these Production Committees. By joining the committee they expect that, once viewers watch the anime, they will buy their products (home video, gadgets, the original manga the anime is based on, anime-themed video games etc.) producing revenue. A manufacturer, for example, may maximize its revenues by not only manufacturing and selling its own gadgets, but also by sublicensing some rights to other manufacturers or even licensees from totally different industries. This will substantially expand the user base and the visibility of the anime property. By leveraging their strengths, all the members of the Production Committee play a role in maximizing the total profit of such property.

Of course, companies which are not joining the Production Committee may decide to purchase anime licenses, thus incrementing the market exposure of the property. In recent years, corporations from industries previously unrelated to the anime business are more and more active in getting anime licenses, as a way to increase the appeal of their products and services to a wider user base.

Revenue Source		2011	2012	2013	2014	2015	2016	2017	2018	Compared to Previous Year
①	TV	900	951	1020	1107	1072	1059	1069	1144	107.0%
②	Film	285	409	470	417	477	663	410	426	103.9%
③	Video	1067	1059	1153	1021	928	788	765	587	76.7%
④	Distribution	160	272	340	408	437	478	540	595	110.2%
⑤	Commercialization	9943	5732	5985	6552	5794	5627	5232	5003	95.6%
⑥	Music	325	283	296	292	325	369	344	358	104.1%
⑦	Outside Japan	2669	2408	2823	3265	5833	7676	9948	10092	101.4%
⑧	Entertainment	2026	2272	2427	2981	2941	2818	2687	2835	105.5%
⑨	Live Performances	-	-	248	318	484	532	629	774	123.1%
Total		1,337.5 billion	1,3386 billion	1,476.2 billion yen	1,636.1 billion yen	1,829.1 billion	2.1 trillion	2.162.4 trillion	2,181.4 billion	100.9%

Source: The Association of Japanese Animations "Anime Industry Report 2019"

All sales related to these ancillary rights reached 2181.4 billion yen in 2018, a significant figure compared to the 275.2 billion yen which were spent in production costs (such production costs are mainly covered by revenues from TV broadcasting rights, movie rights, video rights and streaming rights). This gap arises from the fact that many companies today believe that investing in anime is a profitable business.
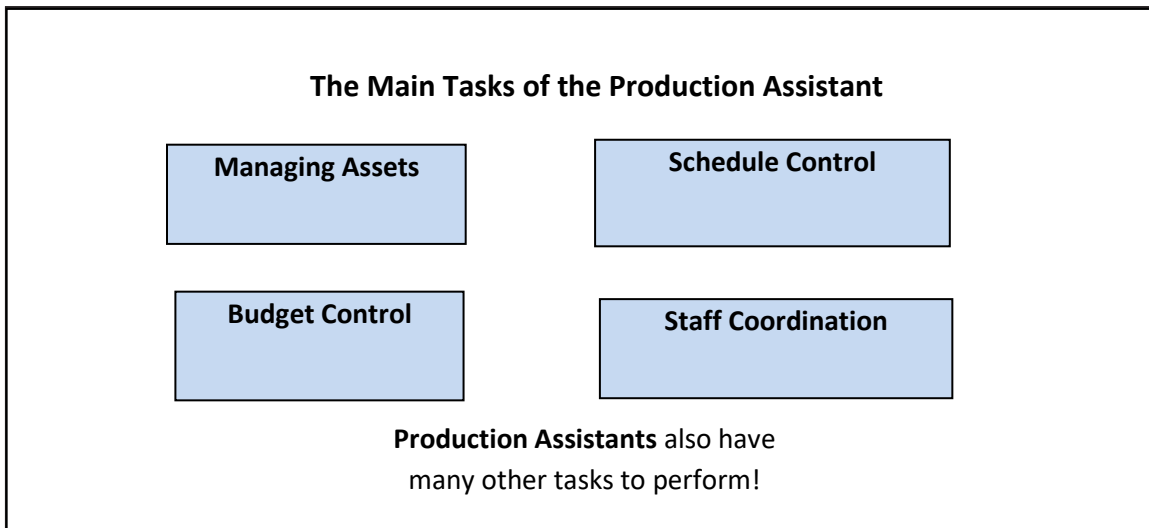
Theatrical movies, OVAs and streaming-only anime are also generating more and more revenues by developing marketing strategies which include a wide array of ancillary rights, thus emancipating themselves from more traditional revenue sources such as box office, home video sales etc.

2   Who is the Production Assistant?

● Who is the Production Assistant?

The Production Assistant is a person who overviews and coordinates the workflow for all the staff involved in the production of an episode. As such, PAs must have a thorough understanding of the whole production process and familiarity with the staff involved in it. PAs perform the necessary management tasks (organization, communication, coordination, etc.) which ensure that the production keeps moving within the deadlines.

They mainly supervise (1) the assets, (2) the schedule, (3) the budget and (4) the staff assignments. They need to always have a clear grasp of the production status and keep that information updated. They need to know the skills and capability of each staffer and they must also understand the protocols and goals of each department and person involved in the production.

So, by definition the PAs are generalists who have a holistic knowledge of the production process, and also managers who support the staff members.

The Main Tasks of the Production Assistant

Managing Assets	Schedule Control

Budget Control	Staff Coordination

Production Assistants also have
many other tasks to perform!

● The Qualifications of a Production Assistant

As their job requires them to complete a wide array of tasks and obligations, PAs engage with many people from different departments of the studio and with external vendors. Therefore, PAs must have excellent communication skills, good time-management and multi-tasking skills even in high pressure situations, as well as the ability to familiarize with the staff in order to keep them motivated and moving forward.

This table summarizes the general background and skills required of a Production Assistant. Ideally, you should have all the abilities listed; but since no one has all of them when they start their careers, you should strive to acquire them through learning and experience.

The General Qualifications of a Production Assistant

(1) Ability to communicate and familiarize	Interaction with staff; sensitivity; sincere social interaction; responsiveness at meetings
(2) Discernment	Situational awareness; logical thinking; resourcefulness; excellent negotiation skills
(3) Ability to Plan	Scheduling; ability to flag potential problems; planning skills
(4) Self-Management	Self-control; sociability; morality; exhibiting a sense of responsibility when responding to staff and external vendors
(5) Stamina	Ability to work in a fast-paced environment; endurance; the resilience to respond to difficult situations even with the strictest deadlines
(6) Proactiveness	The ability to handle situations as they arise, to find solutions and to execute them

The Skills Required of a Production Assistant

(1) Communication Skills	Reporting, communication and consultation skills; the ability to use polite speech and adjust their language depending on the person they are talking with*; conversational skills; information-gathering skills; responsiveness *(* The Japanese language uses a different vocabulary depending on the age and position of the person you are talking with. You may sound extremely rude and unpolite if you don't use the correct vocabulary)*
(2) Scheduling Skills	Understanding the various processes of the production workflow and the work volumes; using such knowledge to forecast schedules; updating, negotiating and adjusting such schedules
(3) Ability to Recognize and Handle Problems	Ability to read Storyboards, Scripts and Breakdown Sheets and to identify any issues they may have. Solving such issues while sticking to the budget. Ability to communicate with other studios, clients or vendors
(4) Ability to Manage A Budget	Situational awareness; ability to create a budget table for the supervising process; estimating the number of key animators and in-betweeners needed; knowing both the staff payroll of other studios and the price list of multiple vendors
(5) Ability to Manage Materials	Understanding the materials, the technologies and the production structure; creating backups; understanding the capacity and the progress of all the staff involved; keeping records (logs and documents); understanding anime terminology and software
(6) Ability to Manage Creators	Making connections and building trust relationships with the staff; understanding the production process and communicating with the animation supervisors and the directors
(7) Quality Control Skills	Ability to create flexible workflows to match the content and to flag potential problems. Ability to timely and precisely deliver information to the right staffer, to report and consult with superiors and to calculate costs and budgets
(8) Accountability	Understanding the processes involved and the responsibilities of each person
(9) Keeping up-to-date about new techniques and technologies	Always being curious and informed about new forms and techniques of expression even outside of the anime industry
(10) Ability to Train New Hires	Having a solid understanding of the job; ability to think and communicate logically; ability to share objectives with the staff, to perform classroom teaching and practical training; to provide constructive feedback and to be social

● The Career Prospects for a Production Assistant

As previously mentioned, the PA role is an entry level position in the anime industry. The PA oversees the entire production process on an episode basis and is responsible for a variety of tasks (management, communication, coordination etc.) that ensure that the whole process moves forward without a hitch. Accumulating experience in this role may lead to positions such as Office PA (= Production Desk), Producer, Episode Director, Script Writer or TV Series Director

That is why it is preferable that PAs keep a clear vision of their final goal (Producer, Writer etc.) rather than willing to be a production assistant for all their life. It is actually quite difficult to stay a PA long term. It is not a 10 or 20-year career job. While you work as a PA, never forget what is your future dream job in the anime industry. Be proactive.

Career Prospects for Production Assistants (Examples)

(1) Production Assistant → Asset Manager → Animation Supervisor → Director
(2) Production Assistant → Assistant Animation Supervisor → Animation Supervisor
(3) Production Assistant → Production Chief → Production Desk → Line Producer → Producer
(4) Production Assistant → Asset Manager → Script Writer
(5) Production Assistant → Production Operations (General Affairs)

Always keep in mind
what you want to become in the future

● The Importance of Maintaining Confidentiality

While you're involved in the production of an anime, you are handling information and materials that the general public doesn't know yet. Consequently, you must be fully aware of the importance and responsibility of handling confidential information and materials that have yet to be publicly released.

The studio's main responsibility is to deliver the finished product to the Client, so that the public may enjoy it and purchase gadgets etc., thus making a profit for the Client. The Client may decide to disclose some information and materials before the official release for promotional purposes: but only the Client has the right to make such decisions.

Divulgating any material or information to third parties, including posting it on personal social media accounts, is subject to the Client's approval. Generally, before starting the pre-production, the studios and the Client enter into non-disclosure agreements (NDAs), which are contracts that strictly define the control of confidential information, setting hefty penalties. So, in addition to damaging the studio, disclosing confidential information may result in legal prosecution of the individual or parties responsible.

Never disclose any information to outsiders
without permission while production is still taking place!

● Thorough Reporting, Communication and Consultation

The ability to report, to contact and to consult are basic skills for any worker, not just for those in the anime industry. These skills are fundamental when working with (or managing) a team, solving unexpected problems in a timely manner and sharing information to create a conducive work environment.

During the first weeks and months of work you will often lack the experience and perspective to make valid judgments by yourself; that's why it is essential to thoroughly and timely report, contact, and consult with your superiors, even when the matter that you need to report is a mistake you made.

Reporting

You will be required to compile different kind of reports, such as "Work Completion Report," "Daily Reports", "Report of Confirmed and Modified Orders" among others.

★ Those reports are the only tools that the Producers and the Management can rely to when they need updated information on the production status: so always organize and report all information in a timely and precise manner.

Contacting

You will be required to contact people for different matters, such as calling the Animators to deliver a message from the Director or the Producers; informing the Director and the Producers of any change in the production or of any conversation you had with the staff that may be of importance to them.

★ Always carry a notepad with you and take notes, so that you can relay information accurately.

Consulting

Examples of consulting might include consulting with staff when a problem occurs or consulting them about a solution.

★ The best time for consulting somebody is when you report them some information: take time to discuss with them any incertitude you may have, so that they can help you find solutions and workarounds in a timely and effective manner.

3　The Basics of Anime Workflow

● The Basics of Anime Workflow

Anime production broadly progresses through three stages: (1) Pre-production involves the planning stage; (2) Production involves the production of the actual animation; and (3) Post-production involves the video editing and the addition of audio, together with other adjustments needed to finalize the work.

Pre-production	● Development of the Production Plan ● Establishment of the Production Committee 　(determining the investment ratio, the investment amount and the areas 　　each investor will have exclusive control of) ● Selecting the Director, the Script Writer, the Music Author and the Character 　Designer; selecting the Vendors and the Voice Actors ● Preparation of the Script => Preparation of the Assets (Model Sheets etc.)	The Production Assistant chiefly manages this part.
Production	● Storyboard ● Layout => ordering Background Art and Computer Graphics work ● Key Animation ● In-Between Animation ● Painting ● Compositing	
Post-production	● Editing ● AR (After Recording, registration of dialogues by the Voice Actors) ● DB (Dubbing, adding in Sound Effects and Background Music) ● V-Edit (Video Editing) 　(OP [opening animation], ED [ending animation], bumpers, captions, staff credits) ● Completion of the visual parts ● Preview of the finished product	
Release	● Broadcasting / Streaming / Theatrical Release ● Home Video release / Events / Gadgets sale ● Additional release(s)	

● Glossary of Terms

[Production Committee] A business model in which a company takes the lead in soliciting investment from a number of different corporations to cover the production costs. The investors would establish a Production Committee where profits will be shared in proportion to each Member's investment. By this system an investor may get involved in the production of an anime by risking a relatively small amount of money. One advantage of this model is that a company may invest its budget in multiple projects simultaneously (= becoming a member of multiple committees) instead of taking the risk to invest the whole budget in only one property. It also allows studios to easily collect investment money. Generally, members of a Production Committee would include TV stations, theatrical distributors, animation studios, advertising agencies, "shosha" (commercial conglomerates), publishing houses, newspapers, record companies, home video distributors, artist management agencies, toy manufacturers, pachinko (legal gambling) operators and various IT companies.

[TV Series Director] The TV Series Director decides the themes, direction and the storytelling, while also having the last word on the filming, sound and music.
While there are people responsible for each department (the Animation Director, the Sound Director, the Color Director, etc.), the Series Director has the final and exclusive authority and responsibility to decide the direction for each process.

[Scenario (Script)] The Script is the book that serves as a blueprint for an episode and contains the stage directions and the dialogues. The persons in charge are generally called Script Writers or Scenario Writers.

[Character Design] The person who draws the visual features of each character into Model Sheets, either directly inspired by the Script or based on directions from the Series Director. By featuring certain distinctive features, hair styles, costumes, props etc., the Character Designer creates a whole narrative worldview around a character. The Art Director will be in charge for creating the environment where these characters act.

[Storyboard] It is a pre-visualization of the anime's final look. Storyboards are graphic organizers that consist of rough illustrations, together with detailed information on the action, the length of each Cut, dialogues, sound effects and other supplemental memos. Storyboards are the blueprint for the camera work, the Layout (scene composition), the lighting and all the details of the visualization.

[Layout] The Layout, often abbreviated as L/O, is a collection of drawings defining the visual context and the camera work of each scene in the Storyboard. While the Storyboard drawings are generally sketchy, the Layout offers detailed designs, therefore functioning as master references for the Background art (Master Drawings or genzu in Japanese).

[Background]: A pictorial element usually consisting of a landscape or environmental depiction. The art staff creates the Background following the directions in the Layout. It is often abbreviated as BG.

[Key Animation] In the animation workflow, Key Animation indicates the drawings of the pivotal movements of an action (the start of a movement, the major transition points and the end of the movement). Initially the animator will add a rough pencil sketch upon the Layout and attach a Time Sheet indicating the timing of the animation. These will be delivered to the Episode Director and the Animation Director for review. When they are approved, the Key Animator will clean up the drawing (Tracing) and deliver it. It may happen that the pencil sketch and the clean-up are done by two different persons, the first one called Primary Key Animator, the other Secondary Key Animator.

[In-Between Animation] In-Between Animation indicates the drawings that complement the Key Animation and make the action look smooth and natural. For instance if the Key Animation shows a character with a hand up at the start point and a hand down at the end, In-Betweeners will draw all the intermediate positions of the arm and hand.

[Painting] The process of coloring the drawings prepared by the animators. Such drawings must be scanned before coloring. In the past they were transferred into Cels (celluloid sheets) and colored on the back side with a special acrylic paint. Nowadays they are scanned and digitally painted. In Japanese it is called "shiage" = "finishing" because it is the last phase of animation before been sent to Compositing.

[Compositing] The process of combining the painted data with the Backgrounds, adding the camera work and effects (light effects, shadows etc.)

[Editing (CT)] The process of rearranging the video data delivered by the Compositing department by adjusting the length of each Cut, so to create the final visual data. This process may also include fine-tuning the length of the episode in order to perfectly fit with the airing time. Its abbreviation CT stands for "cutting" and derives from the process of cutting and pasting the film reel.

[Voice Actors (Performers)] The actors who voice-over the characters in the film.

[Music] The background music, or soundtrack. It also includes the opening theme, the closing theme and featured songs.

[*Afureko*]: This is a Japanese abbreviation for "<u>af</u>ter <u>rec</u>ording" and refers to the process of recording the dialogues after editing. We will refer to it as Aft-Rec in this manual.

[Dubbing] The final audio adjusting process, where all the audio elements (dialogues, sound effects, background music) are mixed and balanced.

[V-Edit] Video editing. The process of producing the master copy for broadcast, perfectly fitting with the broadcaster's specs. In this phase the bumpers (in Japanese eye-catches) are inserted at the start and end of the commercial break. Subtitles, captions, credits and other text are also superimposed at this time. Sometimes final tweaks are also added, such as adjusting colors. Because this process used to be done with video tape recorders (VTRs), it may sometimes be referred to as VTR Editing.

[Screening] The final check of the finished product. It's a term not only used in the anime business but generally in the movie and TV industry as well. In the analog era, this process was mostly a test print to check the color tone of film prints. In Japanese it is generally called Zero Preview or First Preview. In most cases, it is considered the final phase of the whole production process.

[Pre-production] The whole process from planning to the completion of the Script and Storyboard. This includes creating all the Model Sheets and other assets; selecting the main staff and cast; pinpointing locations and researching references etc. It's a term used for all visual productions and not limited to the animation industry.

[Production] The production process of the visual part of an anime, from drawing to compositing.

[Post-production] All video and audio post-compositing processes in anime or film production, including broadcasting or home video.

[Animation Production Schedule]

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Planning
   ↓
Selection of the
Main Staff
   ↓
Script Meeting (Read-Through)
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Character Designer	Props Designer	Art Director		Color Director	Compositing Director

Main Design Meeting

Character Design Meeting (wardrobe etc.)	Props Design Meeting (mecha, food etc.)	Background Design Meeting

Meeting to define the main directions of Coloring and Compositing

Main Design & Art First Draft

Directors and Client Check

Main Design & Art Finalization

Characters Color References (w/ Shadows) → Character+Props Color Model Sheets Drafts

Series Art Boards Meeting

Series Art Boards First Draft

Director, Client Check

Director, Client Check

Color Model Sheets Finalized

Series Art Boards Finalized → Camera Test

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Final Script Delivery
   ↓
Storyboard Meeting
   ↓
First Storyboard Draft
   ↓
Director, Client Check
   ↓
Storyboard Finalization
   ↓
Directors Meeting
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Characters + Prop Design and Art Meeting (for each episode)

Character Design Meeting (wardrobe etc.)	Props Design Meeting (mecha, food etc.)	Background Design Meeting

Character Design First Draft	Props Design First Draft	Background Design First Draft

Director, Client Check

Episode Model Sheets Finalized

Characters Color References (w/ Shadows) → Episode Characters and Props Color Model Sheets

Episode Art Board Meeting

Director, Client Check

Episode Art Boards First Draft

Episode Color Model Sheets Finalized

Director, Client Check

Episode Art Boards Finalized

Animation Meetings

Lead An. Dir. Meeting	An. Dir. Meeting	Animation Meeting

Background Dept.

Color Stylist

Assets Meeting

3DCG	Compositing

Work starts on Layout and rough Key An.

Art Board Meeting

Color Turntables

3D Models

Dir. checks Layout

Art Boards Check

Color Turn. Check

3D Models Check

Lead An. Dir.checks Layout

An. Dir. checks Layout

Art Boards Delivery

Color Turn. Delivery

3D Mod. Delivery

BG Color Meeting

Layout and 3D Material Copies Prepared

BG Master Drawings

3D Mod. Compositing

Layout Returned

Work starts on BG

Color Palette Prep.

Motion

Comp. Meeting

Key Animation

BG Check

Color Pal. Check

Motion Check

Ep. Dir. checks Key An.

BG Delivery

Motion Delivery

Order to Domestic Vendors

An. Dir. checks Key An.

Send BG to Compositing

Color Pal. Delivery

Lighting

In-Betw. Start

Final check before ordering In-Between

Lighting Check

In-Betw. Delivery

Order to Foreign Vendors

Lighting Delivered

In-Betw. Check

In-Betw. & Painting

3D Finalized

Check Finished

Move to Compositing

Color Directions

Painting Start

Camera Test

Painting Delivery

Painting Check

Paint. Check Finished

In-Betw. & Painting Delivery

BG Elements

3D Elements

Compositing

CT (Editing)

Rush Check

Aft.Rec.

Retakes

DB (Dubbing)

Retakes Delivery

Master Preparation

V-Edit

Delivery to Client

● Tools for Managing Animation Production

The Production Assistant assigns tasks to multiple staff members and coordinates them. Here, we will introduce the main tools that help make work assignments go smoothly: the Storyboard, the Call Sheet, the Scene Cut Chart and the Cut Bag.

[Storyboard]

As previously mentioned, the Storyboard is a pre-visualization of the anime's final look. Storyboards are graphic organizers that display in columns the following information: (from left to right) the (1) cut number, (2) rough sketches of the screen composition, (3) the details of the scene (instructions from the Episode Director, descriptions of the action, compositing instructions etc., (4) the dialogues and sound effects, (5) the duration of the scene in seconds + frames.

It is an indispensable item for PAs, who carry them at all times until Video Editing. The Storyboard specifies the aim of the film or the message the film wants to convey. Being able to read storyboards is the first step to keeping abreast of the work at hand. The amount of information and the way the Storyboard displays it will vary greatly depending on who draws it. An example is provided below. You should develop the ability to read a wide variety of storyboards.

The Breakdown Sheet (also Call Sheet, from the live movie industry) is a list of all scenes in the Storyboard which add detailed instructions on the location and environment, the costumes and props and the time of the day when each scene is set. Color Artists, Background Artists, Compositors and Key Animators use it to check the necessary references for their work.

The atmosphere of an anime varies significantly depending on the Episode Director's artistic vision. New costumes and props may be introduced from time to time; the color palette would change depending on the location and the time of the day when each scene is set; and some directors may prefer an imaginary setting and fantastical atmospheres instead of a truthful depiction of reality.

The Breakdown Sheet is pivotal to share the Episode Director's artistic vision with the whole staff, in order to prevent mistakes and misunderstandings. As soon as the Storyboard is finalized you should prepare the Breakdown Sheet, have it checked by the Episode Director, then distribute it to the staff. Also, you need to refer to this in order to match the specs with the previous episodes of the anime you are in charge of.

Finally, keep in mind that different studios may require different information to be included in the Breakdown Sheet.

(1)

Title: (Provisional) Gangsta Stray Cats in the Wilderness, Episode 1

(2) (3) (4) (5) (6) (7) (8) (9) (10)

■ Call Sheet ■

Scene	Cut	Length	Places	Time frame	Character	Details	Dress	Props	Compositing process	Other
A.	1	4 + 0	Town square	Morning	Wild Boy A, Gangsta Stray Ca	Cloak flutters in the blowing wind, dust cloud	Keibu theater style costume			
A.	2	2 + 12	Town square	Morning	Wild Boy A	Wild Boy A looks out	Western style costume		BG slide	
A.	3	5 + 0	Town square	Morning	Gangsta Stray Cat		Western style costume	Dried mackerel	Pan, BG slide	
A.	4	3 + 0	Town square	Morning	Bar girl	Girl rushes over	Waitress type clothing			
A.	5	2 + 0	Town square	Morning	Wild Boy A, Gangsta Stray Ca	Two people start running				
A.	6	0 + 12	Town square	Morning	Fish bar girl	Screaming girl	Waitress type clothing			
A.	7	0 + 12	Town square	Morning	Manager of the fish bar	Screaming store manager	Apron			
A.	8	1 + 12	Town square	Morning	Gangsta Stray Cat	Dried mackerel flies in the air	Western style costume	Dried mackerel	Image BG	
A.	9	3 + 6	Town square	Morning	Wild Boy A		Western style costume		Book division (divide transparent background layer	
A.	10	3 + 12	Town square	Morning	Wild Boy A		Western style costume			
B.	11	6 + 6	Inside the fish bar	Afternoon	Local old man	Old man waiting for order at the counter	Men's clothing	Cup of water	Pan	
B.	12	2 + 12	Inside the fish bar	Afternoon	Manager of the fish bar		Apron			
B.	13	2 + 12	Inside the fish bar	Afternoon	Fish bar girl	Orders fish special	Waitress type clothing	Fish special	Attached pan	
B.	14	0 + 12	Inside the fish bar	Afternoon	Wild Boy A	Forcefully opens the door	Western style costume		Camera shake	

Total length 37 + 12

(1) Title of the work and number of episodes

(2) Cut number

(3) Duration of the cut (seconds + frame numbers)

(4) Setting of the scene

(5) Time of the day when the scene is set

(6) Names of all the characters in the scene

(7) Description of the action

(8) Costumes of the characters

(9) Props featured in the scene

(10) Instructions to the Compositing staff and other notes (whether the scene is hand-drawn, in CG or hybrid etc.)

The Scene Assignment Chart is a list which allows animators to evaluate their own assigned Scene.

We already defined a Scene as a sequence of Cuts set in the same location and time. Once you read the Storyboard, you should list up all the Scenes into this chart. You may find it helpful to further divide difficult Scenes into smaller parts. The basic criteria for assigning a Scene is the ratio between the number of Cuts in it and the number of Key Animators you have available. Generally in TV animation, 10 to 15 cuts per scene is a good a rule of thumb.

To give a very practical example, if you need to have 30 Cuts ready per day and you have 30 animators, the work will be delayed unless you cut the whole episode into 30 Scenes (= 300 Cuts).

Once you have completed the Scene Assignment Chart, have the Episode Director, the Animation Director and the Production Desk check it. When approved, assign each scene to your Key Animators.

Just as with the Breakdown Sheet, keep in mind that different studios may require different information to be included in the Scene Assignment Chart.

(1)

[Scene Cut Chart]

(1) (Tentative) Gangsta Stray Cats in the Wilderness					(2) Episode 1 "Enter The Gangsta Cat" Part A			(3) ○ ○ ○ ○ Company, LLC Production Manager:		

(4) Cut	(5) Scene	(6) Seconds	+	Frames	(7) Responsible	(8) Character/Props	(9) Details	(10) Places	(11) (12) Notes
1	1	4	+	0	Key Animator A	Wild Boy A, Gangsta Stray Cat	Cloak flutters in the blowing wind, dust cloud dances	Town square	
2		2	+	12	Key Animator A	Wild Boy A	Wild Boy A looks out	Town square	BG slide
3		5	+	0	Key Animator A	Gangsta Stray Cat, dried mackerel		Town square	Pan, BG slide
4		3	+	12	Key Animator A	Bar girl	Girl rushes over	Town square	
5		2	+	0	Key Animator A	Wild Boy A, Gangsta Stray Cat	Two people start running	Town square	
6		0	+	12	Key Animator A	Fish bar girl	Screaming girl	Town square	
7		0	+	12	Key Animator A	Manager of the fish bar	Screaming store manager	Town square	
8		1	+	12	Key Animator A	Gangsta Stray Cat	Dried mackerel flies in the air	Town square	Image BG
9		3	+	0	Key Animator A	Wild Boy A		Town square	Book division (divide transparent background layers)
10		3	+	12	Key Animator A	Wild Boy A		Town square	
11	2	6	+	0	Key Animator B	Local old man	Old man waiting for order at the counter	Inside the fish bar	Pan
12		2	+	12	Key Animator B	Manager of the fish bar		Inside the fish Bar	
13		2	+	12	Key Animator B	Fish bar girl	Orders fish special	Inside the fish bar	Attached pan
14a		0	+	12	Key Animator B	Wild Boy A	Forcefully opens the door	Inside the fish bar	Camera shake
14b		0	+	12	Key Animator B	Gangsta Stray Cat	Then comes in	Inside the fish bar	
15		0	+	12	Key Animator B	Wild Boy A		Inside the fish bar	
16		1	+	0	Key Animator B	Fish bar girl		Inside the fish bar	
17	3	2	+	0	Key Animator C	Wild Boy A	Wild Boy A jumps out of the store	Outside the fish bar	
18		1	+	0	Key Animator C	Gangsta Stray Cat	Gangsta Stray Cat leaps	Outside the fish bar	
19		1	+	12	Key Animator C	Fish bar girl		Infront of the fish bar	
20A		5	+	0	Key Animator C	Local old man		Outside the fish bar	T.U. (Track Up)
20B		3	+	12	Key Animator C	Wild Boy A		Outside the fish bar	

This number is used in handling outsourced orders with animators.

Total length	54	Seconds

(13)

Scene	Number	Responsible
1	10	Key Animator A
2	7	Key Animator B
3	5	Key Animator C
Total	22	
Attended to	22	
Not attended to	0	

(1) Title

(2) Number of episodes, subtitles, parts

(3) The contact information for the person assigned to that episode

(4) The cut range for each scene

(5) The scene numbering

(6) The number of cuts for the scene

(7) The name of the assigned animator

(8) The characters and props in the scene

(9) The content of the scene

(10) Where and when the scene unfolds.

(11) Some notes for special provisions.

(12) To convey information about the cuts to the animators, an extra column may be inserted with information about cuts in the same position, cels serving dual purposes, "bank", and other pertinent information.

(13) The total number of cuts and the status of the request are entered here. The unit price and cut-off dates may also be entered.

[The Cut Bag]

A Cut Bag is a large-sized envelope used to manage all the animation materials.

Each Cut's Layout, Key Animation, In-Between Animation and Time Sheet (in some cases also the Model Sheets needed as a references to the animators) will be placed into these envelopes, which will travel from department to department. Compiling and administering them is the job of the PA. The front side of the envelope shows specific hand-written reminders for animators and compositing staff, along with check columns for the Episode Director and the Animation Director.

Again, different studios may use slightly different formats.

(1)	(2)		(8)
50	Title		Memo/Communication
	Episode		
(3) C		Seconds + K	
100 C		Seconds +	
150 C		Seconds + K	
C		Seconds + K	

Picture	Episode Director	In Charge	Key Animator	In-between Animator	In-between Animation Director	Scan	Trace	Paint	Color Stylist	Special Effects	3D
	Layout					Resolution					
200						dpi					
		A					A				
250	Animator Key	B					B				
		C		BG Master Drawing	Layout		C				
								Scan and Paint Process	Compositing		
	Animation Director Check	D					D				
	Layout	E					E				
		F					F				
300		G					G				
	Animator Key			Production Assistant	Size						
350		Total									

(4) ... (5) ... (4) ... (6) ... (7) ... (4)

(1) Episode Number

(2) Title

(3) Cut number and Cut duration time

(4) Signature by the person responsible upon task completion

(5) The Cel number and total number for each Key Animation and In-Between Animation

(6) The set resolution, offset, and size setting used for the scan

(7) The Cel number and total number for each trace and paint

(8) Comments for each section may be entered here, or instruction charts may be attached here.

4   Animation Staff

Anime production involves a wide range of staff (departments and positions). Here, we will explain each role and job, focusing on the PA and higher-level roles. Usually all the staff is mentioned in the credits; so by having a full knowledge of all these positions, reading the credits will become a much more enriching experience.

● Production-related Tasks

[Production Assistant]

While this may overlap with the information in the "Who is the Production Assistant?" section (p.7), it is worth repeating that the Production Assistant is responsible for managing the whole production process.

[Tasks of the PA]

(1) [Managing Staff]

・Selecting the staff and scheduling their work

・Communicating with the staff

★ Hiring Key Animators and preparing the Order Slips is also the job of a PA.
Some Key Animators may be quick, others late; they may be working at different projects simultaneously.
Recurrently remind them of their deadlines and be vocal to ensure they stay on schedule.

(2) [Managing Materials]

・Managing materials incoming from each department

★ More specifically, managing the Key and In-Between Animation, as well as the Painting and Compositing data.
These are called "Interim Works" or "Interim Materials".

(3) [Managing the Schedule]

・Keeping the schedule moving forward and adjust it until delivery.

★ The PA manages the schedule from the delivery of the Storyboard up to the Video Editing.

★ Bottlenecks in production are liable to occur when the Episode Director and the Animation Director check the animation, in particular in the step from Primary to Secondary. Make sure to share the schedule regularly with both of them and update the information regularly.

★ When the Key Animation schedule gets delayed, that puts pressure on all the subsequent processes. The lack of time increases errors, so you will have to adjust the Schedule to ensure that no department will find themselves with a very short deadline.
Take every measure to ensure there are no delays in upstream processes.

(4) [Managing the Budget]

・Verify the invoice amounts, the details of the order slips, and other similar budget-related items.

★ Money is extremely important. Money involves trust, so handle it properly and with utter responsibility

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The PA manages the whole production process from Storyboard delivery to the completion of the Video Master

★ Interacting with the Episode Director and the Animation Director
_____

The Episode Director, the Animation Director and the PA: the performance of these three positions has a huge impact on the Schedule and the quality of the work. As a PA, you must constantly interact with the Episode Director and the Animation Director.

```
[Information that You Should Share with the Episode Director and the Animation Director]
(1) [Production status]
   Progress status of every Cut; Schedule status; daily work volume; priority tasks, etc.
(2) [Issues + Consulting about solutions]
(3) [Schedule of incoming events]
   - Day and time of the meetings and of the checks with each department
(4) [Staff status]
(5) [Status of other episodes]
(6) [Work for the day]
```

> ## Constantly interact with the Episode Director and the Animation Director responsible for your episode

[Office PA (Production Desk)]

In Japanese, the word Production Desk defines the role of what is called in English an Office PA. The main difference between PA and a Production Desk staffer is that the latter is in charge of a whole series under development or production at the studio (usually one staffer for one series) while the PA is in charge of only one episode at a time. In other words, we may think of the Production Desk staffer as the person who oversees the series and the PA as the one who oversees each single episode: what they manage is the same (the whole production line) but on two different scales.

The Production Desk usually also designates the Episode Director and the Animation Director as well as the PA for each episode; therefore they have a huge impact in the quality of the finished product.

```
[Tasks of the Production Desk]
(1) [Managing Staff]
   ・Attending to and managing the main staff (Series Director, Episode Director, Animation Director, etc.)
(2) [Managing Materials]
   Managing important interim materials (such as editing data, sound data, master version compilation data, etc.)
(3) [Managing Schedules]
   ・Adjusting the overall production schedule while looking at the status of each episode
(4) [Managing Budgets]
   ・Managing the production costs for all of the Episodes
```

> ## The Production Desk has management responsibility
> ## on the progress of all episodes

There are two types of producers: Animation Producers, the creative producers who are affiliated with studios and who are in charge of the visual production and storytelling; and Business Producers, who belong to the investors that make up the Production Committee and who are in charge of the monetary aspects of the production (gathering investors, preparing contracts, achieving profits etc.)

Animation Producers are the link between the Production Committee and the production site – whether it is one studio or a group of studios specifically cooperating at one project. They deliver the work and control the quality as the chief executives in production. Animation Producers can submit their own ideas for an anime they want to create and then be in charge of its production.

In addition, there are Line Producers at studios who create "production lines". This is a crucial position because the work of the Production Desk and the PAs cannot get done without a functioning production line. Sometimes the Animation Producer also acts as Line Producer.

[The Tasks of the Animation Producer]

(1) [Sitting at all meetings of the Production Committee and coordinating the production with each investor and/or right-holder]

(2) [Allocating the total budget to each Episode]

(3) [Calling meetings with the main staff and managing the Pre-Production]

(4) [Adjusting the whole production schedule]

[The Tasks of the Line Producer]

(1) [Structuring and coordinating the whole production line]

・Selecting the Editing, Background, Compositing, Sound and Editing studios; negotiating schedules and budgets with each of them and adjusting them when needed

★ At some studios the Production Desk or the Animation Producer may also operate as Line Producers.

★ Career Prospects for a Producer

If you aspire to move up from PA to Producer, you should expect to be required to also have experience at the Production Desk, then move to Line Producer and finally to Animation Producer (the exact hierarchy may vary from studio to studio). There are also cases of Animation Producers moving to Business Producer positions at home video makers.

Animation production is successful only when the business side and the creative aspects are a match. This is why, in order to become a Producer, it is important to understand both sides.

The Producer is responsible for the whole anime and for the production line

Asset Manager

One TV *cour* (10~13 episodes) usually requires the preparation of 200 to 400 assets. The Asset Manager is the person who orders and manages them. Since assets are necessary as a start point to creating animation, Asset Managers, by reading the Script, must figure out and categorize all the assets (Model Sheets of the Characters Design, Props Design etc.) that need to be prepared, assign their preparation to the art staff and share them among the production staff.

[The Tasks of the Asset Manager]

(1) [Compiling Breakdown Sheets]

・Listing up all the Characters and Props needed.

★ If the series is based on a manga or a novel, a good Asset Manager should read it in order to anticipate new characters and props that may be needed in future episodes.

(2) [Placing Work Orders)]

・Assigning the preparation of the Model Sheets for the Characters and Props to the artists.

★ The Asset Manager can decide what to assign to whom. So some parts may be assigned to the main Character Designer and Prop Designer, but others also to in-house team.

When necessary the Asset Manager would do iconographic research and prepare references for the staff.

(3) [Collecting the Model Sheets when completed]

・The Asset Manager should set the deadline for each Model Sheet at the moment of the order, and manage the finished

Model Sheets so to be able to hand them to the staff at any moment they may be needed.

★ It is fundamental that the staff can easily find the Model Sheets they need.

Asset Managers extrapolate from the Script the number and the features of characters and props needed, order the Model Sheets and manage them

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★ Career Prospects for an Asset Manager

It is quite common that stepping up from PA to Asset Manager takes to a career as Episode Director and eventually Series Director. As an Asset Manager you need to develop a high level of understanding and analysis of the Script and to thoroughly know the specific skills of all your staff (usually staffers in charge of drawing the Model Sheets are the most highly skilled in the whole team). This knowledge is the perfect foundation for anybody who aspires to become an Episode Director.

🔵 Scripting Positions

[Script and Scenario]

Writers are responsible for the Script (scenario) and they usually coordinate their work with the Series Director. In some cases there may be one Lead Writer who assigns single episodes to different writers, but the Lead Writer may also be in charge of all the episodes. The basic Script has a story arc featuring a "setup > rising action > climax > aftermath". Within this scheme, Writers create a scenario by assigning a storyline to each character, deciding how the drama will unfold and what hurdles the characters will have to overcome for that episode.

[Story Leader]

The job of the Story Leader is to decide the general framework for developing the drama, the storyline, and the character's growth process through every episode. They convey the flow of the storyline and provide notes to the Writers of single episodes in order to bring consistency to the whole series. Often the Lead Writer also serves as Story Leader.

● TV Series Director, Storyboard, Episode Director

[TV Series Director]

The TV Series Director is the person who bears overall creative responsibility for an anime. They convey their vision to the staff and have the last word on every creative decisions. They also supervise the schedule and the staffing.

[Storyboard Artist]

The Storyboard Artist is the person in charge of drawing the Storyboard. Directors may occasionally decide to draw the Storyboard themselves.

[Episode Director]

The Episode Director is responsible for directing the action of the characters, leading the direction of the story and developing their episode coherently with the preceding and following episodes. You could say that the TV Series Director is responsible for the entire series while the Episode Director is in charge of single episodes. Episode Directors also supervise the schedule and the staffing of their own episodes.

● Design

[Character Designer]

The Character Designer is the person who draws the Model Sheets for the characters featured in the anime. As previously mentioned, through specific facial features, hair styles, costumes, props etc., the Character Designer creates a whole narrative worldview around a character. This may require a complex research work aimed at bringing historical authenticity to the design, or a fertile imagination to create features unseen in the real world.

[Prop Designer]

The staff that design the Props used by the characters. As for the Character Designers, rigorous iconographic research and a visionary imagination are the basic requirements of skilled Prop Designers.

[Background Artists]

They are in charge of literally creating a whole world where the action of the anime is staged.

● Animators

[Lead Animation Director]

The Lead Animation Director supervises the drawings of the characters throughout the entire series. Usually there is one Animation Director assigned for each episode, but there may also be two or more of them working together. The Lead Animation Director's main task is to create a consistent visual look for all the characters, from the first to the last episode.

[Animation Director]

The Animation Director supervises all the animation drawings in one episode. The Animation Director verifies that all the Primary Key Animation (Layout, rough Key Animation) and the Secondary Key Animation reflect the vision of the Episode Director and gives consistency to them. Animation Directors would adjust the artwork and the animation in order to balance the quality of all Cuts and to give a uniform and consistent look to the characters throughout the episode. A series may have multiple Animation Directors for specific fields, such as Mechanical Animation Directors (specialized in robots, machinery etc.) or Effect Animation Directors.

[Key Animator]

The Key Animators draw the essential parts of the animation according to the Storyboard, as requested by the Episode Director. As we have previously mentioned, some studios split Key Animation into Primary Key Animation (Layout, rough Key Animation and Time Sheets) and Secondary Key Animation (clean-up and Tracing of the rough Primary Key Animation).

[IAnimation Supervisor]

Animation Supervisors check the Animation once it's completed, so to verify the quality. Sometimes they also perform a preliminary check to see whether the Key Animation can be handed over to the In-Betweeners as it is or if it needs any adjustment or addition (Pre-Submission Check).

[In-Between-Animator]

Also called In-Betweeners, In-Between Animators create all the drawings that "connect" the Key Animation, so that the characters appear as if they are moving naturally and smoothly.

● Painting, Special Effects, Compositing and other Digital Work

[Color Director]

The Color Directors set the color palette for the entire series. They create Model Sheets specifying the colors to be used for each character, with variations for different light conditions (daylight / nighttime, interiors / exteriors etc.). They also supervise the colors for the whole series.

[Color Stylist]

Based on the Model Sheets by the Color Director, Color Stylists designate which color must be used for each visual element on each Cut of the episode they are in charge of.

[Color Checker (Cel Checker)]

Color Checkers basically check that the right colors, as designated by the Color Stylists, have been used in each Cut. Sometimes the Color Stylist also acts as a Color Checker. Besides the color, they do some other work such as refining the Tracing of each drawing if needed.

[Colorist]

The Colorists scan the finished animation drawings, refine the Tracing when needed and paint the colors.

[Special Effects Artist]

Special Effects Artists refine the texturing of each visual element of a Cut by adding airbrush, highlights and at times also pasting textures.

[Compositing Director]

The Compositing Director is in charge of the Compositing Department. They create references called Compositing Boards and plan the compositing process for the whole series.

[Compositor]

The work of the Compositor is combining the painted animation and the backgrounds based on the Layout and the Time Sheet instructions. They also add effects (lights etc.) thus creating the final visuals for the anime.

[3D (CG)/ 3DCG]

The Computer Graphics team (CG or, more often, 3D) create and animate 3D models. CG is a whole process which includes Modeling, Rigging (creating the "muscles" and "bones" of the character), Animation and other tasks.

[Editor]

The Editors connect together all the finished Cuts and adjust them to fit the duration of the episode fixed by the broadcaster. Even with the same materials, a different editing can create a totally different impression, so the main skill of the Editor is to create a final product that is enjoyable and enthralling to the viewers.

⬤ Art (Background)

[Art Director]

The Art Director supervises the Background art throughout the entire series. Mirroring the vision of the Series Director and the Episode Director, the Art Director decides the style of the backgrounds, constructing a whole narrative world. In some cases the Art Director must recreate different cultures and civilizations faithfully to the reality or inventing fantasy worlds from zero. They share this vision with the Backgrounds Artists by way of Art Boards, which set the atmosphere, the color palette and all other elements of the environment where the series is set. The Art Director also checks all the finished backgrounds.

[Art (Background Artist)]

The Background Artists draw the backgrounds for each Cut based on the Layout and the Art Boards prepared by the Art Director.

⬤ Sound

[Sound Director]

The Sound Director is responsible for managing all aspects of sound creation (dialogues, sound effects and background music).

[Effects (Sound Effects)]

Usually called Foley in the movie industry, it is the department in charge of creating Sound Effects (SE) and synchronizing them with the video.

[Mix Engineer]

They adjust the volume balance of the dialogues, the Sound Effects and the background music. They also adjust the sound balance during voice recording.

[Music Staff]

A general term referring to the people involved in the productions of music (composers, lyrics artists, performers etc.). They are usually hired externally.

5   The Actual On-the-Job Tasks of a Production Assistant

● How to Prepare a Schedule

Preparing the Schedule is a fundamental of the production process. This manual describes the basics, but keep in mind that each company has different formats and policies.

[How to Make a Schedule]

(1) Check the expected Storyboard completion date and the booking of post-production studios with the Production Desk.

・Check the schedules for Editing (CT), Aft-Rec (AR), Dubbing Replacements (= updated versions of the movie used for AR and BD, as it may happen that by the time of AR and DB the final animation is not ready yet), Dubbing (DB), Compositing and Video Editing (V-Edit).

(2) Fill in the details for each items listed in (1) above in the spreadsheet that will become the Schedule.

・Create a calendar for the whole period from the start of the work (= the delivery date of the Storyboard) to the completion (the Video Editing), and fill in the schedules of each process listed in (1) above, the holidays and any other pertinent information.

(3) Create a tentative Schedule.

・As a general scheduling reference you can consider the following:

Layout + Rough Key Animation would generally take 3 weeks
Clean-Up (Secondary Key Animation) will also take 3 weeks
In-Between Animation, Painting, Backgrounds, Compositing and Retakes will take 1 week each
Total = <u>13 weeks</u>

★ Leave a buffer to accommodate potential delays in the schedule.

(4) Revise the Schedule.

・Verify that the tentative Schedule described in (3) above fits with the timing of the Video Editing of (1) above. If it doesn't seem to fit, you will need to shorten a timeline somewhere; consult with your Production Desk or your senior Production Assistant and then revise your Schedule accordingly.

(5) Calculate the number of cuts per workday.

・Divide the total number of Cuts by the number of work days, and calculate the work volume for each department per work day.

(6) Review the performance of each staffer.

・Check with the Production Desk and senior Production Assistants how much work each staffer has been able to perform in the past. If the workload exceeds the capacity of your staff, talk to the Production Desk to see if you can increase your staff.

(7) Determine whether provisional materials may be needed for Editing.

・ As the Editing date nears, you must decide that you need provisional editing materials (screenshots of the Storyboard, of Primary Key Animation etc.). If you don't have neither the finished animation nor such provisional materials ready, the Editing may stop causing delays in all the following phases, so you must take these decisions in a very timely manner.

(8) Consult daily with the Episode Director, the Animation Director and the Production Desk to confirm that the workflow is proceeding as scheduled.

・Upon consulting them, either revise or confirm the Schedule.

(9) Deal with delays

・When a department encounters delays, immediately adjust the Schedule to reflect the effects of such delay on the following phases of production.

[Schedule Table (Note: The format may vary depending on the company)]

Task	Person Responsible	Number of Cuts/ Total Footage	Number of Responsible Days
Storyboard			
Animator Meeting			
Layout or Rough Key Animation		63	4
Layout or Rough Key Animation Episode Director		84	7
Director			
Layout or Rough Key Animation Animation Director		84	6
Animation Director		84	6
Key Animations Submitted		84	6
Key Animation		63	4
Key Animation Episode Director		84	6
Episode Director, Animation Director		84	7
In-between Animation Pre-submission Check		84	7
In-between Animation		84	9
Scan and Paint		84	9
In-between Animations and Scan and			
Paint			
Background		84	5
Compositing		116	9
Retakes			

Lunar New Year
[February 10 - February 24]
Overseas key animation scan and paint presumably cannot be ordered.

● The Workflow of a Production Assistant

Here you will learn more about the production process. Below is a list of the tasks that the PA is responsible for. The bullet point "●" indicates meetings that PAs need to prepare. A double circle bullet point "◎" indicates tasks managed and supervised by the PAs.

For every meeting date, you must make absolutely sure to check the schedule of every participant and contact each one of them to confirm that they will take part to the meeting.

The Workflow of a Production Assistant

Task	People Involved and / or in Charge
● Episode Director Meeting	Director, Episode Director, Asset Manager, PA
● Animation Director Meeting	Episode Director, Animation Director, Asset Manager, PA
◎ Assemble the Animation Team	Production Assistant
● Animation Meeting	Episode Director, Key Animators, PA
◎ Layout Collection → Check by the Production Assistant (immediately after collection) → Check by the Episode Director and the Animation Director	PA, Key Animators Episode Director, Animator Director
◎ Collection of Key Animation → Check by the production assistant (immediately after collection) → Check by the Episode Director and the Animation Director → Coordination with Animation Supervisor	PA, Key Animators Episode Director, Animator Director Animation Supervisor
◎ Order In-Between Animation and Painting	Production Assistant
● Background Meeting	Episode Director, Art Director, Asset Manager, PA
● Color Meeting	Episode Director, Color Designer, Color Stylist, Color Checker
● Compositing Meeting	Episode Director, Compositing Director, Asset Manager, PA
◎ Collection of all materials	Production Assistant
◎ Rush check	Episode Director, PA and, if feasible, a member from each department
◎ Editing, Aft-Rec and Dubbing	Episode Director, PA
◎ Retakes	PA, representatives from each department
◎ Video Editing, preparation of the broadcast master, delivery	PA

*For CG (computer graphics) work orders, processes like Animation and Background, etc. are replaced by CG. At the stage of Pre-Production and Storyboarding, the items to be created with CG need to be identified, listed up and ordered to the in-house CG department or external CG vendors.

● Directors Meeting

Call a Directors Meeting when the Storyboard is ready. In this meeting, the Series Director will provide the Episode Director with a detailed overview of the production and key points, commenting each Cut in sequential order. Be sure to understand the aims and intentions of the work, and the artistic vision of the Series Director.

Task	Meeting with the Series and Episode Directors
Participants	Series Director, Episode Director, Asset Manager, PA *The Producer and the Production Desk may also be present.
What to prepare	(1) The Schedule (2) The Breakdown Sheet (3) The Scene Assignment Chart (4) Assets (Character Design, Background Art, Prop Designs) (5) The Storyboard
Timeline	(1) Distribute the materials to the participants at least three days in advance, telling them the date of the meeting, the start time and where to go (it will take the Animation Director at least one day to carefully review the Storyboard). (2) Remind everyone involved about the meeting the day before. (3) Check again that you have all the materials of (1)~(5) above ready. (4) At the time of the meeting, call in all the participants. (5) If there is anyone taking part to a meeting for the first time duly introduce them. (6) Once the opening remarks are finished, hand the meeting over to the Episode Director. Each scene will be reviewed, so take care that everybody is checking the same material from the same scene. (7) If there is any comment or information not included in the Storyboard, write it down in red on your copy of the Storyboard. (8) If the Series Director or the Episode Director have any request to you, duly take note. (9) At the end, review the whole Schedule with everyone (most importantly the dates for the Animation Director meeting, the Editing, the Aft-Rec, Dubbing Replacements, the Dubbing and the Video Editing). (10) Inform the Series Director and the Episode Director of the date and location of the Animation Director Meeting and the names of the participants. (11) Clean up the meeting room after everybody has got out.
Notes	You are expected to prepare the Model Sheets and the Breakdown Sheets; but as some of them may not be ready at this stage, check in advance with the Asset Manager.

> At this meeting the Series Director explains
> the key points of her/his vision to the Episode Director

● Animation Director Meeting

After the Directors Meeting, the next step will be having the Episode Director meet the Animation Director. They will discuss details of the direction, actions, camera work and animation for each Cut in sequential order. You will need the same materials you brought at the Directors Meeting and some time these two meetings are merged into one, with the Animation Directors taking part to the Directors Meeting.

Task	Meeting with the Animation Director
Participants	Episode Director, Animation Director, Asset Manager, PA *The Producer and the Production Desk may also be present.
What to prepare	(1) The Schedule (2) The Breakdown Sheet (3) The Scene Assignment Chart (4) Assets (Character Design, Background Art, Prop Designs) (5) The Storyboard
Timeline	(1) Distribute the materials to the participants at least three days in advance, telling them the date of the meeting, the start time and where to go (It will take the Animation Director at least one day to carefully review the Storyboard). (2) Remind everyone involved about the meeting the day before. (3) Once the opening remarks are finished hand the meeting over to the Episode Director. (4) Take note of any instructions given to you and follow-up on them. (5) At the end, review the whole Schedule with everyone (most importantly the dates for the Animation Director meeting, the Editing, the Aft-Rec, Dubbing Replacements, the Dubbing and the Video Editing). (6) Inform the Episode Director and the Animation Director of the date and location of the next meeting and the names of the participants. * This basically follows the timeline of the Directors Meeting.
Notes	You are expected to prepare the Model Sheets and the Breakdown Sheets; but as some of them may not be ready at this stage, check in advance with the Asset Manager.

> At this meeting the Episode Director explains
> each Cut to the Animation Director

● How to Assemble a Team of Key Animators

While assembling the Key Animators is a work of the Production Desk, in some cases the PA may be in charge of this task. You must assemble the team before the Storyboard is completed. If you succeed in doing that, your own work, as well as the work of the Episode Director and the Animation Director will proceed much more smoothly. Contact animators whose work is best suited for the kind of anime you have been assigned.

Task	Assemble the Animation Team (Selecting and Scouting the members of the team)
Timeline	(1) Once the Script has been completed, give it a thorough read and visualize the animation scenes (action scenes, dramatic scenes, climax scenes, "*mecha*" (giant robot) scenes, special effect etc.). (2) Check the Storyboard delivery date with the Production Desk. (3) Meet with the Episode Director and Animation Director personally and inform them of the Key Animators you want to hire based on the considerations of (1) above. The Directors may also express their opinions on which animators they would like to call onboard. (4) Draw up the Key Animation Schedule. (5) Make a list of animator candidates and contact them (your studio and your senior PAs surely have a contact list that they will be happy to share with you to make your job easier). (6) Check the background information of each key animator (their past credits, their current position and age). (7) Call the animators and inform them of the details of the anime you're in charge of (tell them the Schedule, the nature of the work and the monetary compensation and inquire about their schedule and availability. Always write down a memo of any important information you share by phone) (8) Send materials and schedules to the candidates you hope will be interested. (9) Contact those candidates one to three days later to confirm whether they will be available for the project. (10) If they agree, officially offer them the job. After this you should contact them about once a week to share information on the work status. (11) Once the Storyboard has been completed send it together with the Breakdown Sheet to the Key Animator. (12) Have the Key Animators look at the Storyboard (11) Schedule the Animation Meeting. (13) Call the Animation Meeting (do this within one week of delivery of the Storyboard. At the end of the meeting, confirm the date when you'll visit the animators to collect their work).
Notes	When other staff refer you to animators, always make sure to ask about their character. Learn phone call protocol and etiquette from senior production assistants.

> ## Start looking for key animators
> ## as soon as the Script is ready

● Animation Meeting

Once the Animators have been chosen and the Storyboard is completed, the animation work begins. At this stage, call an individual meeting with each Key Animator. The Episode Director will offer an essential overview of the work to be done (the action, the location, the camera work etc.) to assure that his artistic vision is faithfully reproduced in the final product. This is when the PA has the Key Animator sign the work order.

Task	Animation Meeting
Participants	Episode Director, Key Animator (individually), PA
What to prepare	(1) The Storyboard (2) Assets (Character Design, Background Art, Prop Designs) (3) The Breakdown Sheet (4) The Scene Assignment Chart (5) The Schedule (6) The Order Slips
Timeline	(1) Distribute the materials to the participants at least three days in advance, telling them the date of the meeting, the start time and where to go. (2) Remind everyone involved about the meeting the day before. (3) If the Episode Director and the Animator don't know each other, duly introduce them. (4) Verify the Cuts and Scenes to be discussed in the meeting. (5) Hand the meeting over to the Episode Director. The Episode Director will explain to the Animator each cut in order. (6) Before the meeting ends, verify the Schedule again with the Episode Director and the Animator. (7) Double check if the Key Animator is currently involved in any other project with other studios, so to be sure that the Animator can meet the deadlines. (8) Verify when and how to contact them. ★ Normal contact tools include phone, email, LINE, etc. Some Animator would prefer to be contacted during the day, others at night. Be sure to make notes every time you talk with them. (9) Provide the Time Sheets, the Layout, the animation sheets and other tools needed by the Animator to do his job. (10) Have the Animator fill out and sign the Order Slip and fill in the submission deadline. Also explain your studio's payment terms. ★ Payment terms vary from company to company, so check in advance with the Production Desk for details.
Notes	There are many different types of Animators. Interact with them in a way conducive to their work, so to grant a timely delivery within the deadline. Get tips on each animator's personality from Senior PAs.

The purpose of this meeting is sharing the Director's vision
and scheduling the deadlines for animation

● Collecting the Layouts and Rough Key Animations

   The Key Animator will first draw the Layout and the rough Key Animation for the assigned Cut. The PA should collect them and hand them to the Episode Director and Animation Director for check. Make sure to contact the Key Animators and visit them for the collection on the date that was agreed on during the Animation Meeting.

   The communication with the Key Animators should be done in person by the PA; but as sometime the collection may require a long trip to the Animator's house or studio, in many cases the PA sends an assistant. Splitting the collection task among multiple assistants or other PAs available at the time may save quite a good amount of time. Some studios even outsource the collection to specialized operators, or they supply one or more company cars to a PA specifically assigned to such collection task.

   It is strongly recommended to keep a list of all the Animators with a log of all the communications and the collection dates.

> Contact yourself the animator on the agreed date,
> but split the collection job with other colleagues

● Checking the Layout and the rough Key Animation

   Since the Layout and the rough Key Animation are the basis for the final visuals, the Episode Director and the Animation Director will check them. After having them checked and approved, scan the Layout and give it to the Art Department. It will become the main reference (Master Drawing) for the background to be painted. By doing so, Background Artists and Secondary Key Animators can do their work simultaneously, gaining precious time.

   As a PA you should also check how the work is proceeding at any time and keep notes on a spreadsheet.

> Layout and Key Animation are the most important visual
> elements of an anime, so the Episode Director and the
> Animation Director will check them thoroughly at this point

> Layout is also important for the Art Department
> as it is the main reference for the backgrounds

⬤ The checking process after collecting the Layout and the rough Key Animation

Who is Responsible for What	What to Check
PA > Content Check	・The quality of the Layout and the rough Key Animation [on the Layout] ・The Background instructions written in the Layout ・The camera work instructions written in the Layout ・ The instructions about Background, "Book" (name that indicates Background elements which are inserted in front of the Animation: for instance tree branches to give more reality to the scene of a character who's walking through a forest; utility poles for a character walking on a street etc.), the number of layers for the animation etc. ・The Time Sheet information (extrapolate the number of In-Between Animation needed from the number of Key Animation) ・If the Animator has duly written her/his name and the cut number ・Any messages that the Key Animator may have left to the Episode Director or the Animation Director
PA > Data Check	・ the Cut Number ・ the Collection Dates (check date by the Episode Director) ・ Number of rough Key Animation ・ If the Animator has duly written her/his name
PA > Report to the Episode Director	・ Attach a memo with the name of the Key Animator and your name, also adding a priority order for the matters you want to have checked ・ Arrange the Cut Bags in order and pass them to the Episode Director along with the summary table
Episode Director > Check	・ Checks if the Layout and Animation conforms to the order ・ Writes instructions to the Animation Director and the Key Animator ★ If the work doesn't conform to the order, the Key Animator will be required a retake. ★ When the check is finished, the PA should collect the Cut Bags, verify the instructions by the Episode Director and deliver them to the Key Animator and the Animation Director
PA > Report to the Animation Director	・ This is the same process as the report to the Episode Director. Always remember to add a memo with the priority order of the matters you want to have checked
PA > Sum up (post-ED check)	・ Re-check the Cut numbers ・ Confirm the next Episode Director's check end date (which will be the Animation Director's check start date) ・ Quantity of rough Key Animation
Animation Director > Check	・ Revisions of Layout and Key Animation ・ Instructions to the Key Animators and In-Betweeners
PA > Sum up (post-AD check)	・ Re-check Cut numbers ・ Confirm the next Animation Director's check end date (= Key Animation start date) ・ Quantity of rough Key Animation
PA > Deliver scanned layout to the Art department	・ Scan the Layout. Deliver it to the Art Dept. It will be used as Master Drawing for the Backgrounds.
PA > Return the layout to the Key Animators	・ Deliver the revised Layouts to the Key Animators (phase called "Layout Back") ・ Confirm the details of the revisions by adding memos and notes. ★ This process repeats every time new Key Animation is ready, so be always prepared to go and collect it.
★ Depending on the studio, the Lead Animator and the Series Director may also be perform additional animation checks. ★ If you succeed in gathering skilled animators, the whole process will be quicken up leaving more time for more compelling creative choices and a higher quality.	

● Key Animation Collection and Check

Once the Layout and the rough Key Animation have been checked and approved, the Secondary Key Animator will clean up and trace the rough Key Animation. As previously mentioned, these days most studios enacts a two-step system, where the Primary Key Animator draws the rough design and the Secondary Key Animator does the clean-up.

The collection of Key Animation proceeds like the collection of Layouts. Note that in order to proceed to the following steps the Animation need to be scanned: scanned data will be used for Painting then moved to Compositing. The scan data also serve as a backup in case you lose the original drawings.

You can ask other PAs to help you scan the animation when they are available.

Checking Procedures after Collecting the Key Animations

Who is Responsible for What	What to Check
PA > Content Check	・Quality of Key Animation ・Instructions on the Time Sheet (exact number of In-Between Animation etc.) ・If the Animator has duly written her/his name and the cut number ・Any messages from the Key Animators to the Episode Director or Animation Director
PA > Data Check	・the Cut Number ・the Collection Dates (check date by the Episode Director) ・Number of In-Between Animation ・If the Animator has duly written her/his name
Episode Director > Check Animation Director > Check	・Similar to the process described above for Layout and rough Key Animation
PA > Sum Up	・Cut numbers ・Collection date (it will be the start date of In-Between Animation) ・Quantity of In-Between Animation
Master version scan	- Scan all the Time Sheets, rough Key Animations and Key Animations ★ If some of the other PAs are available ask them to help scanning

After the Layout and the rough Key Animation are approved,
the work of Secondary Key Animators begins

● Coordination with the Animation Checkers

Animation Checkers examine the finished animation materials and find and edit any mistakes, thus granting consistency in the quality of the whole episode. Their work can become extremely tough if the previous processes are late, so always share any Schedule update with them. They will be thankful.

[The Timing of the Animation Checks and Adjustments]
(1) At the end of the Animation Meeting
　・ hand out the Storyboard, Breakdown Sheet, Scene Assignment Chart and the Schedule.

　・ communicate the names of the Episode Director and the Animation Director.

　★ Since the Checkers are responsible for many different titles, they may be well acquainted with the Animators you hired. So they can advise you about who are the slower or faster animators and give you other important information.
(2) When the Key Animation begins
　・ hand out the Schedule again.

　★ Have people prepare for work in anticipation of the time when the In-Between Animation will be finished.
(3) When ordering the In-Between Animation
　・ share with the rest of the staff what part you have ordered to which Vendor.

　★ Since different Vendors offer totally different quality, be sure to inform in particular the Animation Checkers. Depending on the Vendor, they may find themselves with a huge amount of work to do which will impact the Schedule.

It is extremely important to keep the quality of animation as high as possible because it is the main element the viewers will see.

● Placing a Work Order for In-Between Animation

Most of the time, animation is outsourced to external vendors. The PA decides which vendors to pick up, based on the Schedule. In many cases, the whole process from Animation to Painting is outsourced, but this increases exponentially the risk for retakes, as the in-house Animation Check process would get omitted, leaving nobody to check the quality before the painted materials come back from the vendor.

[Ordering In-Between Animation]
(1) Ascertain when the Key Animation will be ready (that will be the start date of the In-Between Animation work)
　★ Check the Schedule and any summary tables to figure this out.
(2) Determine where to place the order upon the Schedule restrictions.
　★ Delivery dates will differ depending on whether you pick up a vendor in Japan or abroad, if the work is digital or paper based, if it also includes painting etc.
(3) Pick up your vendor from lists you can find at your studio
　★ A rule of thumb is to prepare for the order one or two weeks before the expected date of the Animation Director's check day of Key Animation

Schedule an appointment with In-Between

Animation vendors in advance

● Background Art Meeting

In the Background Art meeting, the Episode Director and the Art Director decide what Backgrounds need to be drawn. They will share their ideas on locations, time of the day, season, weather, light source angles, color tone and atmosphere of the picture, with the Episode Director explaining in detail what actions take places in connection with each Background.

Task	Background Art Meeting
Participants	Episode Director (or Series Director), Art Director, Asset Manager, PA
What to prepare	(1) The Storyboard (2) The Master Drawings from the Layout (3) The Art Boards (4) The Background Art (5) The Breakdown Sheet (6) The Schedule (7) The Scene Assignment Chart
Planning	(1) Set the date for the Background Art Meeting. (2) Distribute any required materials to the participants ahead of time. (3) Remind the time and place of the meeting to everyone involved one day in advance and prepare for the meeting on the day of the meeting. (4) If there's some new participant, introduce them at the start of the meeting. (5) Hand the meeting over to the Episode Director, who will start discussing each Cut. (6) If you are given instructions, take notes and follow-up on them. (7) Verify the Schedule with all staff before the meeting ends. ★ In particular, check the delivery date of the remaining Master Drawings, the deadline for each Background, for Compositing, Editing, Aft-Rec, Dubbing Replacements, Dubbing and Video Editing
Notes	The Background Meeting is staged once a certain number Master Drawings are ready. If some of them are late, take care of delivering them with the highest priority as soon as the Layout check is done. To create a sense of visual consistency, the Backgrounds must match the color of the characters. That is why the Color Stylist often also attends also the Background Art Meeting.

It's a meeting where the ideas and instructions for every background are shared

● Coloring Department Meeting

In this meeting the Episode Director and the Coloring team (Color Director, Color Stylist, Color Checkers) read the Storyboard and the Breakdown List to verify the location, time of the day, season, weather condition, light source angles for each Cut.

Task	Coloring Department Meeting
Participants	Episode Director, Color Director, Color Stylist, Color Checker ★ Also prepare some copies of Key Animation which will also be used for specifying the colors on them
What to prepare	(1) The Storyboard (2) The Model Sheets (3) The Breakdown List (4) The Schedule (5) The Scene Assignment Chart
Planning	(1) Set the date for the Color Meeting. (2) Distribute any required materials to participants ahead of time. ★ Have the Color Director, Color Stylist and Color Checker carefully review the Storyboard. (3) Remind the time and place of the meeting to everyone involved one day in advance and prepare for the meeting on the day of the meeting. (4) If there's some new participant, introduce them at the start of the meeting. (5) Hand the meeting over to the Episode Director, who will start discussing each Cut. (6) If you are given instructions, take notes and follow-up on them. (7) Before the meeting ends, verify the Schedule with all the participants. ★ Mainly review the submission dates of the finished painted materials, the Editing, the Aft-Rec, the Dubbing Replacements, the Dubbing and the Video Editing.
Notes	Ideally, color specification should be performed on the finished animation materials, however it is very common that due to schedule delays, it must be done on Key Animation or even rough Key Animation. In this cases, you should scan all these materials and deliver them to the Coloring Department as soon as possible after the meeting. It's always good to have a scan data of the animation anyway, in case the original drawing is lost.

The purpose of this meeting is sharing the information on
the color palette to be used in each cut.

● The Painting Process

After meeting with the Color Department, when the animation (or at least the Key Animation) is ready, the painting process will begin.

> [The Painting Process]
>   (1) Once the animation is ready, ask the Color Stylists to specify the colors for each cut.
>   (2) Make appointments with Painting vendors to plan out the schedule.
> ★ In most cases this part of the process is outsourced, so it is important to choose a reliable vendor.
>   (3) When the Color Dept. has finished delivering the color specifications, send the Cuts to the vendor.
>   (4) When the painting has been completed, collect them and hand them over to the Color Checkers.
>   (5) When the Color Checking has been completed, hand all the material over to the Compositing Dept.

> There are three processes:
>
> Color specification, Painting and Color Check

● Working with Color Stylists and Color Checkers

The Color Stylists and the Color Checkers examine the painted animation and supervise the quality. Sharing and regularly updating the Schedule with Color Stylists and Color Checkers is crucial, since their work can be easily delayed by the previous process.

> [Timing of the Adjustments with the Color Coordinator and the Color Checker]
> (1) Before the start of the Coloring Dept. meeting:
>   ・ Hand out the Storyboard, the Breakdown Sheet, the Scene Assignment Chart and the Schedule.
>   ・ Communicate the name of the Episode Director and of the Animation Director.
> (2) When Animation starts:
>   ・ Share the schedules again.
>   ★ Share the expected delivery date for Animation, so that the Coloring Dept. can prepare for the color specification work.
> (3) When the order has been placed to the Painting vendor:
>   ・ Share information on which Cuts you ordered to which Vendor.
>   ★ Since the quality of the painting will vary depending on the Vendor, always keep the Coloring Dept. informed.

> Always keep the Coloring Dept. updated on the Schedule, as their work is the most exposed to delays from previous processes

● Compositing Meeting

The Episode Director (or the Series Director) will explain the basic directions and their vision for the production, details of each Cut, the camera work etc., and discuss the processes that they expect to be included in the Compositing phase.

Task	Compositing Meeting
Participants	Episode Director (or Series Director), Compositing Director, Asset Manager, PA
What to prepare	(1) The Schedule (2) A detailed delivery schedule for all the materials needed in compositing (Compositing Workflow Chart) (3) The Storyboard (4) The Breakdown Sheet (5) The Bank List (remember that Bank means those elements of the backgrounds that need to be composited in front of the animation, like tree branches when the character walks through a forest etc.) (6) Temporary Materials (materials which are not ready yet but need to be composited in a provisional form in order to proceed with other processes like Aft-Rec etc.) (7) Compositing Specifications (for Tracing Compositing and Time Compositing)
Planning	(1) Set the date for the Compositing Meeting. (2) Prepare the Compositing Workflow Chart and the Bank List, as well as a list of Temporary Materials. (3) When the Storyboard is delivered, give it to the Compositors. ★ If the Storyboard is not ready, distribute all other materials anyway at least three days prior to the meeting; but keep in mind that the Storyboard must be ready in time for the meeting. (4) Remind the time and place of the meeting to everyone involved one day in advance and prepare for the meeting on the day of the meeting. (5) If there's some new participant, introduce them at the start of the meeting. (6) Hand the meeting over to the Episode Director, who will start discussing each Cut. (7) Before the meeting ends, verify the Schedule with all the participants. (8) You will have to explain the schedule of the Compositing Workflow Chart to the Compositing Director.
Notes	★ Never forget preparing the Compositing Workflow Chart and the Bank List. ★ Prepare a list with detailed instructions about the Temporary Materials and the expected delivery dates of the relevant finished materials that will be needed for replacement.

> The purpose of the meeting is to share the director's vision
> for the finished visuals, including the effects, etc.

● Compositing

Compositing is the phase when the finished visuals that the viewers will see are prepared, by compositing together still elements (animation, backgrounds) with 3DCG parts, effects etc.

It usually begins after delivery of the painted animation. Sometimes, when some of the materials are not ready yet, a provisional compositing will be done from screenshots of non-checked or uncompleted materials. The one used to verify the animation will be called "Tracing Compositing" and the one to be delivered to the Aft-Rec in order to have the voice actor enter the dialogues at the right timing is called "Time Compositing".

[The Compositing Workflow]
(1) Write a Compositing Workflow Chart before the Compositing Meeting
   You will need to:
   ・Create a calendar two weeks before the editing date
   ・Enter both the total number of Cuts and the number of Cuts ready for delivery at each department.
   Items to be attached are the Layout, the Key Animation, the Animation Director's revision orders, the In-Between Animation (including the revision orders), the Painted materials (including the revision orders from the Color Checkers) and the Backgrounds (including the revision orders from the Episode Director).
   ・Calculate the number of Cuts expected to be ready each day and enter their tentative delivery date.
(2) Give the Compositing Workflow Chart to the Compositing Director and ask them to keep their team ready.
(3) Once the painted animation and the Backgrounds are delivered, organize them, fill an order slip and submit them to the Compositors.
(4) If the materials delivery is delayed, immediately contact the Compositing Director.
   ★ The Compositing department assigns their staff in advance as per the Schedule you deliver to them. The Compositors will not be able to work unless the Cuts are delivered on the scheduled date.
   ★ Since the Editing Schedule cannot be altered, if the Compositing gets delayed, the working time per Cut will have to be reduced, impacting the quality of the final product.

It is a process when painted animation and backgrounds
are assembled and effects are added to create the final visuals

An example of a Compositing Workflow Chart

# 11AB							Cut							
				7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
		Total number of cuts		Tue.	Wed.	Thu.	Fri.	Sat.	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.
L/O Animation Director		0												
Key Animation		0												
Key Animation Episode Director Check		0												
Key Animation Animation Director Check		58 left		42	8	8								
In-Between-Animation Supervisor		58 left		42	8	8								
In-between Animations and Scan and Pai		58 left		42	8	8								
Cel Check		230 left		40	40	50	50	50						
Compositing Inserted (BG)		150 left		30	30	30	30	30						
Compositing Inserted (Timing)														
Compositing Inserted (Actual Footage)		230 left			40	40	50	50	50					
Edits Inserted (IG)														
Rush Check														

● Rush Check

It's a series of meetings where all the main staff watches the video delivered from the Compositing department in order to find any area that requires a Retake.

As the PAs will be in charge of Retakes, they need to write down the detail of each one of them during this meeting. Remember that the quality of the Retakes will be what the viewers will see.

There are usually three types of Rush Checks, depending on the people who take part to them and the elements that are evaluated for Retake.

Purpose	What to Check
Checking the timing (Take 0)	The Episode Director, the Animation Director and the PA will check only the Animation and the timing. Elements like color etc. won't be checked at this time.
Checking the footage (Take 1)	Leaders of each department and the PA will check all elements along with the Episode Director.
Checking the footage including the Retakes (Take 2, Take 3)	Needed to check whether the retake portions have been revised as demanded.

Task	Rush Check
Participants	Series Director, Producer, Episode Director, Lead Key Animator, Animation Director, Lead In-Betweener, Compositing Director, Background Artists, Painting Director, Special Effects Director, 3DCG Director, Production Desk etc. ★ Participants will vary depending on the materials to be checked.
What to prepare	(1) The Rush Schedules (2) The Compositing Workflow Charts (keep track of the number of Cuts which are completed and the ones that need to be finished yet) (3) The Retake Table
Planning	(1) Consult with the Production Desk to set a Rush Check date. (2) Reserve a projection room. (3) Remind the time and place of the meeting to everyone involved one day in advance and prepare for the meeting on the day of the meeting. (4) Prepare for the check on the day of the meeting. ・ Get Recording Sheets and the Rush data from the Compositing dept. ・ Copy the Recording Sheets (Compositing Slips) and hand them to the Editing Department) ★ There's a good chance that in the days before the Rush you have to interact a lot with the Painting and Compositing departments, so it's a good rule to avoid taking commitments outside the studio's offices (such as visiting Vendors, collecting Key Animation etc.). (5) When the Rush starts: ・Try to have everybody decide what to fix right during the meeting. ・If you don't understand something, enquire immediately. This is the last chance to modify the product the viewers will see. ・Write notes (either on your notepad or your laptop) about the details of the Retakes. (6) After the Rush: ・ Summarize the details of the Retake into the Retake Table. ・ Try to have the Episode Director complete his part of Retakes on that day. - Prioritize the most time-consuming Retakes (namely, Animation).
Notes	★ Don't forget to collect the updated Compositing data every day.

> The purpose of this meeting is to
> ascertain which Cuts require a Retake

● Editing

Editing (also Cutting or CT) means connecting Cuts that have already been finished at Composition. The same materials, when edited in different ways, will give a completely different atmosphere and rhythm to the whole finished visuals, so it is an important phase of the production process. It is strongly suggested that you follow the process in the Editing room. The Cuts should be edited according to the number of seconds + frames indicated in the Storyboard. In TV anime, the editing is done in a relatively short period of time (3~5 hours for one Episode).

Note that, besides the indications of the Storyboard, there are time rules defined by the Broadcaster which must be prioritized over everything else.

[The Editing Workflow]

(1) Deliver all the materials to the Editing room at least one week in advance:

・the Storyboard, the Script, the Bank List, Temporary Materials, the list of Cuts omitted from the Storyboard, the Time Sheet from the Tracing Rush (copies are OK);

(2) Hand over the editing materials one day in advance

・Composited Data for every Cut

・Recording Sheets (Compositing Slips)

(3) The Editing staff will start their work:

・The PA should provide memos about any Cuts that have been altered from the Storyboard (length change, omitted Cuts, renumbered Cuts etc.), about any missing materials and any other significant information.

(4) After Editing:

・Retrieve the revised version, if any, of the Script

★ The Episode Director would prepare it and give it to you; you should then pass it on to the Production Desk.

・Distribute the Edited Video to the Main Staff

★ Give a copy each to the Episode Director, the Production Desk and other departments involved.

・Report any omitted Cuts

★ If any Cut had been omitted at Editing, immediately inform your animators and the other staff involved to stop working at them.

・Report the length adjustment that have been done at Editing

★ As the Time Sheet needs to be re-written, give all the set of materials to the Episode Director.

・Provide the Sound Studio with the revised Script and the edited video.

★ Sometime this may be done by the Production Desk. The revised Script will be the final text used for

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Connect the cuts and adjust the timing to make a single film

● After Recording

After Recording (AR of Aft-Rec) is the recording of the performances of the voice actors. Usually, the Time Compositing should be ready at this stage, but it is always better to have the final edit so they can better grasp the context of the scenes. This is particularly true for the first episode, so that actors can familiarize with their own roles; but unfortunately today is quite difficult to have the whole Editing ready before Aft-Rec.

There is not much work that the PA needs to do during Aft-Rec, but it always is better to attend it as much as possible. When the Client visit the site, the PA may need to show them around, leading the way, serve tea and snacks, or even draw check marks on their Script to indicate lines that have already been recorded. Contact the Series Director and the Episode Director at least one day before and communicate the time and location, as usually they'll also want to come.

[The Dialogue Recording (Aft-Rec) Workflow]
(1) The voice actors are given a file of the edited video (CT images) and a dialogue script in advance by their agency. During this time they study the characters and their dialogue. Once they enter the studio they only have a very limited amount of takes, so they only have a few days to prepare.
(2) The Sound Director will be in charge of the process. The Series Director and the Episode Director communicate their requests directly to the Sound Director.

・A Part test (1 or 2 times)

・A Part recording

★ B Part follows the same steps
[Etiquette for the Aft-Rec]
- Enter the studio 15 minutes before the start time
(The Sound Studios are usually fully booked, so be on time and stick to the Schedule.)

・ No whispering or sounds, also do not enter or exit the room during the recording (be as quiet as possible during the testing as well).

・ Do not ask actors for autographs (you are expected to be a professional).

To ensure the best performances by the voice actors, make
sure that the final edit is ready by the time of the Aft-Rec

● Dubbing

Dubbing (or DB) is adding Effects and background music (BGM) to the video, and balancing the volume of all the parts. The Series Director, the Sound Director, the Episode Director, the Producer and the sound staff (sound engineer, operators, foley staff) participate in this process. It is better for the PA to attend it when possible.

Note that by the time of the DB the final version of the Edited video may not be ready yet: that is why the word Dubbing Replacements is used to indicate provisional video parts which will be replaced when all Cuts are ready.

Sound-effects and Music are added at this stage

● Retakes

Retake is the process of making any necessary revisions to mistakes and glitches found during the Rush Check, as best as possible within the Schedule.

Depending on the work, the time you have may vary from one day to one week. The Retakes are replaced before dubbing or during Video Editing (the latter case will require a separate budget). Replace the rejected Cuts with the Retakes before the Dubbing, if possible.

The Retake Process

	Organizing the Retake Process
1	Designate a sub-assistant to the PA
2	Before the Rush Check, collect the Cut Bags and sort them by Cut number
3	The PA prepares a blank Retake Sheet and makes copies
4	During the Rush Check, the PA carefully fills in the details of any Retake to be done in the Retake Sheet (if there is no time, the Retake Sheet may be copied and distributed as it is, so write clearly and legibly. Everyone must be able to read it)
5	At the end of the Rush Check inform all staff of the total number of Retakes and the number of Retakes needed
6	Ask the Episode Director to wait for one hour or so and have them complete the Direction Retakes within the day
7	After the Rush Check, the sub-assistant shall copy the hand-written Retake Sheet and collects the Cut Bags
8	If there is time, the PA should type the hand-written Retake Sheet into an Excel spreadsheet to assure legibility
9	Once the Retake Table is ready, distribute it to all the participants of the Rush and the Production Desk
10	Insert the Retake Table inside the Cut Bags
11	Re-check all the Retake instructions: in particular check that there is no mistake with the Cut number.
12	If the Cut number is right, draw a diagonal line through its column in the Retake Table.
13	Deliver the Cut Bags to each section (giving top priority to the Episode Director, as he has to complete the retakes within the day).
14	Recheck the Animation and the Painted Animation. If there is any that requires any additional cost for Retake, add it in the order slip (if not, only fill in the Cut number)
15	After delivering the Cut Bag to each staffer in charge of the Retake, draw a diagonal line through the box in your Retake Table to indicate that the Cut Bag has been duly delivered.
16	When the Retake is delivered from one department, write in the date along the diagonal line. If multiple departments are in charge, repeat the same for each department.
17	When the Compositing of the Retakes is finished, paint over one half of the Cut number.
18	When the Retake Rush is finished, paint over the remaining half to show that the work on that Cut is finished.
* The processes in the gray shaded areas (7~13) must be taken care of within one hour.	

[People and Departments in charge of Retakes]
The Episode Director is in charge or Retakes where
　・she/he demands major visual modifications or requests that involve multiple Departments, such as additional camera work or effects.
　・something is wrong with the timing and the dialogue or the sound is are not in synch
　・the position of the animation or the backgrounds is wrong.
　★ Sometimes the following retakes will also be taken care of by the Episode Director
The Animation Director is in charge or Retakes where
　・there is the need to revise the design or the proportions of some character
　・there is the need to add some character
　・there is the need to add some action
The In-between Animation Supervisor is in charge or Retakes where
　・there is the need to adjust the lip syncing, there are glitches in the In-Between Animation
　・there is the need to add traces or the In-Between animation is flickering
The Painting Director is in charge or Retakes where
　・there is the need to correct color flickering, painting errors, mistakes in the choice of the color palette etc.
The Special Effects Director is in charge or Retakes where
　・there is the need of correcting texture and brushing mistakes, to add effects etc.
The Background Director is in charge or Retakes where
　・there is the need to modify any background
The 3DCG Director is in charge or Retakes where
　・there is the need to modify any 3DCG part
The Compositing Director is in charge or Retakes where
　・there is the need to correct processing defects such as flaring, paraffin shadowing (in Cel animation), and other Compositing glitches
　★ Consult with each department during the Rush to decide which one will be in charge of the Retake.
　★ If you do not understand something during a retake, consult with your Episode Director or other Producers and PAs.

Execute the retake efficiently for better quality.

● Compiling the Master Version

Compiling the Master Version is the final step in the editing process. At this stage, all the Cuts that were revised must be switched to the Retakes. Also check whether there is no discrepancy with the soundtrack (in case there is, you should adjust the video, not the sound).

The Series Director, the Episode Director, the PA and the Producer will all take part to the check to assure that all retakes are included in the finished product.

Replacing rejected Cuts with the Retakes can also be done in Video Editing, but it will cost more; so it is better to finish the replacements when compiling the Master Version.

Edit in the Retakes to complete the Master Video

● [V-Edit] (Video Editing)

Video Editing is the final stage in anime production, when the finished product is made into broadcasting tape. The name Video Editing lives on from the time when the product was delivered to TV stations in video tape format. After the Video Editing, no modifications to the visuals can be made. Getting to this stage without any trouble is the goal for PAs.

[The Video Editing Process]
* The PA is responsible for items 1- 2; the Producer is responsible for items 3-6.
(1) Verify that all Cuts are in their finally approved version (including the Retakes).
・Review all the Cuts while checking the Retake Table.
(2) List up and verify the staff credits.
・The staff credits are displayed at the end of the episode. You must provide the list to the Video Editor at least one day in advance, after double checking the names and position of all staff.
(3) Harding Check
・It's a process to prevent excessive light flashes in TV broadcast.
(4) Audio Loudness Check
・It's a process to prevent excessively high volume in TV broadcast.
(5) Final Client Check
・A representative of the broadcaster will check the final video.
(6) Finalization of the delivery data and/or tapes. Finalization of the check data.

> Adding the credits is the final touch to prepare your anime
> for broadcast and public viewing.

● Post-Completion Work

After completing the Video Editing, send out emails to staff members and organize materials, bills and expense sheets, following the directions of the Production Desk.

[Post-Completion Work]
(1) Thank the staff
・Send thank you e-mails to staff (the day after the video editing).
・Distribute copies of the finished work to the staff (in some cases you may be required to do this only after the broadcast date).
(2) Put in order the materials, the invoices and the order slips
・Put in order all the materials
・Put in order the Cut Bags (arrange them in numerical order and place them in boxes for storage).
・Collect and organize the invoices (in particular the invoices to the Animators, the Episode Director, the Animation Director, the In-Betweeners and the Painters).
 - Collect and organize the Order Slips (they must be stored for two years).

> Thank the staff and put in order the materials.

Production Assistant Manual

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