



THE COMPLETE GUIDE TO CREATING

VISUAL EFFECTS

WITHIN LEAGUE OF LEGENDS



PREPARED BY THE
LEAGUE OF LEGENDS VFX DISCIPLINE

I	OVERVIEW	Our philosophy and goals towards creating compelling visual fx
II	GAMEPLAY	Areas of focus, representing the gameplay space, and level of importance
III	VALUE	Determining and using value ranges
IV	COLOR	Color relation, hue usage, saturation levels, and color palette examples
V	SHAPES	Shape language, shape silhouettes, and illusion of movement
VI	TIMING	Communicating gameplay, animating accurate movement, and reducing visual noise

SECTION I

OVERVIEW



OUR PHILOSOPHY

Whether it's magic, fire, smoke, explosions, or the occasional sparkle, the visual effects discipline at League is tasked with bringing all these elements to life. They understand game design and translates artwork to visualize the magical world of Runeterra. Over the years, we have developed a unified visual style that's set to hit a core group of goals.

VFX GOALS:

- PROVIDE VISUAL CLARITY FOR GAMEPLAY
- MINIMIZE VISUAL CLUTTER
- DELIVER VISUAL EFFECTS THAT PROMOTE A CHAMPION'S THEMES
- CREATE EFFECTS THAT SURPRISE AND DELIGHT PLAYERS



SECTION II

GAMEPLAY



DEFINING GAMEPLAY BY CREATING AREAS OF FOCUS

VFX is closely connected to gameplay and visual design. Our VFX artists must have a deep understanding of League of Legends to clearly translate gameplay into a visual experience that is compelling and readable. In order to do that, we’ve defined a series of primary and secondary elements for each experience we create. This serves as our guiding light to ensure every visual effect promotes gameplay clarity by emphasizing the focal point of the effect, as well as reducing overall visual noise that may confuse players while it occurs.

PRIMARY ELEMENT RULES

- IT IS AN EFFECT’S FOCAL POINT
- IT SERVES AS THE SPELL’S MAIN PURPOSE
- THE EFFECT COMMUNICATES GAMEPLAY CLEAR AND ACCURATELY

SECONDARY ELEMENT RULES

- THE ELEMENT ENHANCES A CHAMPION OR SPELL’S THEMATIC
- IT SUPPORTS THE PRIMARY ELEMENT BY PUSHING VALUE AND SATURATION
- THE ELEMENT UTILIZES MULTIPLE HUES AND A WIDER SATURATION RANGE TO ENHANCE AN EFFECT’S OVERALL VISUAL APPEAL



PROJECT LEONA’S W

Leona’s W (Eclipse) forms a shield around her that explodes. The primary element should be the border of the Eclipse spell; in order to avoid the explosion, players must be able to easily identify the effect’s radius.

The secondary effects are the faint electric energy within the circle. They are used to enhance the project skin line’s theme.

AREAS OF FOCUS

A guide on how to define primary and secondary elements

PRIMARY ELEMENTS

- HIGH VALUE RANGE
- STRONG CONTRAST IN VALUE OR SATURATION
- CLEAR SILHOUETTE
- HIGH OPACITY
- STRONG SHAPE
- INTENSE MOVEMENT

SECONDARY ELEMENTS

- LOWER VALUE RANGE
- SMALL SIZE
- BLURRY SILHOUETTE
- LOW OPACITY
- SIMPLE SHAPE
- SUBTLE MOVEMENT



ACCURATE REPRESENTATION OF AREAS OF EFFECT

Clarity is paramount for a competitive experience that is meant to be played and watched. Providing an accurate representation of gameplay allows players and viewers to clearly understand and anticipate gameplay.

✗ INACCURATE REPRESENTATION

The radius of Teemo's mushroom explosion is about 600 units. However the mushroom's explosion only covers half of its radius and an area indicator is missing.



✓ ACCURATE REPRESENTATION

Omega Squad Teemo shows the AoE with a subtle ring, and the explosion was made to accurately communicate the area of effect.

ACCURATE REPRESENTATION OF EFFECT HITBOXES

Clarity is paramount for a competitive experience that is meant to be played and watched. Providing an accurate representation of gameplay allows players and viewers to clearly understand and anticipate gameplay.



✗ INACCURATE REPRESENTATION

Sona's old ultimate covered a wider range than its actual size. It often confused players when Sona's ultimate missed a target but the visuals connected with the target.



✓ ACCURATE REPRESENTATION

DJ Sona's ultimate shows the rectangular AoE clearly. The effect is shown at ground level so that the camera angle doesn't affect its position.

LEVEL OF IMPORTANCE

An effect's visual presence should communicate its degree of importance to players and viewers. For example, if a champion's basic attack effect had the same visual importance as her ultimate, it can confuse the player or viewer. Also this makes the ultimate less satisfying.

In order to determine these levels of importance, we map specific aspects of VFX to spells' power spikes. This ensures that the form matches the function of all visual effects. While determining an effect's level of importance, we evaluate 3 core components:

◆ READABLE

Players and viewers can immediately understand an effect's purpose

◆ EMPHASIS

Visual effects direct players to focus on important spells while reducing the visual noise in team fights

◆ SCALE OF IMPORTANCE

Each visual effect should match its level of importance to gameplay



LUX BASIC ATTACK VS ULTIMATE

Since the impact of Lux's Ultimate is so much greater than her basic attack, it should always be visually louder.

SCALE OF IMPORTANCE

The level of importance can be controlled by size, shape, timing, value, saturation and opacity. The importance of each particle should be determined by the effect's level of impact to gameplay, as shown below.



IDLE PARTICLE

- LOW OPACITY
- BLURRY SHAPES
- SUBTLE MOVEMENT

BASIC ATTACK

- SMALL SIZE

DEFENSIVE SPELL

- LOW SATURATION
- LOW OPACITY
- BLURRY SHAPES
- SUBTLE MOVEMENT

DAMAGE SPELL

- HIGH SATURATION
- HIGH OPACITY
- CLEAR SILHOUETTE

GAME CHANGER

- HIGH SATURATION
- HIGH OPACITY
- HIGH VALUE RANGE
- CLEAR SILHOUETTE
- INTENSE MOVEMENT

ULTIMATE

- HIGHEST SATURATION
- HIGHEST OPACITY
- HIGHEST VALUE RANGE
- LARGE SIZE
- IMPACTFUL ANIMATION

SECTION III

VALUE



HOW TO DETERMINE VALUE RANGE

Manipulating value range is the key to communicating magical effects. All magic and energy have a different level of value range and opacity to ensure they represent the power levels of each visual effect correctly.

To make sure these stay cohesive throughout the game, we adhere to a few guidelines when creating visual effects.

VFX VALUE RANGE GUIDELINES

- HIGHER VALUE RANGE DRAWS MORE FOCUS
- CONTRAST CAN CREATE A CLEAR AREA OF EFFECT
- AVOID USING 100% OR 0% VALUES, AS IT CAN BE CONFUSED FOR THE GAME ENVIRONMENT OR UI

VALUE RANGE BY EACH DISCIPLINE



VALUE RANGE IN CONTEXT




ENVIRONMENT VALUE
RANGE


VFX VALUE
RANGE


CHARACTER VALUE
RANGE


UI VALUE
RANGE

ENHANCING MAGICAL EFFECTS BY USING PROPER VALUE RANGE

In Master Arcanist Ziggs’s Bouncing Bomb, Pushing the value at the center of magical effects can help to make the effects look more powerful and magical.

✓ **ACCURATE REPRESENTATION**
By pushing the value to the center of the bomb, there is a clearer focus to the effect. This makes it easier for players to notice the spell in team fights.

✗ **INACCURATE REPRESENTATION**
With no visual “center” to the effect, it is difficult to notice where the effect is going to deal the most damage, as it falls into the background of the map.

ENHANCING MAGICAL EFFECTS BY USING ILLUMINATION

Illumination is the key to expressing a spell's magical nature. Pushing the effect's value range by adding a simple glow can greatly enhance the expression of a magical effect.



✗ INACCURATE REPRESENTATION

Without an illuminated effect applied, the effect loses a lot of life and feeling of magic.

✓ ACCURATE REPRESENTATION

With glow and illumination applied, there is so much more life to the effect. This also assists in conveying the motion, direction, and duration of the effect.

USING VALUE RANGE TO CREATE AN AREA OF FOCUS

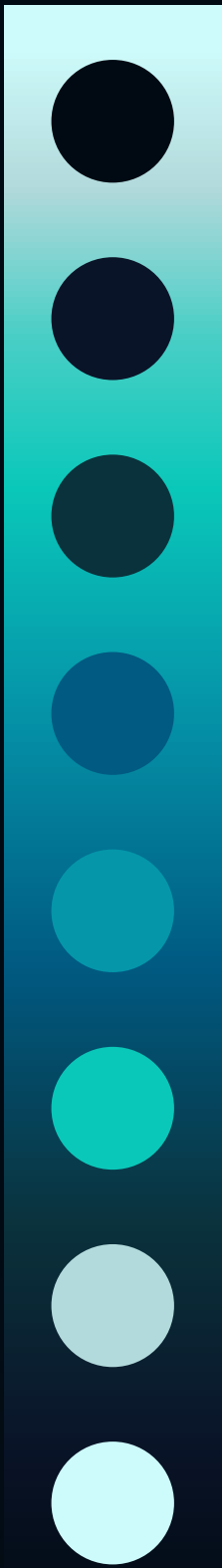
A visual focal point is created by contrast. When creating visual effects in our game, value range is one of our strongest allies in creating that contrast. When a desired effect can't achieve the ideal area of focus we want, adding a dark background manually can help to promote the effect. However this practice should be used with caution; if overused, these effects can contrast with other effects during teamfights.

✓ **ACCURATE REPRESENTATION**
Dark Star Varus' Q and Arclight Vel'Koz' W are good examples of using proper contrast to draw focus

HIGH CONTRAST
HIGH FOCUS

LOW CONTRAST
LOW FOCUS

HIGH CONTRAST
HIGH FOCUS



SECTION IV

COLOR



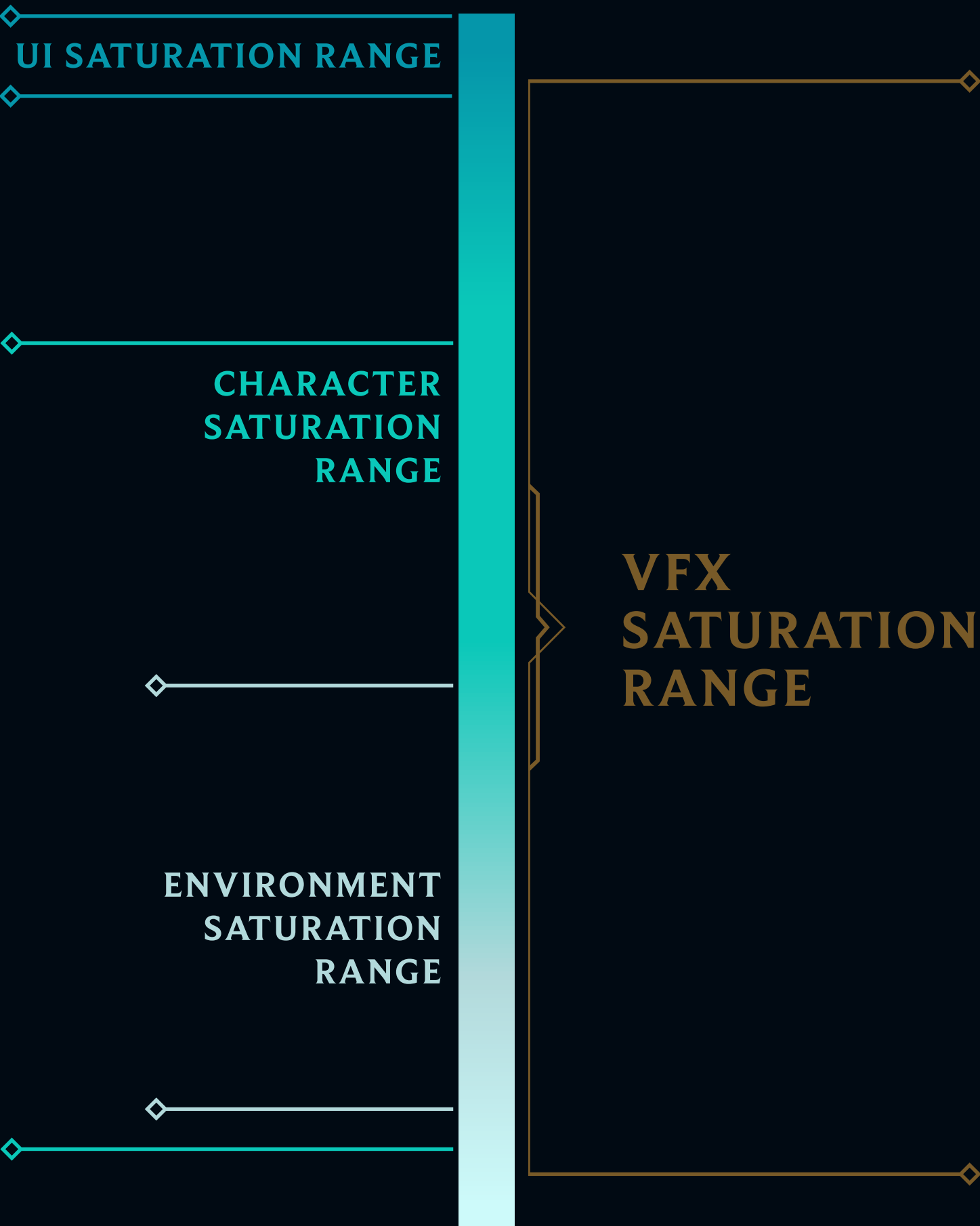
THE IMPORTANCE OF COLOR IN VFX

Color plays a huge role in defining the theme of a spell. In this section we'll underline appropriate use of saturation levels, color relationships, and basic color palettes for a few themes in League.

VFX SATURATION RANGE GUIDELINES

- HIGHER SATURATION RANGE CAN DRAW MORE FOCUS
- CONTRAST CAN CREATE A CLEAR AREA OF FOCUS
- AVOID USING 100% OR 0% VALUES, AS IT CAN BE CONFUSED FOR THE IN-GAME ENVIRONMENT OR UI

SATURATION RANGE BY EACH DISCIPLINE

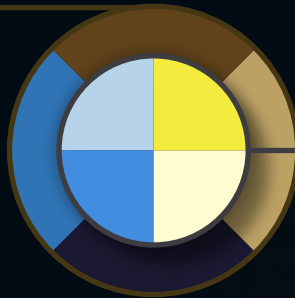


COLOR RELATIONSHIPS BETWEEN CHAMPIONS AND THEIR VFX

A champion's VFX has a higher and wider range of value and saturation range than its model.

AETHER WING KAYLE

MODEL COLOR PALETTE

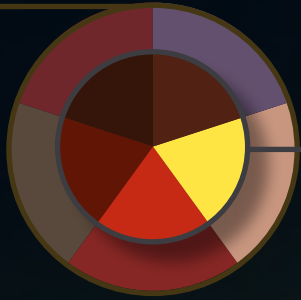


VFX COLOR PALETTE



DRAGON SLAYER BRAUM

MODEL COLOR PALETTE



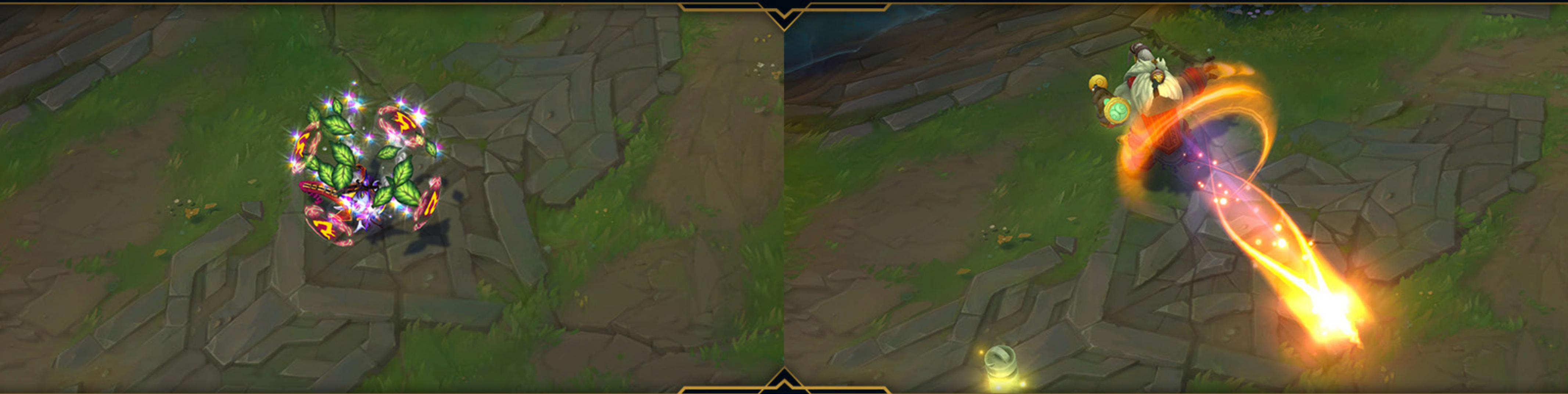
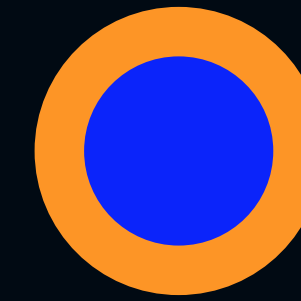
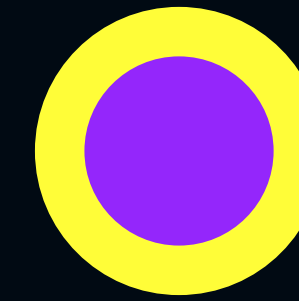
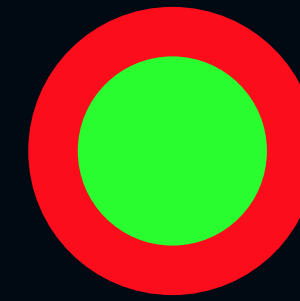
VFX COLOR PALETTE



COMPLIMENTARY COLORS AND HUE USAGE IN VFX

It is ideal to use analogous colors, but when there are two complementary colors in one effect, one of those colors must serve as the secondary color. When two opposite colors are present in one effect, those colors will always compete to be the primary element (even when they belong to different value levels).

COMPLIMENTARY COLOR EXAMPLES



✗ INACCURATE REPRESENTATION

Using complementary colors with high opacity and high saturation creates heavy noise in Lulu's shield effect. Moreover, the intended focal point is competing with these colors to be the primary element.

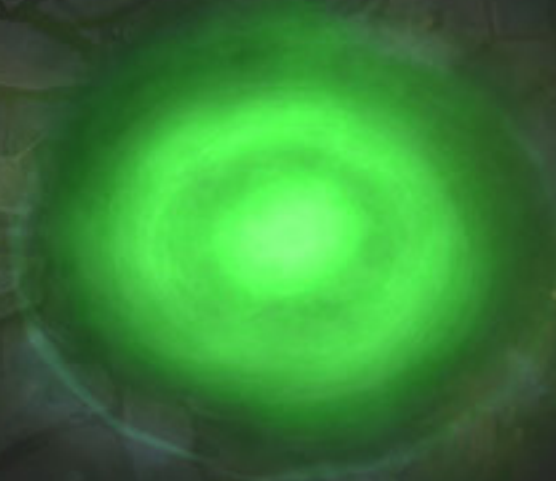
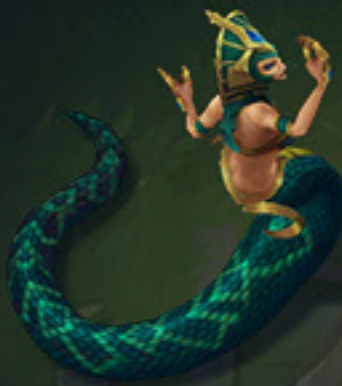
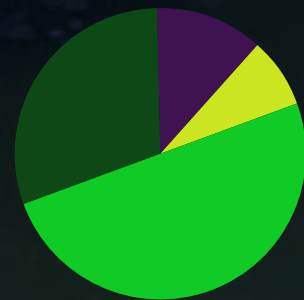
✓ ACCURATE REPRESENTATION

Bard's Q has a desaturated purple color with low opacity, balanced against bright yellow. By using a complementary color in the secondary part of the effect, it adds a beautiful richness to the effect without competing.

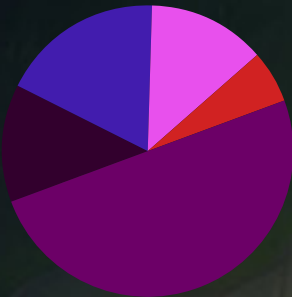
COLOR PALETTES FOR COMMON SPELLS IN LEAGUE

Here is a collection of the color palettes most commonly used for spells inside the game

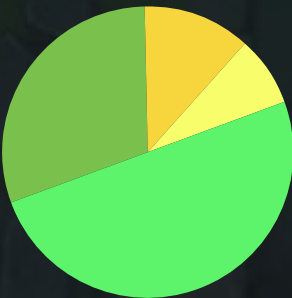
POISON



VOID



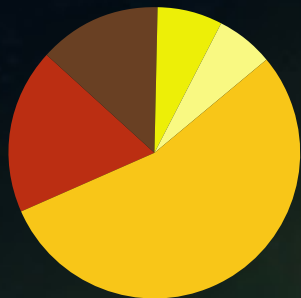
HEAL



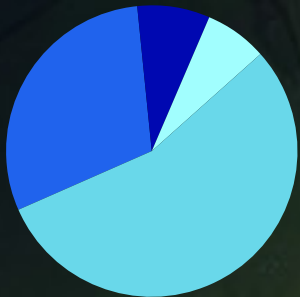
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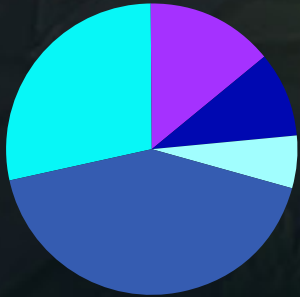
GUN POWDER



FROST



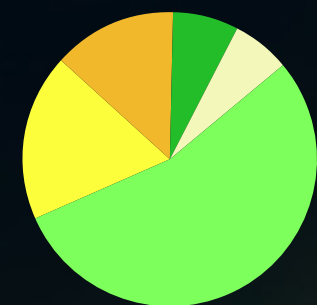
ARCANE



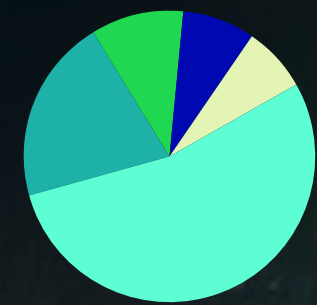
COLOR PALETTES FOR COMMON SPELLS IN LEAGUE

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NATURE



SHADOW ISLE



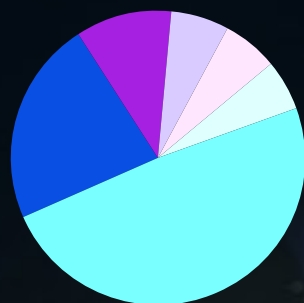
CELESTIAL



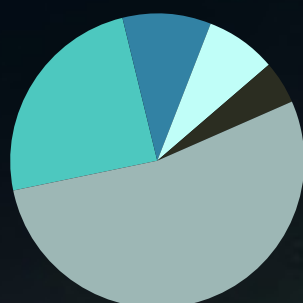
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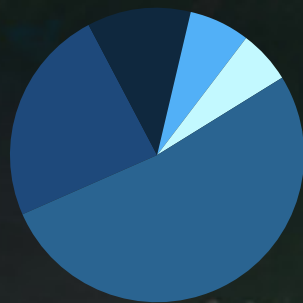
HEXTECH



WIND



WATER



COLOR PALETTES FOR COMMON SPELLS IN LEAGUE

Here is a collection of the color palettes most commonly used for spells inside the game



ALLY INDICATOR



ENEMY INDICATOR



SECTION V

SHAPES



USING SHAPE LANGUAGE TO DEFINE OUR VFX STYLE

Shape is another major element that defines a VFX art style and can help to reduce visual noise. Common shapes include: concise detail, hand-painted textures, mixture of soft and sharp shapes, well-defined silhouettes and moving object textures.

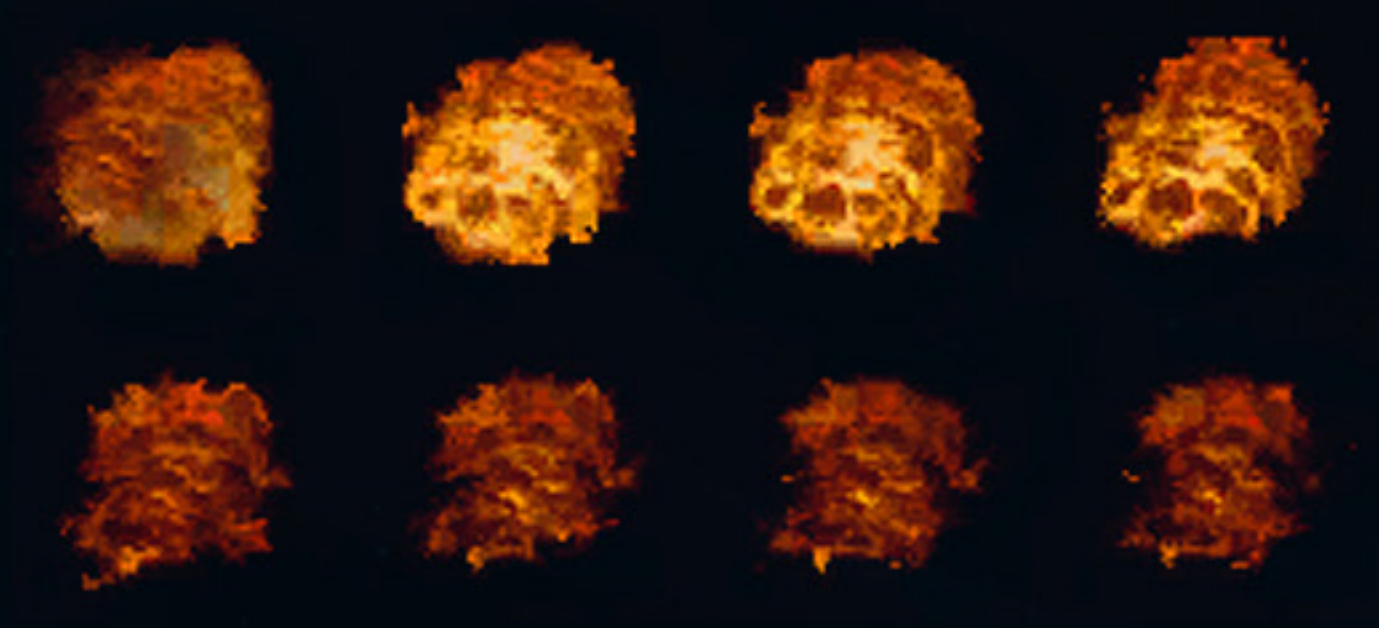
VFX TEXTURE SHAPE GUIDELINES

- ALL TEXTURES NEED TO BE HAND-PAINTED WITH CONCISE DETAIL
- TEXTURES NEED TO BE A MIXTURE OF SOFT AND SHARP SHAPES



✓ ACCURATE REPRESENTATION

A combination of hand-painted textures with a combination of soft and hard defining lines work best.



✗ INACCURATE REPRESENTATION

Avoid using photographs texture or visuals with superfluous detail becuae it creates unnecessary noise.

CREATING WELL-DEFINED SHAPE SILHOUETTES

Creating well-defined shapes is the key to reduce noise in team fights and quickly communicate gameplay and convey a spell's theme.



✗ INACCURATE REPRESENTATION

Since there are too many details and contrast in the effect, it is difficult to tell where the actual object is moving and what is the shape of effect.

✓ ACCURATE REPRESENTATION

This is a great representation of proper shape silhouettes. The shapes are simple, but have a wide enough value range to create a focal point.

CREATING MOVEMENT WITH THE SHAPE LAYER ITSELF

Adding a blur to an effect creates the illusion of movement. It helps enhance the directional feeling of the effect and clearly communicates gameplay.

✗ INACCURATE REPRESENTATION

Fast moving particles without motion blur end up creating visual noise and illusion of frame drop.



✓ ACCURATE REPRESENTATION

The directional shapes and motion blur of this particle provides a good example of where the visual effect is moving towards.

SECTION VI

TIMING



THE IMPORTANCE OF TIMING IN VFX

Timing is important to VFX and serves a critical role in creating meaningful movement and visual interest for effects. The way an effect changes over its lifetime offers essential visual information about its function.

VFX TIMING GUIDELINE

- ALL EFFECTS SHOULD HAVE ANTICIPATION AND DISSIPATION
- OUTROS SHOULD BE CONSIDERED AS A SECONDARY EFFECT; WITH A LOWER VALUE, SATURATION, AND OPACITY
- FADING ENERGY CAN BE EXPRESSED BY CHANGING VALUE, HUE, SATURATION, OPACITY, OR SIZE
- COLOR VARIATION, VALUE, OR OPACITY ARE ELEMENTS THAT CAN BE ALTERED IN RELATION TO AN EFFECT’S TIMING



SION Q INDICATOR

The time it takes for Sion’s Q to reach full stun range and the area of effect is clearly communicated with a visual timer.

USING TIMING TO COMMUNICATE GAMEPLAY

An effect's timing communicates specific gameplay moments.



GANGPLANK BARREL EXPLOSION

Gangplank's barrel explosion is a good example of showing different stage of effects;
it communicates gameplay timing clearly

ANTICIPATION

MAIN EXPLOSION

DISSIPATION



ANIMATING ACCURATE MOVEMENT

Accurate movement of elements is key to making believable effects.
Accurate and impactful timing clearly communicates gameplay and delivers a competitive and satisfying experience for players.



YASUO WINDWALL

Yasuo's Windwall is a good representation of wind movement
In League of Legends



INFERNAL DIANA

In Infernal Diana's fire embers enhance the skin's thematic while creating impactful moment



CORPORATE MUNDO

Corporate Mundo's Q is a good example of showing accurate influence of gravity on papers

ARTISTIC ENHANCEMENT WITH DYNAMIC TIMING

Dynamic timing creates impactful moment, create higher satisfaction and add more interest in effects.



✓ **ACCURATE REPRESENTATION**
Ekko R with dynamic timing create more impactful and powerful moment



✗ **INACCURATE REPRESENTATION**
Linear timing of Cast effect and explosion blast creates a less interesting moment

REDUCING THE AMOUNT OF TIME EFFECTS STAY ON SCREEN

We intentionally minimize an effect's linger duration to reduce visual noise for team fights.



✗ INACCURATE REPRESENTATION

Snow Day Syndra's W is intensely opaque, and has an unnecessarily long linger time. That puts too much focus on the effect and it will likely dominate other effects happening in the same space.

✓ ACCURATE REPRESENTATION

Justicar Syndra's W fades off quickly and has some transparency even at its high moment. This allows other effects to show up clearly.

THANK YOU

