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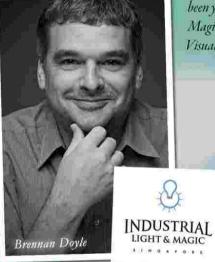
PHOTOS FROM INDUSTRIAL DIGHT & MAGIC LTD, SINGAPORE

VFX MAESTROS

LIGHT SABERS AND MORE

When it comes to fun per square pixel, it's difficult to find a better place where you can marry spectacular visual effects graphics with mindbending, futuristic storylines and still look cool doing it than in the burgeoning VFX industry. These days the twin peaks of art and motion represent the cutting edge of the animation industry, an edge Industrial Light & Magic Ltd. has been at for more than a quarter century. Their films like Star Wars, Transformers and the Johnny Depp-fronted Rango - just a few of the many movies that have cemented their position as a global leader make the likes of Ziggy Stardust and The Spiders from Mars look like child's play, Say you're a freshly-minted

graduate hot off the school conveyor belt, and swashbuckling light sabers in the distant echelons of space been your thing. What's next? Brennan Doyle, Singapore's VFX head honcho at Industrial Light and Magic Singapore (ILM) gives us a lowdown on all the insights you will need to land that spanking Visual Effects (VFX) job you've always wanted.



KNOW YOUR ROLE

WELCOME TO THE JUNGLE

If you're an aspiring VFX artist and the time is ripe for you to enter the bowtie jungle that is the workforce, landing a sweet job at major VFX companies like Industrial Light & Magic Ltd is not uncommon, but it's going to take an unshakeable determination and dedication to get you there. So, be realistic. Most VFX graduates land jobs in minor firms before gaining the experience to move onto bigger, more established corporations. This may take about 3 to 4 years of on-the-job learning and portfolio building, but it is worth the wait. Part of becoming a renowned artist is starting at the bottom of the workforce food chain and gradually working yourself up to greater things, so don't lose sleep over landing a job in a small firm. Even George Lucas had to start somewhere.

KEEP IT REEL

Let's face it. A good portfolio separates a determined artist from the rest. Not only does a portfolio speak for you, it helps showcase what you're capable of achieving if given the chance, VFX artists usually helm a kaleidoscope of expressions via blogs, YouTube channels and social networking sites to showcase their abilities. In most cases, graduates land jobs in major corporations through diversifying their outlets of expression.

Grabbing attention is key, so dirch the "troubled artist" persona and get yourself noticed. Industry headhunters are always on the prowl for interesting, fresh new artists, so start building that portfolio today.

easy to get your industry terms in a mangled bunch. Knowing your terms is key if you're planning on dishing out the next summer blockbuster. The first jargon any aspiring artist should

With terminologies like "digital composit-

ing" and "computer-generated imagery"

being thrown around precariously, it's

embrace is the stark difference between VFX and animation. Visual Effects entails the entire process of production from motion capture to frame composition, while animation is merely one discipline of the entire pipeline. A VFX team usually comprises a modeller, live action artist, digital animator and digital effects coordi-

Each specialises in a field of expertise so choosing the right role is key towards becoming an effective VFX artist.





BRAINTEASE

Surprise, surprise. So drawing and designing just aren't your thing. But you're a whiz kid in math and your teachers often point to you when they make references to Issac Newton, Congratulations, the VFX industry needs youl Students holding Master Degrees in Mathematics and Computer Engineering degrees often find themselves in the VFX industry as rendering or technical assistants. They usually break through the market with knowledge in technical aspects of production and are then nurtured in the artistic aspects by the industry. This way, they get the best of both worlds.

ROOM FOR CHANGE

With programme companies belting our software upgrades by the minute, a constant thirst for knowledge and the mindset to learn and re-learn concepts is key towards becoming an established VFX artist. Industry toolsets are usually revamped once every 4-5 years so artists are constantly on their toes anticipating change in order to survive in the industry. The concepts remain ever the same but the software aspects are tweaked on a regular basis. So, open up your mind and brace yourself for an industry that is constantly evolving.



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BY DISHADT STORE

Last year alone, the gaming industry was valued at a staggering US\$75 billion. It even dethroned the music empire by raking in \$50 million more. In the league of creative industries, those numbers speak volumes. So if you're looking for a good time to break into the gaming market – that time is now. But before you do, just remember – the gaming market is not all consoles and stunning graphics. Densely packed with defined roles, tight deadlines and a demand for precocious creativity, this industry is a madhouse, but if you're ready to swim in cutting-edge visual creativity, read on.

WHAT IS GAMING?

Spending incessant hours playing a game is very different from engineering one. The face of gaming is always changing and that is driven largely by technology – its advancements have not only cushioned the gaming industry, it's even provided new heights to reach.

"Take Wii as an example; if gaming hadn't conceptualised the need for motion interaction; the technology wouldn't have become publicly available;" says Jeffrey Lim, Lead Games Engineer at LucasArts Singapore.

As such, technology developers for platforms (like Sony and Microsoft) often enlist the aid of game developers like LucasArts to ensure new consoles are able to support projected game releases. So to stay relevant in this industry, it is essential that you stay with the trends and continue learning.



© LucasArts

ROLES IN GAMING

The gaming industry is not made up of neatly packed jobs. Most of these roles spill over onto other aspects of game development.

To be a **Game Designer** means you have control over the development of concepts and how it pans out.

A Game Engineer's focus is the interface - it is important for an interface to be user-friendly and captivating because this is the first contact gamers have with their game.



in Lucasi

Artists are involved in mapping out every detail of the visuals needed from avatar designs, animation to the general aesthetic of the game.

To be a **Game Production Officer** means taking on several roles, from being an organiser to handling budgets, to ensure a timely release.

Working as a **Quality Assurance Tester** is more than just dishing out feedback; it is also crucial to have an eye for detail

All these roles do seem clearly delineated but the departments do work in tandem, especially if the projects are big.

LOVE DEADLINES

To release a game on time, plenty of deadlines have to be met. It also largely depends on the type of game that is being released. For a mobile game, it takes around half a year for production, while an AAA game (open-sourced war game) usually takes 2-3 years (Blizzard's Diablo III took 10 years!). There are no strict time frames assigned to developing games, but to stay current, it is always best to keep the production time short. This also helps to mitigate last-minute changes in the ever-evolving technological boom.

Less than five years ago, for instance, iPads and iPhones that didn't exist previously took the world by storm. Suddenly there was a pressing need for cross-platform adaptability, so game makers were scrambling to come out with iPad or iPhone versions of their titles.





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has helped passionate students become world-class software and hardware engineers, designers, and digital artists – including the original team behind Valve's *Portal* series. Now, in partnership with the Singapore Institute of Technology and the Singapore Workforce Development Agency (WDA), DigiPen Institute of Technology Singapore offers a range of programs for students interested in careers in the video game, digital animation, and computer simulation industries.

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Join us for an info session at our campus on September 29 to learn more about DigiPen Institute of Technology Singapore and its programs. For details and to register, visit singapore.digipen.edu/infosession.



*These courses are offered under the umbrella of the Continuing Education and Training programs in collaboration with the Singapore Workforce Development Agency.



STARTING OUT IN THE WORLD OF GAMING So if you're still keen on stepping into this world, it's time for you to start identifying your key interests. Hone that skill in an internship at a game designing firm - besides getting real-world experience, you'll also get to learn the tricks and trades of the industry. Here's what some of LucasArts' latest interns have to say about their internship experiences: VKERDADA REEL

From left: Daniel Seah, Alan Miller, Paul Yung, Jun Wei

IUN WEI (DIGIPEN)

As a gameplay engineer, Chun Wei's internship draws on his years of amateur game development to help bridge the gap between designers' expectations and the limitations of technology.

"To be an artist in gaming, you have one aim - to make everything look realistic. That can be conflicting at times. when ideas don't necessarily translate to game engineering logic. I'm here to colour that 'grey area' in."

PAUL YUNG (DIGIPEN)

As a core engineer (aka "handyman"), Paul helps make sure everything runs smoothly. As an all-seeing eye, Paul's focus is to enhance the performance

"Visual effects make or break a game, so to enjoy better game-play, higher frame-rates are a must. My role is to ensure the underlying systems do that by working closely with the production team."

DANIEL SEAH (NUS)

The most coveted job for casual gamers is to be Quality Assurance Tester. For Daniel, it's definitely a fun job but he emphasises that focus is a very crucial trait to have in this particular line.

"Initially being a QA is about giving feedback on a game that is completed. Now with the industry expanding at ferocious speeds, being a QA means more face-time. The analysing and bug-finding is put into action as soon as the game is developed. The days of watching QAs stroll in only after the game is completed are gone. It is now all hands on deck, right from the start.

MORE TIPS FOR NEWBIES:

If you're a newbie to the gaming industry, here's some advice from Cyrus Lam. Senior Animator at Ubisoft Singapore.

in Singapore offer internship programmes for their students, where they can have on-the-job training. This means demo reel for your future employment.

their preferred department - but don't be discouraged, as this means you can learn different skills.

companies, staff are exposed to of game starting with them makes you more Most companies don't require their

employees to be a pro at

their position from the start, but keen staff who are willing to learn are what they really

Ubisoft produces games like Assassin's Creed, Ghost Recon and Prince of Persia.

Beyond just an über-cool building that induces equal portions of envy and aspiration. LASALLE College of the Arts has a rigorous and experiential teaching curriculum that allows students to participate in "live" projects and industry competitions that prepare them for the

real world. CAMPUS chats with two Design Communication graduands who recently swept awards at London's

Design & Art Direction (D&AD) Student Awards 2012 and the Crowbar Awards 2012, and one Animation graduate

who's making her dreams take flight!

I heard many positive experiences from my friend

I chose Design Communication because... Fve always been interested in the arts. When I was

young. I liked to doodle and draw cartoon characters

I also liked to lie down on the backseat of my father's

The biggest obstacle I

frustrated when my works

Is a fulfilling one with a lot

of late nights, hard work

and good memories.

don't reach my personal

Myself. I am a perfectionist

have faced is...

standards.

Check out more of the

2012 graduands' works at

www.thelasalleshow.com!

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The LASALLE

experience...

and sometimes I get

car so that I could see all the billboards passing by.

David Droga the advertising genius! Music and

MARCUS YUEN. 24

I chose LASALLE because...

who was studying there.

My inspiration is...

movies too

[BA(Hons) Design Communication Junior Art Director at BBH Asia

[BA(Hons) Design Communication Junior Art Director at BBH Asia

I chose LASALLE because...

UNI LEE. 28

I fell in love with Singapore and LASALLE when I came here in 2009 to take part in HP Space. I was working as a motion concept art director back then in Korea and I decided to stay here to further

The Wind Beneath
Our Wins

Advice for anyone who wants to study Design Communication

To really know that design is your passion and not jump into it because you think it's fun. An education and career in the arts require a lot of determination and real passion.

The key to my achievements ...

I always try my best and I want to win in everything that I do.

The LASALLE experience...

Provided me with many good opportunities. I am who I am today because of the lecturers and the environment at LASALLE.

GRACE YEW. 23

[BA(Hons) Animation Art] Lead animator at Kindernomics School

I chose the arts because...

I have loved drawing since I was a kid. Going to LASALLE after graduation was a natural choice.

Advice for anyone who wants to study Animation is.

It's a tough programme and definitely not for the half-hearted! For my 5-minute final year animation piece, I had to come up with 15,000 frames, which is equivalent to 7,500 drawings. This didn't include prep work like idea generation and character concepts.



A good animation character...

Takes a lot of time and research to create.

The LASALLE experience...

Prepared me for real working life as I was taught to have a systematic workflow and analytical mindset. I like the conducive environment, and like-minded creative school-mates with whom I can share ideas.

"While no specific qualification is needed to enter the field, it is always an advantage in addition to your portfolio. Plenty of schools accumulating work experience as well as a

Game production requires personnel with different skill sets, so students should target on a particular skill they intend to work on. During interviews, prospects will be asked for desired position based on their interest. However, not everyone can be assigned to

XBOX 360

With smaller many aspects production, so well-rounded.

ASSASSINS CREEDITS



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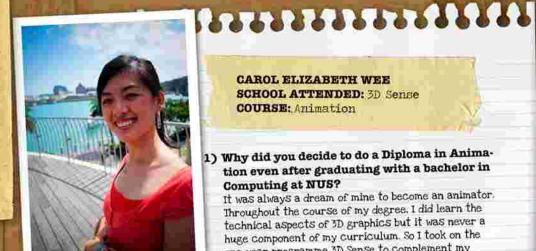
*Valid for first 10 registrants, subject to availability. Terms and conditions apply.





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insider scoop from students in the biz



MOHAMMAD FIRDAUS

SCHOOL ATTENDED: 3D Sense

COURSE: Animation POSITION: Animator.

Double Negative

1) Why did you pick 3D Sense?

I picked 3D Sense mainly because of the industrial immersion programme they offered After graduating from polytechnic with a Diploma in Multimedia Computing

I ventured into the finance sector for a good amount of years because I believed that I possessed a diploma that was too general So when I heard that 3D Sense was offering specialization courses in multimedia and arts. I knew right off the bat that this was the school that would help fine tune my existing skills.

2) Now that you are working as an Animator for Double Negative, what keeps you motivated? It is definitely my passion that keeps me going strong in this industry. Another catalyst that keeps me motivated is the opportunities I am presented with on a daily basis - just recently, I had the chance to work on Several Hollywood films like John Carter and Total

5) What advice would you give to aspiring CG Artists seeking to enter the industry?

Be sure to cultivate passion and focus. It is also important to have the mentality to accept criticism. It is human nature to feel dejected but forging on and learning from your mistakes will help you grow both spiritually and creatively. So keep an open mind and you will reach your full potential, in time.



PATRICK LIM

SCHOOL ATTENDED: CG Protege

COURSE: WSQ Diploma in Animation (3D Modelling & Texturing)

POSITION: 3D Modeller

Tiny Island Productions

Why did you pick CG Protege?

At the time, there were several animation schools to choose from, but CG Protege caught my eyes with their impressive portfolio and quality of graduates. I went down for a visit and never looked back. The lecturers are very experienced in their field and know exactly the kind of skill set the industry needs. They also act as mentors to guide us along our careers. Although I've graduated, we still share our knowledge and I go to them for advice - they are always there to

2) How has studying there benefited you?

I was trained as a 3D modeller during the course of study, which included the core 3D modelling techniques, 3D game asset creation and extra classes such as anatomy and life drawing. The tools, techniques and workflow are essential and up-to-date with the industry standard. The knowledge gained enabled me to work as a next gen game artist at a local game company during my industry attachment. and as a 3D environment modeller now at Tiny Island Production.

> 3) What have you been working on?

I have worked as a digital asset modeller on Ben 10: Destroy All Aliens CGI film. as a stereo artist for the Dream Defender TV series and as a game character modeller for a DOTA-styled game called Darkgrounds, I am looking forward to more exciting projects ahead and hopefully be part of the production team for a CGI feature film in future

CAROL ELIZABETH WEE SCHOOL ATTENDED: 3D Sense COURSE: Animation

Why did you decide to do a Diploma in Animation even after graduating with a bachelor in Computing at NUS?

It was always a dream of mine to become an animator. Throughout the course of my degree. I did learn the technical aspects of 3D graphics but it was never a huge component of my curriculum. So I took on the one-year programme 3D Sense to complement my existing knowledge.

2) What was your best experience studying there? It would definitely be the openness among the staff and students in 3D Sense. I like the fact that we could approach any of the teaching staff for help. It was also an incredible experience to be around like-minded people with similar passions for the industry.

 What advice would you give to students looking to venture into the field of animation?

I would say keep practicing and stay focused. Feed your passion by actively reading up Learn to get yourself inspired because no one else is going to help you. Technology is also constantly changing the face of animation. So be sure to keep yourself updated with the latest

ALAN MILLER SCHOOL ATTENDED: Digipen INTERNED AT: LucasArts, Singapore

1) What did you do during your internship at LucasArts?

As an intern in the engineering department. I was involved in the conceptualisation and implementation of ideas. My job was to gauge the feasibility of the game as conveyed by the designers. I loved what I did, and it didn't feel like a job at all. It also helped that I had a higher level of interaction with other artists on a daily basis compared to other interns

2) What is the most rewarding aspect of what you do?

It's hard to pick one thing. If it wasn't for this internship. I'd be programming a game for school Now I know I can do a lot of things I'd never dreamed of The best aspect of my time at LucasArts is accomplishing things as a team and sharing that experience.

LENA AH-TUNE

SCHOOL ATTENDED: Orita Sinclair COURSE: Diploma in Design Communication

1) Why did you pick Orita Sinclair?

I originally chose Orita Sinclair as I was very interested in learning new digital skills, since nowadays everything is online and tech-based The course length (11 months) also helped me quickly acquire the skills in digital software without wasting any time.

Because the lecturers have design backgrounds and work as a professional creatives, they also know what it's like in the world of commercial design, so their advice is really helpful.

2) What was your best experience studying there?

During my course. I've also built a good network of contacts. from fellow students to industry people and lecturers, which helps me tap new opportunities like competitions and professional discussions.

3) What advice would you give to students?

And while I don't know what the future might hold. I know I'm better prepared with a strong foundation in design. So for anyone con-Sidering design, my advice is to never stop trying, keep pushing yourself creatively and find a way to enjoy what you have to do.





Daydream everyday !

WSQ Diploma in Animation, 12 months



Dreaming Professionally

Yes, they dream about robots defending the world, about heroes saving the damsel and they dream about the colours of their cape. They dream so that we can enjoy better movies and games, and know that there is always hope for humanity.

But our students dream in a process driven and disciplined environment. At 3dsense, they study and work in an industry, based pipeline and have produced some of the best students' short films and projects the industry has seen. They are subsequently hired by the best amongst the world's leading entertainment studios. Yes. Dreaming is a serious business.

We are all around you,



Do you know that 3dsense is all around you? Since 2003, every year, batches of our graduates success fully enter the Visual Effects and Anination industry, creating some of sames for the world to see. Yes, you White and the Huntsman, Rango, Captain America, Assassin's Creed John Carter of Mars, Battleship, The Avengers and more All because they dared to dream.

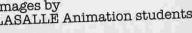
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Images by LASALLE Animation student Sketches Images by LASALLE Animation students

What is animation? It's the art of breathing life into an inanimate object. These days, most people associate animation with things like drawing characters for movies or cartoons, but anything can be "animated", from a simple sketch to complex, virtual geometry where animators create entire universes in which the laws of space, time and physics need not apply.

While incredibly slick, 3D computer animation is a relatively new phenomena, animation can include anything from bringing a simple 2D puppet to life (think Pinocchio), to dynamic graphics for a movie trailer or website homepage, or even non-traditional mediums like sand-on-glass.

And while each is very different, what ties them together is that life is breathed into all them by an

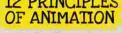




12 PRINCIPLES

Probably the most famous Animation Studio is Disney, where a group known as the "9 Old Men" codified the "12 Principles of Animation" which are still the benchmark today.

Addressing everything from how style make it suited for a specific role



characters look, to how you as a viewer perceive space and time, the Principles range from "Squash and Stretch" (dealing with volume and movement) to abstract "Appeal", which governs how the sum of a character's habits, looks and even as a villain, hero, side-kick or even an animated tea cup.

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In the film industry, animation is generally seen as one of two definable types:

- * Story-led character animation like Pixar or
- * Special Effects like Harry Potter or Transformers which add to existing, live-action footage;

And within those genres, there are distinctive styles of 2D and 3D.

MODERN ART THE EMERGENCE OF 3D

It might seem everything today is 3D, but when you look back, it's a relatively new phenomena. Fifteen years ago, 3D was an emerging industry globally, led by films like Toy Story, which was ground-breaking as the first movie ever produced without the use of a camera, and created entirely

2D still remains hugely popular though - just think South Park, Spongebob and The Simpsons - and that's just 2D titles starting with "S". It also remains the go-to style in Japan for anime and manga which give 2D a vast global audience.

The lines blur further within the film industry where even though a movie may have elements of 3D, those elements can still have aspects of 2D meaning the two styles aren't mutually exclusive. And that's good news for animation students, as the skill-set for an animator is transferable from 2D to 3D.

Irregardless of which style you prefer, the two most critical skills you need to be successful as an animator are the love of reading and drawing since the ultimate goal of both 2D and 3D is to tell a story and communicate that visually to an



DEFINITION OF 2D / 3D

While 2D and 3D might seem miles apart, the only fundamental difference between them are the tools involved. While 2D uses pens. pencils and more traditional mediums, 3D relies on computers and software

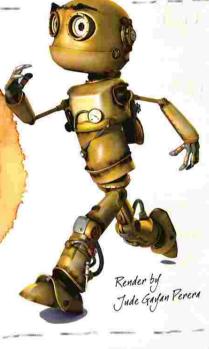
There are obviously circumstances that favour one style over another: for instance, in a battle sequence with thousands of characters, 3D's obviously preferable to hand-drawing. Conversely, if you're doing character sketches for an advertising campaign, the speed and flexibility of 2D are better.



While not always true, generally 2D-trained animators tend to become better 3D animators, and that's because people who've gone straight into 3D tend to rely on software to make dynamic changes, while trained 2D animators are forced to carefully consider elements like lighting and shadows, lest they have to go back to the drawing board after hours of work.

Natisah Mohamed

Conversely, if you want to get into animation but can't draw, then 3D gives you an option that 2D cannot



ANIMATION AS A CAREER

Career-options within the animation industry are literally endless, and that's because like any industry, it has pipelines and processes. Just watch the credits roll at the end of any animation film there are IT experts developing 3D tools. There are fine arts students who become modellers. There are marketing experts and scriptwriters. Ironically in "animation production", the actual animator is just one of dozens of roles.

And that's just an animated movie production. There's a whole other spectrum of "animation jobs", such as comic book design, web design, advertising and graphics.

LEARNING THE ROPES

Like any course of study, animation students do more than just sit and animate during their matriculation. Animation programmes are made up of numerous modules, which expose students to a range of disciplines including acting, drawing, programming and writing. And this gives you the flexibility to adapt to any of the dozens of roles that make up today's animation industry.

Many schools in Singapore offer comprehensive animation programmes - with both diplomas and degrees available - letting students easily tailor their education to their career ambitions.

