

LUCASFILM ENTERTAINMENT COMPANY, LTD.

SKYWALKER  SOUND

 INDUSTRIAL
LIGHT+MAGIC

Information Packet

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TYPES OF JOBS AT **INDUSTRIAL LIGHT + MAGIC AND SKYWALKER SOUND**

This section presents profiles for various positions with either of the Lucasfilm Entertainment Company, Ltd divisions, Industrial Light + Magic or Skywalker Sound. *A listing here does not mean there is a current opening.*

- Audio Technician
- Character Animator
- Creature Developers
- Composer
- Computer Graphics Technical Assistant
- Digital Matte Artist
- Digital Plate Restoration Technician
- Digital Resource Assistant
- Editorial Technical Assistant
- Matchmover
- Modeler – Organic & Hard Surface
- Production Assistant
- Rotoscope Artist
- Systems/Tools Programmer
- Technical Director
- Video Engineer

For a listing of current opportunities view our website at ilm.com

AUDIO TECHNICIAN

Division: Skywalker Sound

Duties: Audio Technicians include Mix Technicians, Transfer Operations Technicians, Recordists, Central Operators and Projectionists. Responsibilities vary depending on the specific job title. However, duties may include setting up and operating technical equipment for a mix, aligning the recording, playback and projection equipment; assisting with the locating, setting up and breakdown of outboard equipment; completing billing forms such as mix logs and master inventory tracking sheets, and assisting clients with various technical needs.

Requirements: Two years work experience or training in audio post-production is required. Candidates must have extensive knowledge of both digital and analog audio recording techniques. Knowledge of digital audio workstations and computers is highly desirable. To apply, submit a resume.

Other info: Most often, Audio Technicians work “on call” including weekend, swing and graveyard shifts.

CHARACTER ANIMATOR

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Character Animators comprehend and execute direction from the Animation Supervisor or Animation Director to create the motion and personality of computer graphics characters. The Character Animator will use various high-end animation software packages such as SoftImage, Maya and proprietary software. As a member of the production team they participate by providing feedback to other members of the production and by attending dailies on a regular basis. Character Animators are generally from a traditional background in cel or stop motion animation who now take a computer modeled character or object and bring it to life via the computer.

How to prepare yourself/what we look for: Technical skills are necessary for the position although the candidate’s artistic skills are the most important attribute. Successful animators have knowledge of traditional animation principles: acting, film production and compositional design. They have the ability to visually express believable motion and acting with characters and/or creatures. In addition to these core artistic skills, it would be advisable to pursue classes in 3D animation and ultimately produce a short film (approximately 3 minutes) to demonstrate an understanding of the basics of animation, acting and filmmaking. To apply, submit a resume, reel and/or portfolio. Your 2D portfolio should show an understanding of basic pose, structure and attitude through life drawings of both sustained poses and quick sketches. In your reel and/or portfolio, show sketches, gesture poses, pencil tests and short animation films. Individuals without proven skill will not be considered for a Character Animator position. (Refer to the section titled “Application Process”)

Other Info: This is a union position working 45 hours per week.

COMPUTER GRAPHICS TECHNICAL ASSISTANT

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Provide general but crucial support to all current productions. Computer Graphics Technical Assistants (TAs) retrieve files from tapes, process conversions, transfers, and the backing up of data to tape. They have the opportunity to develop simple scripts and tools to streamline operations and also provide assistance in monitoring shots.

How to prepare yourself/what we look for: Strong technical knowledge and problem-solving skills are the key to this position. We look for candidates with a Bachelor's degree in Computer Science and solid UNIX experience, as well as strong programming and scripting skill. A strong artist eye and familiarity with film and video post-production techniques will be necessary later on, if you should pursue the Technical Directing career path, for which this entry-level position will provide a solid foundation. To apply submit a resume and demo reel.

Other info: This is a union position working 45 hours per week and must be willing to work day, swing, graveyard and/or weekend shifts.

COMPOSITOR

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Compositors seamlessly integrate all the layers or elements of a shot, including live-action and computer graphic elements. At ILM, in-house proprietary compositing software runs on Linux and UNIX-based systems. There is also a department of high-speed Discreet-based compositing workstations. Both groups work closely with the Visual Effects Supervisor and CG Supervisor compositing the numerous elements that complete a visual effects shot. The Compositor performs many 2D tasks including blue/green screen extractions, tracking, stabilization, painting, rotoscoping, and color continuity. The Compositor is usually the last person to work on a shot before it goes out to film.

How to prepare yourself/what we look for: Traditional artistic and design skills, including a good knowledge of composition and color. Knowledge of photography and practical lighting is helpful in this position. Compositors should have a working knowledge of UNIX or experience working with the Discreet compositing products. Shell scripting is a plus. To apply submit a resume and reel. A reel should demonstrate the artistic ability is necessary for this role. We look for experience in challenging extractions and multiple element composit. Film or Commercial production experience is preferred.

Other info: This is a union position working 45 hours per week

DIGITAL MATTE ARTIST

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Digital Matte Artist works with the Visual Effects Supervisor to create digital set extensions and virtual environments. Digital paint and photo manipulation skills are used to create vistas, cityscapes and backdrops of all kinds that fool the eye and look real. The Digital matte artist is often responsible for designing, creating and incorporating animation and 3D elements into the matte "painting." Research is often required to locate and obtain appropriate visual reference materials.

How to prepare yourself/what we look for: Excellent artistic and design skills are necessary. We look for a background in Fine Art, Photography, Industrial Design or Architecture. Individuals in this role have a good knowledge of cameras, lenses, photography and perspective. To apply submit a resume, demo reel and/or a portfolio. Overall we look for demonstrated skills in reproducing photo-real imagery with digital tools. On a reel we like to see a breakdown of matte paintings in a final shot as well as a visual or written breakdown of elements. In a portfolio, present only your best work, both computer generated and traditionally based. Excellent Photoshop skills are important, and technical competency in other packages such as After Effects, FormZ, Electric Image, LightWave and Maya are helpful. Film and/or television experience is preferred.

Other info: This is a union position works 45 hours per week.

DIGITAL PLATE RESTORATION TECHNICIAN

Division: Industrial Light & Magic, Computer Graphics Department

Duties: After viewing shots using proprietary viewing software, Digital Plate Restoration Technicians use paint software to clean frames and remove dirt, scratches, etc. They transfer the cleaned frames to the Resource Assistants to backup and to load into the shows work area.

How to prepare yourself/what we look for: Qualifications for these positions include basic UNIX knowledge, proven experience with various software programs and willingness to learn new tools while working efficiently within a production environment. To apply, submit a resume.

Other info: Typically, we fill these positions by promoting from within and not by recruiting external candidates. We have provided this job summary for information purposes only. This is a union position working 45 hours per week.

DIGITAL RESOURCE ASSISTANT

Division: Industrial Light & Magic, Computer Graphics Department

Duties: The Digital Resource Assistants (RA) serve as the primary liaison for resource information between Production, CG Artists and Computer Graphics Technical Assistants. They are responsible for tracking all information through the digital pipeline using various tools. They ensure information is accurate in bringing files online and off-line to meet the needs of the digital artists and production. They also track the status and location of all files used by artists. This is an entry-level position that can provide a strong foundation/experience in postproduction, leading to various career growth opportunities.

How to prepare yourself/what we look for: Bachelor's degree in Film, Computer Science or related field. Two years of related experience required, preferably in computer graphics or postproduction. Must be computer literate. Experience with UNIX required. Exposure or interest in graphic programs preferred. Must be a self-starter, able to work as a team, with strong organization skills and the ability to handle a variety of tasks in an efficient manner. To apply, submit a resume.

Other info: This is a non-union position, typically working a minimum of 50 hours per week (8 am - 7 pm). Interviews and relocation costs are usually *not* refundable.

EDITORIAL TECHNICAL ASSISTANTS

Division: Industrial Light & Magic, Editorial Department

Duties: The Editorial Technical Assistant (TAs) are responsible for various editorial support tasks including video dubbing on Betacam, Digital Beta 3/4", VHS, Hi8, D1, DAT and DDR, providing support/tape changes for CMX and Avid sessions, video support and tape changes for production dailies.

How to prepare yourself/what we look for: Bachelor's degree in Film/Television or equivalent work experience. Strong editing skills (machine to machine editing), solid knowledge of video techniques (insert vs. assemble editing, time-codes, black encoding, etc.), and a familiarity with routers, vector scopes, waveform monitors and other video equipment. Computer experience with Macs & PCs; knowledge of UNIX a plus. To apply, submit a resume.

Other Info: This is a union position. TAs work 40 hours per week. Interview and relocations costs are usually *not* refundable.

CREATURE DEVELOPERS

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Enveloping is an ILM term for creating the skin motion of a CG creature. Creature Developers, are primarily responsible for ensuring that models maintain an anatomically correct and sculpturally detailed form while moving through animated motions. Achieving this goal requires proficiency in the tasks of connecting the rendered surfaces of models to animation controls, creating procedurally animated simulations of hair, cloth, muscles and flesh, and generally making sure that models proceed through the animation and render pipeline of a shot in good form.

How to prepare yourself/what we look for: Bachelor's degree in Computer Science or a related field with a strong technical aptitude. Proficiency in UNIX and a working knowledge of SoftImage is highly recommended. Experience with 3D modeling of organic models, animation control rigging, and character animation is necessary. Feature film or commercial production experience is highly regarded. To apply, submit a resume and reel. An ideal reel for this area would demonstrate a mix of artistic and technical skills. Complete shots and polished renders, while good to see, are not as important as breakdowns featuring character set-up, models going through motion tests which demonstrate skin control, and control over procedural animation systems such as cloth, particles, and rigid body dynamics. 2D artwork and photographs of traditional sculptures, which demonstrate a candidate's understanding of anatomy and biological form, are also very informative.

Other Info: This is a union position working 45 hours per week.

MATCHMOVER

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Matchmovers create motion files matching the original background plate photography and converting the plates into various formats for use with in-house software. They model the set geometry used to create the matchmove and CG environment for Character Animators and Technical Directors. They light, render and composite the files with the background to judge the move. They also match any live-action characters that interact with both the lighting or CG characters.

How to prepare yourself/what we look for: Bachelor's degree in Film/Computer Graphics field or equivalent work experience, plus 1-2 years of related experience in the field, preferably in motion picture computer graphics. This role requires an extensive understanding of photography and the effects of different lenses on perspective as well as professional experience using UNIX, Maya and SoftImage. We suggest training in SoftImage, Maya and Maya live, 3DEqualizer and Realviz Matchmover. To apply, submit a resume and reel. To gain experience, create a reel by shooting a background plate and bring it into a 3D package. Once there, model the set geometry and recreate the camera perspective with a moving camera. Shoot footage with a person in the scene running, walking and jumping. Build a 3D figure with matching measurements and match animate the character in the scene. Measure set geometry with the ability to read blue prints and build a 3D model. The ideal reel will include examples of the ability to build accurate models from measurements, blueprints or through photo modeling. Examples of animation (hard surface as well as character) and photography showing the effects that different lenses have on perspective are useful.

Other Info: This is a union position working 45 hours per week. Interview and relocation costs are *not* refundable.

MODELER - ORGANIC & HARD SURFACE

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Modelers work closely with Art Directors, Visual Effects Supervisors, Animation Supervisors to turn 2D concept art and traditionally sculpted maquettes into high detail, topologically sound 3D wireframe models. They will continue to assist the Technical Animator and Enveloper as the model has a skeleton put in place and the skin is developed. Following this, the model may be handed back to the Modeler, who will proceed to sculpt facial expressions and any specific muscle tension/jiggle shapes required.

How to prepare yourself/what we look for: Artistic abilities are the most important attribute, combined with technical skills. Practice understanding the human anatomy (and if possible the anatomy of a quadroped), through life drawing classes and observational studies. Clay/plastiline/sculpy work is encouraged, as well as traditional sketching and paint work. Once you feel confident with traditional work, then it would be advisable to pursue classes teaching more technical/computer aided skills. To apply, submit a resume, reel and/or portfolio. Keep your portfolio concise and provide only what you consider to be your best work, both computer generated and traditionally based. Sketchbooks are also a good addition to include along with your portfolio (copies are sufficient). (Refer to the section titled "Application Process")

Other info: This is a union position working 45 hours per week.

MOTION CAPTURE TECHNICAL ASSISTANT

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Motion Capture is a technique for recording performances from actors and applying those performances to digital characters. ILM uses this technique to animate a wide range of digital characters for feature films and commercials.

The Motion Capture Technical Assistant performs technical support tasks for the Motion Capture Group. The primary role of the TA is to process mocap data to reconstruct and deliver clean data that accurately represents the captured performances. This involves cleaning up noise artifacts, thinning oversampled data, reconstructing missing trajectory segments, and blending multiple motion capture performances.

How to prepare yourself/what we look for: Preferably, a Motion Capture Technical Assistant will have a Bachelor's degree in Computer Science. This position requires proficiency in managing large volumes of data in both UNIX and PC Windows environments. In addition, a TA must be able to work under deadlines and learn new tasks and facilities quickly. This work is detail oriented and requires a good eye for motion as well as technical proficiency. To apply, submit a resume.

Other info: This is a union position working 45 hours per week.

PRODUCTION ASSISTANT

Division: Industrial Light & Magic, Production Department

Duties: Provide administrative support and back-up to the production team including typing memos, documents and schedules; photocopying, filing, preparing, maintaining and distributing storyboards and other reports; organizing dailies, helping with live action stage and location shooting as needed including craft service and errands.

How to prepare yourself/what we look for: A minimum of two years related experience is required. Bachelor's degree in Film or equivalent is highly preferred. Must be computer literate. To apply, submit a resume.

Other info: This is a non-union position working 50 hours per week. Interview and relocation costs are *not* refundable.

ROTSOPE ARTIST

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Working very closely with Compositors, Rotos Artists modify and remove isolated elements for digitally composited sequences using both procedural and hand-painting methods. They perform plate clean-up and create digital articulate mattes as well as doing background repairs, wire removals and blue screen extractions.

How to prepare yourself/what we look for: Knowledge of compositing techniques and paint animation desired. Bachelor's degree in graphic design, drawing, animation or equivalent artistic background and education required. Requires a minimum of 2 years production experience in computer graphics, animation or video; more preferred. Experience with UNIX, 2D image processing, Harry/Henry/Matador /Macintosh software or other similar systems. To apply, submit a reel and resume.

Other info: This is a union position working 45 hours per week.

SYSTEMS/TOOLS PROGRAMMER

Division: Industrial Light & Magic, Production Engineering Department

Duties: The Script/Tools Programmers improve, develop, maintain and document the "generic scripts" used by the Render Support Department in tracking the shots rendering for each production. The generic scripts are programs and control files written in C shell, python, or other high-level computer languages. New versions of the scripts are delivered to the render support personnel by the Script/Tools Programmer who then assists with the integration of the tool as well as following up should any problems occur. They will also receive show specific script changes from the Assistant Technical Directors and then assist in integrating changes into the generic scripts. When necessary, the Render Support Department may ask for other programming tasks to be completed also.

How to prepare yourself/what we look for: Bachelor's degree in Computer Science. Knowledge of UNIX, LINUX, C shell, and some scripting language such as python, TCL, or Perl and C or C++ required. SQL and database experience required. Computer graphics production experience is necessary. To apply, submit a resume.

Other info: This is a non-union position working 45 hours per week.

SYSTEMS DEVELOPER

Division: Industrial Light & Magic, Systems Research & Development

Duties: Systems Developers are responsible for design, prototype and construction of complex computer and data storage systems needed to create cutting edge graphical images. They define and build applications, including software and hardware, needed to support the artists in fulfilling their mission of creating visual images for the motion pictures. Systems Developers function as a liaison with the application software groups and artistic groups.

How to prepare yourself/what we look for: Systems Developers at ILM range anywhere from the junior level (right out of school with some hands on work experience and/or internship) to our senior level (5+ yrs of hands on experience). It is useful to obtain a degree in BS/CS/EE and be exposed to the development of complex compute/imaging/storage systems. Classes in and/or hands-on work experience using C/ C++ and/or Java is useful. It is essential to have work experience using UNIX (and its different flavors), Mac OSX, Networks, and Protocols. Relevant experience in System and/or Network Administration is a plus. To apply, submit a resume.

Other info: This is a non-union position working 45 hours per week

TECHNICAL DIRECTOR

Division: Industrial Light & Magic, Computer Graphics Department

Duties: Technical Directors (TD) work with direction from the Visual Effects Supervisors and CG Supervisors to create the look of computer generated objects and scenes. They are responsible for lighting, shading, rendering, some compositing and for creating the motion dynamics and look of simulated effects such as water, smoke, fire and hair. TDs work with other artists such as Character Animator, Rotoscope Artists and Compositors to bring the shot together. They must be familiar with the ILM render pipeline and be technically adept to identify and debug any problems.

How to prepare yourself/what we look for: Technical Directors typically combine strong computer programming abilities with visual arts skills. Qualified candidates have a Bachelor's degree in Computer Science or Computer Graphics with at least 2-3 years production experience. A strong working knowledge of UNIX, C programming and shell scripting is necessary as well as knowledge of Maya, Renderman or proprietary high-end software packages. To gain the necessary production experience people typically begin as Computer Graphics Technical Assistants, eventually moving into an Assistant Technical Director before becoming a TD. Other ways to prepare yourself for this role include working on live action/CG integration project, spending time learning how to install CG characters into a plate, light it and applying shadows. To apply, submit a resume and reel (Refer to the section titled "Application Process")

Other info: This is a union position working 45 hours per week

VIDEO ENGINEERS

Division: Industrial Light & Magic, Digital Video Engineering Department

How to prepare yourself/what we look for: Video Engineers install and maintain complex video systems and equipment that support the production process, ensuring integration with existing systems. They are responsible for trouble shooting equipment and systems problems along with repairing and maintaining video equipment and systems.

How to prepare yourself/what we look for: Qualified Video Engineers should have a Bachelors degree in Engineering or Computer Science along with 4-6 years experience as a Video Maintenance Technician, preferably with a major video post production facility using professional equipment from Sony, Grass Valley, Abekas, CMX, etc. They should also be highly computer literate with UNIX, MAC and Win95/NT Operating Systems, and have excellent soldering and component level printed circuit repair skills. To apply, submit a resume.

Other info: This is a non-union position working 45 hours per week

APPLYING FOR A POSITION

For information on current openings at Industrial Light & Magic or Skywalker Sound please check the job opportunities section of our website at www.ilm.com.

Information regarding the other Lucas companies can be found by viewing their web sites at:

Lucasfilm	www.lucasfilm.com
LucasArts	www.lucasarts.com

WHERE TO APPLY

Industrial Light + Magic
P.O. Box 2459
San Rafael, CA 94912
Attn: Recruiting

OR

Apply directly on-line at www.ilm.com

APPLYING FOR COMPUTER GRAPHICS POSITIONS SPECIFICALLY

For positions within the Computer Graphics Department, we require you to submit a reel and/or a portfolio along with your resume.

INCLUDE IN A REEL

- Your reel should demonstrate your artistic abilities:
- Typically 2-3 minutes of your most recent work is sufficient. Don't include old, irrelevant work, i.e. something you did 5 years ago in a school project.
- Show enough of the project to see your work. Repeat it a couple of times if it is a short piece "flashing" by. If it is a short piece, include whole project or sequence in its entirety at the end of your tape.
- You don't need a fancy introduction. A simple card with your name, address, phone number and email address, if available, will do. It is helpful to have a card introducing the title of each piece as it is outlined on your demo reel, if possible.
- Our preference is DVD, 1/2" VHS tapes in either NTSC or PAL format. No Beta tapes please. Digital versions (CD-ROM or disk) will not be reviewed.
- Do not send your Master demo reel. Send duplications only. They will be returned if you include a self-addressed, stamped envelope in your package.

CREDIT LIST

- List the show, description of the shot and the specific task that you performed including software used. The more specific and descriptive you can be the better.

PORTFOLIO

- Send 8 1/2 x 11 **copies only**. No original artwork please.
- Copies of Slides will not be accepted.

GENERAL HINTS

- Unless instructed to do so, do not telephone to see if we have received your information. You will receive a postcard confirming receipt. If there is interest in having an interview, we will call you.
- Limit your resume to one page. If it's longer than that you're probably including more information than necessary.
- White paper is preferred, as it is easier to read.

WHAT YOU ALWAYS WANTED TO KNOW

(a.k.a. what computer graphics supervisors at ILM would like to see on a reel)

CHARACTER ANIMATION

- If you want to bring a character to life, you need to show its personality and how it moves in its environment. Keep it simple! A multi-layered, textured background is not necessary to show your character animation
- Knowledge of a software is not the key to being a character animator.
- Apply the principles of animation to anything that is receiving a soul:
 - Force / Resistance / Balance = Is there a believable force that initiates and stops the movement?
 - Weight / Center of Gravity = Does the character visually look heavy or light according to design specifications? Does the weight shift properly?
 - Path of Action = Is the movement following a believable path according to the initiating force? Are there drag, delay or overlapping elements of the form that follow through in action?
 - Acting = Does the audience believe that the character thinks, feels, acts, reacts to the environment and others?
 - Timing = Believability in performance, be it acting or action.

MODELING

- Demonstrated knowledge of modeling using spline-based, high-end packages (Alias, Softimage) and to a lesser extent, polygonal modeling.
- Examples of models showing artist's interest (hard surface vs. organic)
- Show the progress of the piece: Final renders, turntables, plastic shaded and wire frame versions of models. These should be at a high-level of finish and should rely on detailing from the modeling as much as possible (rather than bump or displacement maps).
- Additional traditional artwork (sketches, photos of sculptures, etc.) relating to targeted area (hard-surface or organic modeling).

TECHNICAL DIRECTION

- Show the "before and after" to show the shot progression.
- Install a CG character into a plate, light it, put in the shadows, etc.
- Try to light the shot in a creative way while making it look natural to the environment.
- The style of the different parts should be carefully thought out.
- Show some Live Action/CG Integration. It is rare to see this on a student reel but as it is what we do at ILM. It gives us some understanding of the individual's understanding of matching realistic lighting in computer graphics as well as compositing. By sticking to an all computer graphics environment (which is much easier to do than the integration we do) it is difficult to determine how your "eye" will create a photo realistic "look".
- A surprise: It is the defining factor that shows someone is an exception to the rule. by definition it is an unknown element. It might be just some "special" effect or some amazing lighting or particle effect. It is something unique that shows some extra care or special ability.
- Additional traditional art work (such as photography, painting, etc.,)

SAMPLE RESUME

We are often asked what type of information is necessary for a resume. This is an example of the information that is helpful for us to see when reviewing your experiences.

Josephine Candidate
123 State Street
New York, NY 10012

(h) 212 555-1212
(w) 212 555-1234
josephine@statestreet.com

EXPERIENCE:

Oct '99 - Your Current Company

Present Present Job Title

2 or 3 lines summarizing your primary responsibilities each day. You can add how many people you supervise or tools you have created important points of your responsibility.

Sept '97 - The Company Just Prior To Your Present Employer

Oct '99 Job Title

Good place to outline what your former responsibilities were that are different from what you are currently doing to show why you changed companies.

March '95 - The Company Just Prior To The One Listed Above

July '97 Job Title

This is where you are probably going to start showing that you have focused on one area or have figured out what it is you want to do following school or on the job experience.

July '94 - First Job Out Of School or Training Program

Dec '95 Job Title

This is probably your first industry-related job where you have done everything from make the first pot of coffee to loading the tape to back up your work.

Summers

'92 and '93 Work Experience While I'm In School, Inc.

Summer Internship #2

Summer '91 Work Experience While I'm In School, Inc.

Summer Internship #1

HARDWARE AND SOFTWARE:

Software: TDI Explore, Side Effects' PRISMS, Wavefront Preview, ABC Company, Proprietary tools, Renderman, Dynamation, Softimage, Alias, Matador.

Hardware: Proficient with SGI platforms and Macintosh systems.

Languages: C/C++, Pascal, Basic, AWK, SNOBOL, SIMULA, LISP, Mathematica

EDUCATION:

Oct '91 - June '94 School, College or University,

BS - Computer Science or BA - Classical Animation (or certified equivalent)

Dean's List, Cum Laude Graduate

ABC Scholarship Society

SAMPLE CREDIT LIST

We are often asked what information is necessary on a credit list. The following sample will give you an idea of the details that are useful to us in determining your specific skills in the work displayed on your demo reel.

Josephine Candidate
123 State Street
New York, NY 10012

(h) 212 555-1212
(w) 212 555-1234
josephine@statestreet.com

TITLE OF PROJECT

Computer/OS used:	SGI
Software used:	Alias, Softimage, Maya
Modeling:	All models created by myself.
Character Animation:	All animation created by myself.
F/X Animation:	All particle effects and laser flares were created by co-worker.
Compositing:	All compositing and rendering was completed by my co-worker.
Production Time:	Approximately 3 weeks.
Problems:	I think my shot is weak in the character animation and the shadows on the back wall is too diffused for the type of light source.

OR

TITLE OF PROJECT

I am a traditionally trained character animator. My demo reel shows how I have applied the principles of animation in each of the following scenes. For this reason, there is simple lighting, no background and very basic modeling. I am aware that what you want to see is my character animation.

Scene 1	Front and side view of running cheetah, normal speed
Scene 2	Front and side view of running cheetah, slow motion
Scene 3	Front and side view of walking man, normal speed
Scene 4	Front and side view of walking man, slow motion
Scene 5	Front and side view of man pulling bucket full of water from the well by a rope, normal speed
Scene 6	Front and side view of man pulling bucket full of water from a well by a rope, slow motion

Software:	No experience, traditional animation only
Hardware:	Touched a keyboard to do my homework in high school but haven't since then

LUCASFILM ENTERTAINMENT COMPANY, LTD. STUDENT INTERNSHIP PROGRAM

PROGRAM INFORMATION

Industrial Light + Magic and Skywalker Sound offers student internship opportunities for highly motivated students who wish to pursue technical and business careers in visual effects and sound design for feature films. It is an opportunity to work with talented teams of artists and other professionals who do incredibly creative work in an atmosphere that is both dynamic and highly collaborative. Industrial Light + Magic and Skywalker Sound's Internship Program is an important part of our recruiting strategy; an internship could be the starting point for employment in a staff position with the company. We typically offer two paid student internship program sessions annually: a Summer Session and a Fall/Winter Session. The number of student internships and the areas in which they are available each session are determined by the projects in production. Internships for prior sessions have been offered in such areas as art, sound, editorial, computer graphics (CG) software and training, computer systems & software engineering, web development, human resources, finance, accounting, media library, and video engineering. For details on the program requirements and how to apply please view our web site at ilm.com.

UNIVERSITIES, COLLEGES AND SCHOOLS

We are often asked what one should do to gain the education and training needed for a career in the digital industry. The following is just a short list representing the numerous universities, colleges and schools where some of our employees completed their undergraduate and graduate education.

Art Center College of Design	Pasadena, CA
Bournemouth Polytechnic University	Bournemouth, England
Brigham Young University	Provo, UT
Brown University	Providence, RI
Carnegie Mellon University	Pittsburgh, PA
Harvey Mudd College	Claremont, CA
Massachusetts Institute of Technology	Cambridge, MA
New York School of Visual Arts	New York, NY
Ohio State University	Columbus, OH
Pratt Institute	Brooklyn, NY
Rhode Island School of Design	Providence, RI
Ringling School of Art and Design	Sarasota, FL
San Jose State University	San Jose, CA
San Francisco State University	San Francisco, CA
Savannah College of Art and Design	Savannah, GA
Sheridan College	Oakville, Ontario, Canada
Stanford University	Stanford, CA
Texas A&M	College Station, TX
University of British Columbia	Vancouver, B.C., Canada
University of Calgary	Calgary, Alberta, Canada
University of California at Berkeley	Berkeley, CA
University of California at Davis	Davis, CA
University of California at Los Angeles	Los Angeles, CA
University of California at Santa Cruz	Santa Cruz, CA
University of Illinois at Chicago	Chicago, IL
University of Illinois at Champaign	Urbana, IL
University of Southern California	Los Angeles, CA
University of Toronto	Toronto, Ontario, Canada
University of Washington	Seattle, WA
Vancouver Film School	Vancouver, B.C., Canada

RECOMMENDED BOOK LIST

American Cinematographer Manual

Compiled and Edited by Charles G. Clarke,
A.S.C.

Assisted by Three W. Tyler

An Official Publication of the American
Society of Cinematographers

The Animation Book

Kit Laybourne

Crown Publishers/Three Rivers Press

Animation from Script to Screen

Shamus Culhane

St. Martins Press

Artistic Anatomy

Dr. Paul Richer

Watson-Guptill

Cartoon Animation

Preston Blair

Walter Foster Publishers

Chuck Amuck

Chuck Jones

Avon Books

Cinematographer's Field Guide

KODAK Motion Picture Camera Films

Composing Pictures

W. Donald Graham

Van Nostrand Reinhold

Creating Special Effects for TV and Film

Bernard Wikie

A Focal Press Book

Hastings House, Publishers

The Illusion Of Life: Disney Animation

Frank Thomas and Ollie Johnston

Hyperion, Publishers

Industrial Light & Magic

Thomas G. Smith

Ballantine Books, N.Y., Publishers

Industrial Light & Magic: Into The Digital Realm

Mark Cotta Vaz & Patricia Rose Duignan

Ballantine Books, N.Y., Publishers

Professional 16/35MM Cameraman's Handbook

Verne and Sylvia Carlson

American Photographic Book Publishing
Co., Inc.

Special Effects in Motion Pictures

Frank P. Clark

Society of Motion Picture and Television
Engineers, Inc.

Special Optical Effects In Film

Zoran Perisic

Focal Press Limited, London/New York

The Technique of Special Effects Cinematography

Raymond Fielding

Communication Arts Books

Hastings House, Publishers

The Technique of Special Effects in Television

Bernard Wikie

Focal Press, London

Hastings House, New York

Timing for Animation

Harold Whitaker & John Halas

Focal Press

HISTORY OF LUCASFILM ENTERTAINMENT COMPANY, LTD....

In 1971 George Lucas formed his own independent production company, Lucasfilm Ltd., in Marin County, just north of the Golden Gate Bridge.

In July of 1975, with the Star Wars saga already written and design work begun the previous year, Industrial Light + Magic (ILM) was established to produce the visual effects for *Star Wars*.

That same year Sprocket Systems was established to edit and mix *Star Wars*. It was later to become known as Skywalker Sound.

In 1977 *Star Wars* opened and became the largest grossing film of all time to that date. It received six Academy Awards for original score, film editing, sound, art and set decoration, costume design and visual effects, as well as a Special Achievement Academy Award for sound effects creations.

With the release of *The Empire Strikes Back* in 1980 and a new home in San Rafael, ILM began to establish itself as the leader in visual effects production. The same year, ILM received a Special Achievement Academy Award for visual effects for *The Empire Strikes Back* and began to work on its first non-Lucasfilm picture, *Dragonslayer*.

Throughout the 1980's, ILM continued to receive recognition for its visual effects work, earning 9 Visual Effects Academy Awards during that decade. Included among the films honored are: *The Empire Strikes Back*, *Raiders of the Lost Ark*, *E.T.: The Extra-Terrestrial*, *Return of the Jedi*, *Who Framed Roger Rabbit?* and *The Abyss*.

Skywalker Sound was also honored with 5 Academy Awards during this period for Best Sound and Best Sound Effects Editing on films including *The Empire Strikes Back*, *Raiders of the Lost Ark* and *E.T.*

In 1987, construction was completed on the Technical Building at Skywalker Ranch, Lucas's film production facilities in central Marin, allowing Skywalker Sound to move into the 145,000 square-foot facility.

Terminator 2: Judgment Day in 1991 was another milestone in the history of ILM. Additional advancements and achievements in the field of computer graphics were realized. Both ILM and Skywalker Sound were rewarded with Academy Awards for their work on the film.

In 1992 George Lucas was honored by the Academy of Motion Picture Arts and Sciences with the Irving Thalberg Award. This award was voted by the Academy Board of Governors to a "creative producer whose body of work reflects a consistently high quality of motion picture production" and is given only in years when the Board feels there is a deserving recipient. Steven Spielberg presented the Thalberg award to Lucas at the Academy Awards Ceremony on March 30th.

The following year, in 1993, a new corporate structure was set up among Lucas' various companies to allow for management flexibility and accountability. Three separate companies were the result of the restructure:

- Lucasfilm Ltd. - Film and Television Production, THX and Lucas Licensing.
- LucasArts Entertainment Company - Games and Learning
- Lucasfilm Entertainment Company, Ltd.- Industrial Light & Magic and Skywalker Sound

Inspired by its successful work in the feature film arena, ILM expanded into the world of advertising in 1989. Today, Industrial Light + Magic Commercial Productions (ILMCP) is a full service production company, specializing in the production of live-action commercials as well as commercials with visual effects. ILMCP accounts for nearly a quarter of ILM's revenue.

Additionally, the George Lucas Educational Foundation (GLEF) was founded in 1991 as a non-profit organization focused on creating media materials (films, books, newsletters and a Web site) which promote a vision of learning where students are challenged and engaged, learn by doing, having access to interactive technologies and are supported by inspired teachers and involved parents and communities.

That same year, ILM completed the visual effects for *Jurassic Park*, creating computer graphic dinosaurs which blended flawlessly with the live action footage while Skywalker Sound was in charge of creating the audio effects. Again, both units were recognized with Academy Awards for their work in Sound, Sound Effects Editing and Visual Effects.

The nineties saw continued success and awards for both companies. Notable films that benefited from their expertise included *Forrest Gump*, *The Mask*, *Twister* and *Saving Private Ryan*.

In 1997, the twentieth anniversary of *Star Wars*, all three movies in the *Star Wars* trilogy were re-released. New and refined digital footage was inserted and the sound was enhanced. Record crowds greeted familiar characters with applause and delight and *Star Wars* once again became the one of the largest grossing movies of all time.

In 1999, we released the eagerly awaited *Star Wars: Episode 1 "The Phantom Menace,"* the third highest grossing picture in motion picture history, with renowned digital effects. Hundreds of fans slept on sidewalks in front of theaters, waiting to be among the first to see the film.

The start of the new millennium brought an Academy Award nomination for our work on the film *The Perfect Storm* as well as for Best Sound on *Castaway*. 2001 will bring highly anticipated movies such as *Pearl Harbor*, *A.I.*, *The Mummy Returns* and *Jurassic Park III*.

We continue to want to ensure that viewers are astounded and moved by what we have to offer!

FILM CREDITS

CREDITS

2004	THE BOURNE SUPREMACY	Universal
2004	THE CHRONICLES OF RIDDICK	Universal
2004	HARRY POTTER AND THE PRISONER OF AZKABAN	Warner Bros.
2004	THE DAY AFTER TOMORROW	20 th Century Fox
2004	VAN HELSING	Universal
2004	HIDALGO	Disney
2004	ALONG CAME POLLY	Universal
2003	PETER PAN	Universal/ Columbia/ Revolution
2003	STUCK ON YOU	20 th Century Fox
2003	TIMELINE	Paramount
2003	MASTER AND COMMANDER: THE FAR SIDE OF THE WORLD	20 th Century Fox
2003	ONCE UPON A TIME IN MEXICO	Miramax
2003	11'9"01 – SEPTEMBER 11 (SEGMENT USA)	Empire Pictures
2003	THE LEAGUE OF EXTRAORDINARY GENTLEMEN	20 th Century Fox
2003	PIRATES OF THE CARIBBEAN	Disney
2003	TERMINATOR 3: THE RISE OF THE MACHINES	Warner Bros.
2003	THE HULK	Universal
2003	DREAMCATCHER	Warner Bros.
2003	TEARS OF THE SUN	Revolution Studios
2003	THE HUNTED	Paramount
2002	GANGS OF NEW YORK	Miramax
2002	HARRY POTTER AND THE CHAMBER OF SECRETS	Warner Bros.
2002	STAR WARS BOUNTY HUNTER	LucasArts Entertainment
2002	PUNCH-DRUNK LOVE	Revolution
2002	BLOOD WORK	Warner Bros.
2002	SIGNS	Disney
2002	K-19: THE WIDOWMAKER	Paramount
2002	MEN IN BLACK 2	Sony Pictures 2002
2002	MINORITY REPORT	Fox
2002	THE BOURNE IDENTITY	Universal
2002	STAR WARS: EPISODE II “Attack of the Clones”	Lucasfilm
2002	BIG TROUBLE	Disney
2002	E.T.: THE EXTRA-TERRESTRIAL (Re-release)	Universal
2002	THE TIME MACHINE	Warner Bros./DreamWorks SKG
2002	IMPOSTER	Miramax/Dimension
2001	THE MAJESTIC	Warner Bros.
2001	HARRY POTTER AND THE SORCERER’S STONE	Warner Bros.
2001	PLANET OF THE APES	20 th Century Fox
2001	JURASSIC PARK III	Universal
2001	A.I.: ARTIFICIAL INTELLIGENCE Academy Award Nomination – Best Visual Effects	Warner Bros./DreamWorks SKG
2001	THE MUMMY RETURNS	Universal
2001	PEARL HARBOR Academy Award Nomination – Best Visual Effects	Disney
2000	IMPOSTOR	Miramax/Dimension
2000	SPACE COWBOYS	Warner Brothers
2000	POLLOCK	Pollock Film, Inc.
2000	THE PERFECT STORM	Warner Bros.
2000	THE ADVENTURES OF ROCKY AND BULLWINKLE	Universal
2000	MISSION TO MARS	Disney
1999	SWEET AND LOWDOWN	Sony Pictures Classics
1999	MAGNOLIA	New Line Cinema
1999	SNOW FALLING ON CEDARS	Universal
1999	GALAXY QUEST	DreamWorks SKG

1999	THE GREEN MILE	Warner Bros.
1999	SLEEPY HOLLOW British Academy Nomination - Best Visual Effects	Paramount
1999	BRINGING OUT THE DEAD	Paramount/Disney
1999	DEEP BLUE SEA	Warner Brothers
1999	THE HAUNTING	DreamWorks SKG
1999	WILD WILD WEST	Warner Brothers
1999	STAR WARS: EPISODE I "The Phantom Menace" Academy Award Nomination – Best Visual Effects British Academy Nomination - Best Visual Effects	20 th Century Fox/Lucasfilm Ltd.
1999	THE MUMMY British Academy Nomination - Best Visual Effects	Universal
1999	OCTOBER SKY	Universal
1998	THE LAST DAYS	October Films
1998	MIGHTY JOE YOUNG Academy Award Nomination - Best Visual Effects	Disney
1998	JACK FROST	Warner Brothers
1998	CELEBRITY	Miramax
1998	MEET JOE BLACK	Universal
1998	REACH THE ROCK	Gramercy Pictures
1998	SNAKE EYES	Paramount/Disney
1998	SAVING PRIVATE RYAN British Academy Award - Best Visual Effects	DreamWorks SKG/Paramount
1998	SMALL SOLDIERS	DreamWorks SKG/Universal
1998	DEEP IMPACT	DreamWorks SKG/Paramount
1998	MERCURY RISING	Universal/Imagine Films
1998	DEEP RISING	Disney
1997	DECONSTRUCTING HARRY	Fine Line Features
1997	AMISTAD	DreamWorks SKG
1997	TITANIC	20th Century Fox/Paramount
1997	FLUBBER	Disney
1997	MIDNIGHT IN THE GARDEN OF GOOD & EVIL	Warner Brothers
1997	STARSHIP TROOPERS	TriStar/Touchstone
1997	SPAWN New Line Cinema	
1997	CONTACT	Warner Brothers
1997	MEN IN BLACK British Academy Award - Best Visual Effects	Columbia
1997	SPEED 2: CRUISE CONTROL	20th Century Fox
1997	THE LOST WORLD: JURASSIC PARK Academy Award Nomination - Best Visual Effects	Amblin/Universal
1997	STAR WARS TRILOGY SPECIAL EDITION	20th Century Fox/Lucasfilm Ltd.
1996	MARS ATTACKS!	Warner Brothers
1996	STAR TREK: FIRST CONTACT	Paramount
1996	101 DALMATIANS	Disney
1996	DAYLIGHT	Universal
1996	SLEEPERS	Warner Brothers
1996	TRIGGER EFFECT	Universal
1996	ERASER	Warner Bros.
1996	DRAGONHEART Academy Award Nomination - Best Visual Effects	Universal
1996	TWISTER Academy Award Nomination - Best Visual Effects British Academy Award - Best Visual Effects	Warner Bros./Universal
1996	MISSION: IMPOSSIBLE	Paramount
1996	SPECIAL EFFECTS (AN IMAX FILM)	WGBH
1995	JUMANJI	TriStar Pictures
1995	THE AMERICAN PRESIDENT	Castle Rock/Columbia
1995	SABRINA	Paramount
1995	THE INDIAN IN THE CUPBOARD	Paramount
1995	CONGO Paramount	
1995	CASPER	Amblin/Universal
1995	VILLAGE OF THE DAMNED	Universal

1995	IN THE MOUTH OF MADNESS	Katja/New Line Cinema
1994	DISCLOSURE	Warner Brothers
1994	STAR TREK: GENERATIONS	Paramount
1994	RADIOLAND MURDERS	Lucasfilm Ltd./Universal
1994	THE MASK	New Line Cinema
	Academy Award Nomination - Best Visual Effects	
	British Academy Award Nomination - Best Visual Effects	
1994	FORREST GUMP	Paramount
	Academy Award - Best Visual Effects	
	British Academy Award - Best Visual Effects	
1994	BABY'S DAY OUT	20th Century Fox
1994	WOLF	Columbia
1994	MAVERICK	Warner Brothers
1994	THE FLINTSTONES	Amblin/Universal
1994	THE HUDSUCKER PROXY	Warner Brothers
1993	SCHINDLER'S LIST	Amblin/Universal
1993	JURASSIC PARK	Amblin/Universal
	Academy Award - Best Visual Effects	
	British Academy Award - Best Visual Effects	
1993	FIRE IN THE SKY	Paramount
1993	RISING SUN	20th Century Fox
1993	MALICE	Castle Rock/Warner Brothers
1993	METEORMAN	MGM
1993	LAST ACTION HERO	Columbia
1993	MANHATTAN MURDER MYSTERY	TriStar Pictures
1993	THE NUTCRACKER	Warner Brothers
1992	DEATH BECOMES HER	Universal
	Academy Award - Best Visual Effects	
	British Academy Award - Best Visual Effects	
1992	ALIVE	Disney/Paramount
1992	ALIEN ENCOUNTER	Showscan
	Simulator Ride	
1992	MEMOIRS OF AN INVISIBLE MAN	Warner Brothers
1992	THE YOUNG INDIANA JONES CHRONICLES	Lucasfilm Ltd.
1991	HOOK	Columbia/Amblin
	Academy Award Nomination - Best Visual Effects	
1991	STAR TREK VI	Paramount
	Academy Award Nomination - Best Visual Effects	
1991	SPACE RACE	Showscan
	Simulator Ride	
1991	TERMINATOR 2: JUDGMENT DAY	Carolco/TriStar
	Academy Award - Best Visual Effects	
	British Academy Award - Best Visual Effects	
1991	THE ROCKETEER	Disney
1991	BACKDRAFT	Imagine Films
	Academy Award Nomination - Best Visual Effects	
1991	HUDSON HAWK	TriStar
1991	THE DOORS	TriStar
1991	ARACHNOPHOBIA	Amblin/Universal
1991	SWITCH	HBO Films
1991	MICKEY'S AUDITION	Disney
1990	DIE HARD 2	20th Century Fox
1990	BACK TO THE FUTURE, PART III	Amblin/Universal
1990	THE HUNT FOR RED OCTOBER	Paramount
1990	GHOST	Paramount
1990	THE GODFATHER, PART III	Paramount
1990	JOE VERSUS THE VOLCANO	Warner Bros.
1990	AKIRA KUROSAWA'S DREAMS	Kurosawa Prods./Warner Brothers
1990	ROLLER COASTER RABBIT	Disney
1989	ALWAYS	Amblin/Universal
1989	BACK TO THE FUTURE, PART II	Amblin/Universal
	Academy Award Nomination - Best Visual Effects	

1989	British Academy Award - Best Visual Effects THE ABYSS	GJP Productions/ 20th Century Fox
	Academy Award - Best Visual Effects	Columbia
1989	GHOSTBUSTERS II	Lucasfilm Ltd./Paramount
1989	INDIANA JONES AND THE LAST CRUSADE	Universal
1989	FIELD OF DREAMS	Disney
1989	TUMMY TROUBLE	Disney
1989	MICKEY - EISNER SPOT	Disney
1989	BODY WARS	Disney
	Simulator Ride for Disney World's EPCOT Center	
1989	SKIN DEEP	Blake Edwards Co
1989	THE 'BURBS	Renfield Productions/Universal
1988	THE LAST TEMPTATION OF CHRIST	Universal
1988	COCOON, THE RETURN	20th Century Fox
1988	CADDYSHACK II	Warner Brothers
1988	WHO FRAMED ROGER RABBIT?	Touchstone Pictures/Amblin
	Academy Award - Best Visual Effects	
	British Academy Award - Best Visual Effects	
1988	TUCKER: A MAN AND HIS DREAM	Lucasfilm Ltd.
1988	STAR TREK ATTRACTION	Universal/Paramount
	Universal Studios Tour	
1988	WILLOW	MGM/Lucasfilm Ltd.
	Academy Award Nomination - Best Visual Effects	
1987	EMPIRE OF THE SUN	Warner Bros./Amblin
1987	STAR TREK: THE NEXT GENERATION	Paramount Television
	"Journey to Farpoint"	
1987	BATTERIES NOT INCLUDED	Universal/Amblin
	Academy Award - Technical Achievement	
1987	INNERSPACE	Warner Bros./Amblin
	Academy Award - Best Visual Effects	
1987	HARRY AND THE HENDERSONS	Universal/Amblin
1987	THE WITCHES OF EASTWICK	Warner Brothers
	British Academy Award - Best Visual Effects	
1987	STAR TOURS	Disney/Lucasfilm Ltd.
	Simulator Ride for Disneyland	
1986	THE GOLDEN CHILD	Paramount
1986	STAR TREK IV: THE VOYAGE HOME	Paramount
1986	CAPTAIN EO 3D Film for Disneyland	Disney
1986	HOWARD THE DUCK	Universal
1986	LABYRINTH	TriStar/Henson Prod.
1986	GENERAL CINEMA TRAILER	General Cinema Corp.
1986	THE MONEY PIT	Universal/Amblin
1985	OUT OF AFRICA	Universal
1985	ENEMY MINE	20th Century Fox
1985	YOUNG SHERLOCK HOLMES	Paramount/Amblin
	Academy Award Nomination - Best Visual Effects	
1985	EWOKS: THE BATTLE FOR ENDOR	20th Century Fox
	Emmy Award - Best Visual Effects	Television/Lucasfilm Ltd.
1985	AMAZING STORIES	Universal Television/Amblin
1985	MISHIMA	Warner Brothers
1985	EXPLORERS	Paramount
1985	BACK TO THE FUTURE	Universal/Amblin
	British Academy Award Nomination - Best Visual Effects	
1985	COCOON	20th Century Fox
	Academy Award - Best Visual Effects	
1985	THE GOONIES	Warner Bros./Amblin
1984	STARMAN	Columbia
1984	THE EWOK ADVENTURE	20th Century Fox
	Emmy Award - Best Visual Effects	Television/Lucasfilm Ltd.
1984	THE NEVERENDING STORY	Bavaria Studios
1984	STAR TREK III: THE SEARCH FOR SPOCK	Paramount
1984	INDIANA JONES & THE TEMPLE OF DOOM	Paramount/Lucasfilm Ltd.

	Academy Award - Best Visual Effects	
	British Academy Award - Best Visual Effects	
1983	TWICE UPON A TIME	Korty/Lucasfilm Ltd.
1983	RETURN OF THE JEDI	20th Century Fox/Lucasfilm Ltd.
	Academy Award - Best Visual Effects	
	British Academy Award - Best Visual Effects	
1982	THE DARK CRYSTAL	Henson Productions
1982	E.T. THE EXTRA-TERRESTRIAL	Universal
	Academy Award - Best Visual Effects	
1982	STAR TREK II: THE WRATH OF KHAN	Paramount
1982	POLTERGEIST	MGM/UA
	Academy Award Nomination - Best Visual Effects	
	British Academy Award - Best Visual Effects	
1981	DRAGONSLAYER	Paramount
	Academy Award Nomination - Best Visual Effects	
1981	RAIDERS OF THE LOST ARK	Paramount
	Lucasfilm Ltd. Academy Award - Best Visual Effects	
1980	THE EMPIRE STRIKES BACK	20th Century Fox/Lucasfilm Ltd. Academy
	Award - Best Visual Effects	
1977	STAR WARS	20th Century Fox/Lucasfilm Ltd.
	Academy Award - Best Visual Effects	

TECHNOLOGY TIMELINE HIGHLIGHTS FOR THE LUCAS COMPANIES

1977

Industrial Light + Magic revolutionized special effects with *Star Wars*. The film marked the first use of a motion control camera.

1979

George Lucas set up the Computer Division to explore new uses of computers for digital imaging, electronic editing, and interactivity.

1982

Industrial Light + Magic, working with the Computer Division, created the "Genesis sequence" for *Star Trek II: The Wrath Of Khan*, which marked the first completely computer-generated sequence.

George Lucas formed the Games division to explore interactive entertainment.

1984

Lucasfilm pioneered film-oriented computerized electronic nonlinear editing for picture and sound and premiered EditDroid and SoundDroid at the National Association of Broadcasters conference.

1985

Industrial Light + Magic made further breakthroughs in computer graphics with the first completely computer-generated character with the "stained glass man" in *Young Sherlock Holmes*.

1987

The Games division leads the move from parser-driven interfaces to the "point-and-click" interface popular today with its new story engine SCUMM (Script Creation Utility for Maniac Mansion).

1988

Industrial Light + Magic created the first morphing sequence for motion pictures in the film *Willow*. ILM subsequently won a Technical Achievement Award for its development of Morf, a computer-graphics program allowing the fluid, onscreen transformation of one object to another.

1989

Industrial Light + Magic created the first computer generated three-dimensional character with the "pseudopod" in *The Abyss*.

1991

Industrial Light + Magic created the first computer graphics main character with the T-1000 in *Terminator 2: Judgment Day*.

Skywalker Sound introduced the first utilization of T-1 tie-lines for real-time digital audio transmission to distant locations. The projection of film at Skywalker Sound is synchronized, through patented technology, with the screening room projector at a

filmmaker's office or home. With the combination of synchronized projection and real time digital audio transmission, it is no longer necessary for the filmmaker to leave his home or office.

LucasArts introduced its patented interactive sound system *iMUSE* (Interactive Music and Sound Effects) with *MONKEY ISLAND 2: LE CHUCK'S REVENGE*. *iMUSE* allows a game's soundtrack to be as interactive as the gameplay, responding seamlessly and spontaneously to unpredictable player choices. *iMUSE* composes sound and music on the fly, making the soundtrack of a game work like that of a film--creating mood, building suspense, and moving the experience forward. *iMUSE* now manages digital soundtracks for all LucasArts titles.

1992

Lucasfilm broke new ground in digital production by utilizing D1 digital video technology to complete post-production and visual effects on "The Young Indiana Jones Chronicles." The series won 10 Emmy Awards including one for visual effects which included digital replication of actors, digitally created matte paintings, and digital compositing.

1993

Industrial Light + Magic won its 12th Academy Award for its computer graphics work on *Death Becomes Her* and its fifth Academy Technical Achievement Award. This marked the first time human skin texture was computer generated.

Avid Technology acquired the EditDroid and SoundDroid technologies and joined forces with Lucasfilm to develop and produce the next generation of digital picture and sound editing systems.

Lucasfilm Entertainment Company, Ltd. and Silicon Graphics formed an exclusive alliance to create JEDI, a unique networked environment for digital production. JEDI is a beta test sight for Silicon Graphics equipment and allows the artists and technicians at ILM to advise SGI on future developments.

LucasArts created a new proprietary video streaming engine, INSANE (Interactive Streaming Animation Engine), for its first exclusive CD-ROM game, *REBEL ASSAULT*. *REBEL ASSAULT* is one of the few elite PC titles to sell more than one million units.

1994

Industrial Light + Magic won its 13th Academy Award for its work on the computer-generated dinosaurs for Steven Spielberg's *Jurassic Park* and its sixth Academy Technical Achievement Award for pioneering work on film digitization. For the first time, digital technology was used to create a living, breathing character with skin, muscles, texture, and attitude. This breakthrough expanded the filmmaker's canvas and changed the cinematic art of storytelling.

1995

LucasArts developed the proprietary Jedi Engine for *DARK FORCES*. The new engine supports full 3D objects, a realistic lighting model, atmospheric effects such as haze and fog, and animating textures.

Industrial Light + Magic won its 14th Academy Award for its breakthrough work on *Forrest Gump*. Although the most obvious accomplishment is the manipulation of archival footage allowing seamless interaction with historical figures, a variety of "invisible" effects, such as the character who becomes a double amputee, computer-generated jets, helicopters, birds, crowds, and ping-pong balls, subtly help the filmmaker tell the story.

Industrial Light + Magic's computer animation work on *The Mask* garnered an Academy Award nomination. For the first time, the ILM team created a photo-real cartoon character. The artists and technicians turned a human being into a cartoon character.

Industrial Light + Magic created the first fully synthetic speaking characters with distinct personalities and emotions for *Casper*. Whereas *Jurassic Park* had six minutes of digitally animated dinosaurs on the screen, the ghosts in *Casper* are on the screen for more than 40 minutes.

Industrial Light + Magic created the first computer-generated photo-realistic hair and fur for the digital lion and monkeys in *Jumanji*. This movie also featured a stampede scene with dozens of elephants, rhinos, zebras and pelicans, all computer-generated.

1996

Industrial Light + Magic is awarded a Technical Achievement Award from the Academy for its pioneering work in digital film compositing.

With *Mission: Impossible*, ILM created a fully virtual set for the climactic action sequence, requiring a computer-generated train speeding through a computer-generated tunnel followed by a computer-generated helicopter; actors were digitally composited into the virtual set to complete the scene.

Twister's digital tornadoes were the stars of the box-office sensation of the summer movie season. These stunning images of one of nature's fiercest weather events were wholly computer-generated via particle systems animation software.

Industrial Light + Magic's proprietary facial animation software brought the 3D digital character of Draco, the star of *Dragonheart*, to life. With the voice and facial physique of Sean Connery as their guide, ILM's team of animators redefined what can be successfully shown on screen.

1997

Industrial Light + Magic's software team was awarded two Technical Achievement Awards by the Academy of Motion Picture Arts and Sciences, for the creation and development of the Direct Input Device, which allows stop-motion animators to bring their skill and artistry to computer animation; and for the development of a system to create and control computer-generated hair and fur in motion pictures. The Academy also awarded the ILM software team a Scientific and Engineering Award for the development of the Viewpaint 3D Paint System, which allows artists to color and texture details to computer-generated effects. ILM and its team of innovators and pioneers have won a total of twelve "sci-tech" awards from the Academy.

Skywalker Sound installed the largest digital audio console at any audio post-production facility worldwide. The Capricorn, manufactured by AMS Neve, can technologically match the artistry of the sound designers and mixers. Two of the first projects to be mixed on the Capricorn, *Contact* and *Titanic*, earned Academy Award nominations for best sound.

Utilizing more sound elements, including dialogue loops and sound effects, than any feature film in history, *Titanic* won best sound awards from the Academy, Motion Picture Sound Editors and Cinema Audio Society.

1998

ILM's research & development team is awarded two patents for proprietary techniques. One is for "hair, fur and feathers," as illustrated by the groundbreaking images of the computer-generated gorilla in *Mighty Joe Young*. The other patent, for facial animation software initially developed for the 1995 release *Casper*, was further enhanced and refined over the next several years on projects such as *Dragonheart* and *Men in Black*.

1999

"Caricature," the facial animation system awarded a patent, also earns a Technical Achievement Award by the Academy of Motion Picture Arts & Sciences for ILM's software developers. The award states: By integrating existing tools into a powerful interactive system, and adding an expressive multi-target shape interpolation-based freeform animation system, the "Caricature" system provided a degree of subtlety and refinement not possible with other systems.

ILM's camera department receives a Technical Achievement Award from the Academy of Motion Picture Arts & Sciences for their pioneering work in motion-controlled, silent dollies.

The Mummy stars the most realistic digital human character ever seen in film. Featuring totally computer-generated layers of muscles, sinew and tissue, the ILM team again elevates its artistic and technical skill level in bringing a digital character to life.

With over 90% of George Lucas's *Star Wars: Episode I "The Phantom Menace"* featuring digital effects shots, a new method of filmmaking is achieved. Scenes which are fully computer-generated, featuring synthetic environments and digital terrain generation, computer graphic lead characters and thousands of digital extras are but some of the accomplishments, which were rewarded with an Academy Award nomination for best achievement in visual effects.

2000

The digital waves and weather created at ILM are the stars of *The Perfect Storm*, one of the summer's most anticipated film events.

2001

Industrial Light + Magic is nominated for best visual effects by the Academy of Motion Arts and Sciences for *Pearl Harbor* and *A.I. Artificial Intelligence*.

2002

Industrial Light + Magic's software team was awarded two Technical Achievement Awards by the Academy of Motion Picture Arts and Sciences, for the creation and development of its proprietary Motion and Structure Recovery System and Creature Dynamics System.