

In Washington, D.C., in the year 2054, murder has been eliminated. The future is seen and the guilty punished before the crime has ever been committed. From a nexus deep within the Justice Department's elite Pre-Crime unit, all the evidence to convict – from imagery alluding to the time, place and other details – is seen by “Pre-Cogs,” three psychic beings whose visions of murder have never been wrong.

It is the nation's most advanced crime force, a perfect system. And no one works harder for Pre-Crime than its top man, Chief John Anderton (Tom Cruise). Destroyed by a tragic loss, Anderton has thrown all of his passion into a system that could potentially spare thousands of people from the tragedy he lived through. Six years later, the coming vote to take it national has only fueled his conviction that Pre-Crime works.

Anderton has no reason to doubt it ... until he becomes its #1 suspect.

As the head of the unit, Anderton is the first to see the images as they flow from the liquid suspension chamber where the Pre-Cogs dream of murder. The scene is unfamiliar, the faces unknown to him, but this time, the killer's identity is clear – John Anderton will murder a total stranger in less than 36 hours.

Now, with his own unit tracking his every move, led by his rival, Danny Witwer (Colin Farrell), Anderton must go below the radar of the state-of-the-art automated city, where every step you take is monitored, every car you drive can be controlled by someone else, and your own eyes tell the world who you are, what you want and where you're going. Because you can't hide, everybody runs.

With no way to defend himself against the charge of Pre-Crime, John must trace the roots of what brought him here, and uncover the truth behind the question he has spent the past six years working to eliminate: Is it possible for the Pre-Cogs to be wrong?

From Steven Spielberg comes a futuristic thriller *Minority Report*, starring Tom Cruise as a detective who must race to uncover the truth before he becomes a victim to the system he helped create. Written by Scott Frank (*Out of Sight*) and Jon Cohen, based on the short story “The Minority Report” by legendary author Philip K. Dick, the film is produced by Gerald R. Molen, Bonnie Curtis, Walter F. Parkes and Jan De Bont. Gary Goldman and Ronald Shusett are the executive producers.

Led by Tom Cruise, the cast features a diverse and accomplished ensemble of actors, including Colin Farrell (*Tigerland*, *Hart's War*) as Danny Witwer, Anderton's rival; Samantha Morton (Academy Award nominee, *Sweet and Lowdown*) as Agatha, the enigmatic Pre-Cog who plays a vital role in Anderton's struggle to find the truth; Max von

Sydow (whose numerous film credits include several classics from director Ingmar Bergman) as Lamar Burgess, the father of Pre-Crime; Lois Smith (*The Pledge*, *Twister*) as Iris Hineman, the researcher whose work paved the way for this radical new system; and Kathryn Morris (*The Contender*) as Lara, Anderton's estranged wife.

Rounding out the cast are Tim Blake Nelson (*O Brother, Where Art Thou?*) as Gideon, caretaker of the Hall of Containment; Peter Stormare (*Fargo*, *The Lost World*) as Dr. Eddie, who performs contraband surgery; and Neal McDonough (*Band of Brothers*) as Pre-Crime Officer Fletcher.

Steven Spielberg's distinguished production team includes Academy Award-winning cinematographer Janusz Kaminski (*Schindler's List*, *Saving Private Ryan*), Oscar®-winning editor Michael Kahn (*Raiders of the Lost Ark*, *Saving Private Ryan*), production designer Alex McDowell (*Fight Club*) and Oscar-winning costume designer Deborah L. Scott (*Titanic*). Multiple Oscar winner John Williams (*Star Wars*, *Saving Private Ryan*) composed the score.

The film's distinctive near-future world is enhanced by visual effects supervisor Scott Farrar (*A.I.*) of Industrial Light & Magic, who supervised the film's groundbreaking visual effects, and Academy Award winner Michael Lantieri (*Jurassic Park*) supervising the practical effects. Brian Smrz (*Mission: Impossible II*) coordinated the substantial stunt work.

Minority Report probes the implications of what would seem on its surface to be an ideal criminal tool. What if it was possible to stop murder before it happened? "I think all of us would love to know what's just around the corner," director Steven Spielberg says. "We'd all love to know what's going to happen next – in the world, in our lives. This story flirts with the concept of what if we had the chance to know certain things about the future, especially things that come under the heading of 'life and death.'"

With *Minority Report*, Spielberg and his team investigate the nature of crime, technology and destiny with both a sense of adventure and the inscrutable mystery reminiscent of classic noir films of the 1940s. "I want to tackle subjects I haven't really tackled before," the director explains. "I'm in a period in my life of experimentation and trying things that challenge me. *Minority Report* is really a mystery. It's a who-done-it or who-will-do-it, and you're along for the ride. It's also a very human story, about a man who has lived through a tragedy and is working through it."

Both Spielberg and Tom Cruise, who first met while the actor was making his breakout film *Risky Business*, had kept a keen eye out for a project that they could do together. “Steven is a great American storyteller,” says Cruise. “He’s given us so many moments of real cinema joy. I’ve wanted to work with him for a long time. I know everyone wants to work with Steven, but I had this opportunity and it was something I really cherished.”

While shooting the late Stanley Kubrick’s *Eyes Wide Shut*, an early adaptation of Philip K. Dick’s *Minority Report* caught Cruise’s eye. He sent it to Spielberg and the director’s response was immediate. “He got excited about it,” says Cruise. “It’s a wonderful story.”

Though the project has been around for at least a decade, Spielberg’s immediate impetus was to make it his own. *Minority Report* had been a project at Fox with various filmmakers seeking to develop it. After Cruise sent Spielberg an early adaptation written by Jon Cohen, the director read Philip K. Dick’s short story, entitled “The Minority Report,” and brought in screenwriter Scott Frank to adapt it.

Dick’s short story was first published in 1956 in the magazine *Fantastic Universe*. The now-legendary fantasist and science fiction author wrote hundreds of short stories during the 1950s and 60s, but was never commercially successful. Though he died before the completion of the first film based on his work, Ridley Scott’s *Blade Runner*, his fertile imagination has inspired generations of writers and filmmakers and posed vital questions that continue to resonate with the advancement of society and technology.

With late scheduling on *Mission: Impossible 2* and Spielberg’s impulse to realize Kubrick’s *A.I. Artificial Intelligence*, it would be two years before *Minority Report* began production and Spielberg, Frank and DreamWorks’ Walter Parkes used the scheduling gap to work together in shaping the complex storyline. The delay also proved tremendously valuable for both the screenwriter and the production designer, Alex McDowell, to collaborate on the development of the words and images that would become Spielberg’s film.

Says producer Bonnie Curtis, “Structuring this complicated story was a very daunting task. Steven wanted to weave a psychological thriller, so during the development process, he took great care to get all the layers of the story just right. In some ways, I think this is the most complicated film that Steven has ever made.”

Minority Report also represents a step forward in creating organic, seamless visual effects that reveal a world that is not traditionally sci-fi futuristic so much a subtle

natural progression from our world today. The film features 481 visual effects shots, more than any film Spielberg has made since *Close Encounters of the Third Kind* 25 years ago.

From the earliest animatics by Pixel Liberation Front to ILM's ground-breaking 3D image modeling, supervised by Scott Farrar, to custom Lexus vehicles designed by Harald Belker, the images in *Minority Report* reflect a future we are on the verge of today.

THE THINK TANK

Spielberg decided early on that he wanted the visual world of *Minority Report* to reflect essentially that which is around us every day – specifically Washington, D.C., where the story unfolds -- with pieces of the future peaking out. To aid in envisioning this future, Spielberg brought together the men and women helping to shape it. “I thought it would be a good idea to bring some of the best minds in technology, environment, crime fighting, medicine, health, social services, transportation, computer technology and other fields into one room to discuss what the future a half a century hence would be like,” Spielberg notes.

From M.I.T. scientists such as John Underkoffler to urban planners, architects, inventors, writers (such as *Generation X* author Douglas Coupland), the Think Tank came together at a hotel in Santa Monica, California, to hash out the social and technological details of our very near future during a three-day conference. Sitting in were the filmmakers, along with screenwriter Scott Frank, and production designer Alex McDowell and his team. “We sat around in a room and talked through the aspects of how society would be affected over a five-, ten-, twenty-, thirty-year period,” McDowell recalls, “what would change, what the trends were, and where they would logically end up. We knew that we would have to learn the answers to those issues we would have to go into a consumer environment.”

The conversations encompassed everything from advances in medicine, to how people would brush their teeth, to transportation, urban planning, architecture and art. “Steven wanted backgrounds that we were familiar with, that we could relate to, and within the context of the familiar have spectacular props,” notes producer Bonnie Curtis.

The gradual loss of privacy was a near unanimous prediction. “The reason is not so people can spy on you,” explains Frank, “but so they can sell to you. In the not too

distant future, it is plausible that by scanning your eyes, your whereabouts will be tracked. They will keep track of what you buy, so they can keep on selling to you.”

“George Orwell’s prophecy really comes true, not in the twentieth century but in the twenty-first,” the director explains. “Big Brother is watching us now and what little privacy we have will completely evaporate in twenty or thirty years, because technology will be able to see through walls, through rooftops, into the very privacy of our personal lives, into the sanctuary of our families.”

Spielberg’s vision for *Minority Report* was devoid of the natural disasters and wars that shaped many other futuristic films. Notes McDowell, “The technology is benign and getting more and more efficient and serving the world better.” Offices would be entirely portable and personal technology like computers and phones would become built-in human accessories.

Generation X author Douglas Coupland dreamed up a number of products for the Washington D.C. of 2054, such as a sick-stick, a weapon that causes involuntarily vomiting, spray meat, and boosted cats, which have been engineered to grow to the same size as dogs.

Though the corporations would drive development, such technologies would naturally prove valuable to law enforcement – to find and track suspects and, by extension, catch them.

“Philip K. Dick was always interested in the consequences of technology and science,” comments M.I.T. science advisor John Underkoffler, who for 17 years has worked at the institute’s world-renowned Media Lab. “But Phil Dick took it past where most other people stopped, because he was one of the few people who understood that good science fiction is actually social science fiction. Technology is a reflection or an echo of what’s happening socially. Dick was interested in what the anthropological effect would be. I’m not sure if he ever passed a real judgment, but he was always asking. And that’s what makes him so great.”

Spielberg had similar aims in devising *Minority Report*. “Steven wants the audience to be split down the middle in their perception of this world,” says McDowell, “whether it’s a good world or a bad world, and not be black or white about it. He didn’t want the audience to think everything about this future world was evil or dystopic, but an extension of a world that we absolutely recognize.”

“We want the audience to take the technology we show them for granted by having so much of it in the movie,” says Spielberg, “so they can sit back and focus on the mystery.”

Fossil fuels have given way to the development of Magnetic-Levitation traffic system and while the potential to prevent murder is an optimistic one, it comes with a price. “To Steven’s credit, the world we have in the film is edgier and more realistically gray than the kind of utopian world imagined by futurists,” says Underkoffler. “And that’s always a more exciting place and a more interesting place for a story to unfold.”

STORY AND CASTING

Minority Report begins with a day in the life of Detective John Anderton. A man who has lost everything, he has balanced his life on the precept that Pre-Crime is the answer to society’s ills. “He has basically joined Pre-Crime because of the loss of his son, and the disintegration of his family,” says Cruise. “He wants to rid the world of crime.”

Screenwriter Scott Frank’s approach to the story began with the character of Anderton. “What kind of person would embrace this kind of system?” he muses. “Anderton has lost his son, who is presumed dead, and Anderton is still grieving some six years later, to a point that he obsesses about the minute that he lost his son, the moment he turned away, and keeps replaying it over and over in his mind. His own guilt over what happened has led him to think he’s a true believer in this system, because if it can prevent another set of parents from losing their child, then it must be a good thing.”

As leader of the Pre-Crime Division of the Justice Department, Anderton bears the responsibility of sorting through the visions of a group of Pre-Cogs – psychic beings held in a womb-like chamber, suspended in fluid, who are able to see murders before they’re committed. “The information goes from the Pre-Cogs to a computer, and John separates the pictures to analyze what is it he’s looking at, where it is, and to glean information from what the Pre-cogs are seeing,” says Cruise.

Underkoffler created a gestural language that would allow Anderton to sort and conduct the visual information he was getting from the Pre-Cogs. Commands were developed for stopping time, rolling backwards and forwards and making excerpts or changing his view. These pre-visual images were created by effects house Imaginary Forces, which has designed opening titles for such films as *Seven* and *The Mummy Returns*. “The Pre-Cogs see the future very prismatically,” Spielberg explains. “They

don't see things like film, with squares and cuts. The human eye sees in circles. [Imaginary Forces] made the pre-visions look actually organic.”

“Steven wanted to create a computer language but make it physical,” explains Cruise. “He wanted the specific hand movements to play like a dance – he even played music during the scene. It was actually lots of fun.”

The discovery of the three beings' precognitive visions was an accidental byproduct of a completely different line of research, “an unintended result,” explains Underkoffler. “But given that the researchers found that their subjects had these predictive abilities, then this whole Pre-Crime government institution was founded around them. This whole facility was built in response.”

The three Pre-Cogs – Dashiell, Arthur and Agatha -- lie in an “egg” deep within Pre-Crime Headquarters, bathed in a fluid that is intended as both a biological nutrient and a medium that helps to channel future visions into their heads. It also filters the images, so the Pre-Cogs will only see murder. Though the outside world has no conception of who the Pre-Cogs are or how they were made, Anderton has lived with their visions and made a connection with the only female of the three beings: Agatha.

Samantha Morton (*Sweet and Lowdown*) describes Agatha as essentially “a child, but she has wisdom beyond her years,” says the actor. “She sees people's feelings and emotions and feels their pain and suffering. It's a harsh reality for her.”

Morton considers Agatha the most difficult role she has ever done, not only for the emotional gravity inherent in such a complicated and abstract character, but also for the physical demands of the role. “Nothing prepares an actor for acting in the water – it's an element that you're not used to,” she says. “It requires a whole different body language. Deborah Scott designed a wet suit for me that enabled me to be water protected but still gave me a vulnerability. And the part required that I shave my hair and eyebrows. I was totally transparent physically and emotionally.”

“The three beings in the tank are not treated as human beings,” says Spielberg. “They're not even being treated as government workers. They're being treated like vegetables that spin a magic elixir that allows us to stop murders from happening. It takes Anderton a while to learn how to relate to the main pre-cog, Agatha.”

Prior to seeing his own face in a Pre-Crime visualization, Anderton never considered the questionable implications surrounding arresting and convicting individuals before they have committed murder. The question itself is immaterial based

on the presumption that Pre-Crime – and the Pre-Cogs that make it possible – are never wrong.

“Anderton comes into this story with an air of professionalism, because he’s the best at what he does,” Spielberg explains. “But he’s also under a very dark cloud, having lost his son and never found out who took his son six years ago, just before he came to work at Pre-Crime. Everybody he has trained to be good at stopping murders before they happen, all these trainees who are the best of the best, then come after him using all the techniques that he taught them.”

“Anderton aggressively goes after people who are going to commit murder,” says Frank. “He is terrific at locating them, taking these little cues of information and piecing it all together to solve the murder. He is completely together and on top of it during the day, but at night you see a man who is completely fractured and falling apart.

Spielberg points out that Anderton is on two journeys. “One is a physical journey of discovering all the clues to either vindicate himself or determine that he, in fact, can and will murder. In addition, he is on an inner journey, an emotional struggle. So every scene is informed twice – once by the information he gathers and again as he lives his life. This makes this one of the more compelling roles Tom Cruise has ever had to play, and I think he pulls it off amazingly well.”

Likewise, screenwriter Frank has nothing but praise for the fearlessness with which Cruise approached the role. “From the very beginning of the project, Steven and I would periodically discuss with him what we were doing in terms of his character,” Frank explains. “He’s never been afraid of embracing dark characters and never once complained about any of those aspects. We tried hard to keep in mind that he’s this great movie star and you want to have a great time and see him doing certain things. But at the same time he was all for going deep and making it as emotional as we needed it to be. He encouraged us to go as far as we possibly could, and I think he does his best work when we go really far with it.”

It is only when Anderton finds himself somewhat outside the system that he begins to see cracks. The first sign is when Justice Department official Danny Witwer, played by Colin Farrell (*Hart’s War*) comes to Pre-Crime to audit the system and make sure it has no flaws on the eve of its national referendum. Farrell describes Danny as “cocky and smug; he’s there to do a job. Actually, he’s there to infiltrate Anderton’s department by pretending to be one of the lads. He’ll step on anyone to get to the next

step of the ladder, because he wants to get to the top. I really enjoyed playing the character.”

“You can tell when you first meet Witwer that he would love Anderton’s job, that he likes Pre-Crime and thinks it’s a great place for him,” says Spielberg.

Scott Frank notes that while Anderton is motivated by grief and guilt, Witwer is motivated by faith. “He’s got a religious background and really believes in the Pre-Cogs as pseudo-deities,” says the screenwriter. “He thinks they have religious value beyond their value to solving murders. And he goes after Anderton rather zealously.”

Famed Swedish actor Max von Sydow portrays Lamar Burgess, whom Frank describes as “a father figure to John. He has taken him under his wing and brought him in. He has also used tragedy not only motivate Anderton but also get people behind Pre-Crime. He’s the perfect poster boy for Pre-Crime.”

Burgess developed the institution of Pre-Crime based on the research of a scientist named Iris Hineman, played by Lois Smith. In the film, the Pre-Cogs are grown children whom the state has taken away from their unstable or drug addicted parents, and made essentially into predicting machines. “You harness them and stick them in this tank and force them to dream of violent crime and murder all the time,” Underkoffler states. “It has a very objectionable element. But the way Steven has conceived and put this film together does a great job at just subtly suggesting that. All of our protagonists work for this agency, but at the same time the agency is engaged in something that many people might object to.”

“People can be against capital punishment until they lose a loved one,” says Frank. “We can be completely civilized until the murder rate goes way up and we need to figure out how to bring in the troops. That’s how dictatorships get started; it’s always for the greater good. We use the Abraham Lincoln quote in the movie -- sometimes it’s better to sacrifice a limb to save the whole body. But how far do you go and by sacrificing the limb are you really controlling the whole body more than you are saving the whole body?”

Production on *Minority Report* commenced on March 22, 2001 in Los Angeles, with locations including the Ronald Reagan Federal Building, the Willard Hotel, and the Federal Triangle Plaza in the Washington D.C. metro area; and Southern California locations including Downtown L.A., an abandoned mall in Hawthorne and a factory in Vernon. Additionally, Hennessy Street on the Warner Bros. lot, and soundstages at Universal and Fox accommodated the production.

CINEMATOGRAPHY AND DESIGN

The complex drama and action Spielberg conceived for the film demanded a number of large-scale believable sets and intimate synergy between all departments – from lighting to design to visual effects to the massive special effects and stunt sequences. Using both practical locations and soundstages at three major studios, Alex McDowell's art department created preliminary sketches and storyboards that, once approved, gave way to Ron Frankel's animatics from Pixel Liberation Front, a company which helped Spielberg and McDowell create 3D, moving storyboards to pre-visualize virtually every scene in the film, saving the production potentially millions of dollars in tests.

Cinematographer Janusz Kaminski, who has worked on every Spielberg film since 1993's multiple-Oscar-winning *Schindler's List*, points out that the large scale sets and visual effects required all departments to work closely together. "More than any other production I've been involved with, I would say this is the movie where all the departments collaborated the most," he says. "We incorporated our own ideas to the sets in terms of lighting and how the camera is going to move. There are sequences where the camera moves through an entire house and that has to be designed to fulfill that kind of demand. So, to maintain coherence of the images and continuity of the lighting and visual style, we had to become involved in building the sets and working with wardrobe months in advance."

Spielberg saw *Minority Report* as a noir film from the beginning. "I said to Janusz I wanted to make the ugliest, dirtiest movie I have ever made," Spielberg remembers. "I want this movie to be dark and grainy, and to be really cold. This isn't a warm adventure the way *A.I.* was. This is, rather, the rough and tumble, gritty world of film noir."

Consequently, Kaminski and Spielberg worked to create a visual world that would mirror Anderton's dark, emotional and psychological journey. "We wanted to create a world that feels realistic, kind of seedy, and full of shadows," Kaminski describes. "We wanted it to be a dangerous world."

To achieve this affect, Kaminski designed the lighting to allow for such elements as darker shadows and grainy skies, and used a bleach by-pass process in developing the film to desaturate the colors and create a grittier world. "Normally, when you develop the print, the film goes through a process in which the emulsion gets bleached out," Kaminski explains. In skipping this process, "the highlights become much more severe

in terms of not seeing any details. The blue skies get eliminated; the shadows become really dark; and the grain structure gets altered, making it grittier. The movie takes place in the future, but we wanted to create a world that feels realistic but also dangerous. Lighting the movie with heavy contrast and not allowing the viewers to see any details in the shadows, automatically creates a sense of danger.”

The main set pieces broke down into several sections – Anderton’s apartment, where we are first introduced to a device called the Mag-Lev, a network of magnetic “roads” for advanced magnetic cars running both horizontally and vertically throughout the city; Pre-Crime headquarters and the area called the Temple, where the Pre-Cogs are kept; and the Hall of Containment, the state-of-the-art suspension chamber where murderers are stacked end to end in pneumatic tubes. For both the Mag-Lev track and the cars, a synthesis between practical effects, real cars and functional models, and visual effects elements was essential.

Additional set pieces involve a car factory and tenement where elaborate stunt sequences would play out, Mall City, the Cyber Parlor, and finally, the private garden of Iris Hineman, which contains some very unusual flora.

Production designer Alex McDowell, whose previous work includes *Fight Club* and *Fear and Loathing in Las Vegas*, began his research as early as 1998. After participating in the Think Tank, he set to work creating and designing the plausible future reality in which *Minority Report* would unfold. “Steven was very clear about what worked and what didn’t work for him,” says McDowell. “It tended always to veer away from a traditional, classical sci-fi vision. Anything that tended too much to the fantastic he steered us away from. It’s an interesting challenge to try and really make a world that’s as believable and real as possible.”

Scott Frank found McDowell and his team a constant source of inspiration throughout the development of the script and the various tweaks necessitated during production. “They had a whole Bible of the technology for me to work from,” he describes, “what the computers were going to look like, what the visuals were going to look like. So, I really wrote from that. More than anything else, they inspired me and came up with a lot of stuff that I then used to help tell the story. They really started thinking, if we were going to make this real, how would it work? How could we do this?”

Spielberg conceived a visual vocabulary that would communicate a believable future some fifty years from now, focusing on Washington, D.C. “We will still have the Washington Monument, the Rotunda of the Senate and the Capitol Building,” Spielberg

comments. “There will still be a White House. There are great swatches of the District of Columbia that are not going to change in the next hundreds of year. But around that city are going to be the vestiges of the future architecture and technology, so I thought it was really nice to always return to a city that has the icon of the Washington Monument, or the Lincoln or Jefferson Memorials. It’s a touchstone to reality, and I think every time you see Washington D.C. it reminds you that this is happening in our world, in a real world just a little bit ahead of our time.”

“The film has been a great experience because of the range of sets and environments we’ve needed to create to satisfy the story,” continues McDowell. “Our future architecture is very diverse. At one extreme we’ve got the very traditional federal office building of Max von Sydow’s character and on the other, we’ve got Pre-Crime headquarters that, in the tradition of Frank Gehry, has been liberated from the square.”

Working with Spielberg, McDowell extrapolated that Washington, D.C. has evolved into three layers – the D.C. of monuments that does not change; an upscale, “bedroom community” across the Potomac where Anderton lives that has developed vertically; and the old part of the city that has not kept up with the technological advances afforded to the rich. “There’s a dark, decaying city which is where our tenement hotel, the alley chase and a significant part of the movie takes place,” he says.

The transportation in D.C. has been supplemented with a Mag-Lev (Magnetic Levitation) system based on magnetics. “Mag-lev, three dimensional system was based on a combination of taxi cabs and elevators, in the way that they are beginning to be released from their trappings and made free. It can take you wherever you want to go on command.” Adds Bonnie Curtis, “The Mag-Lev can go horizontally, vertically; it can spin; it can turn; and you sit in the middle and never spill your coffee.”

“The most futuristic thing about the movie, and maybe the most science fiction-y thing, is the look of the Mag-Lev systems,” Spielberg comments.

Spielberg and McDowell turned to Lexus and car designer Harald Belker, a visionary of multiple futures who worked on vehicles for *Batman and Robin*, *Armageddon* and numerous other films, to create the vehicles for *Minority Report*.

Pre-Crime headquarters was conceived as a building installed within the last ten years, and designed to be a statement about Pre-Crime. “Steven liked the idea that Pre-Crime is a transparent organization,” says McDowell. “It had nothing to hide. There was no hidden secret, and at the same time it's hiding the biggest secret of all, suspended above, in the egg. We conceived of the egg as this pebble dropping into a pond, and

very early on came up with a spiral design that incorporated this expanding ripple that, at the same time, in the three-dimensional design expanded into a series of spirals.”

Very different from the egg containing the three Pre-Cogs is the monument dedicated to them outside the building. “The Pre-Cogs are unknown to the public completely,” says McDowell. “They’ve become these very idealized, almost godlike figures, because they’re saving people from murder on a daily basis. Pre-Crime has encouraged this attitude. So, we wanted to come up with a Washington Federal-type sculpture that reflected the idea of the power of the three Pre-Cogs and at the same time had a kind of religious overtone. We had our own sculptors developing this and I think they have achieved something that’s very close to a piece of art in the real world.”

Following McDowell’s lead, costume designer Deborah L. Scott designed the costumes according to imagined segments of a futuristic Washington, D.C. “There are three segments of society,” she explains. “There are the inner city people who can’t afford any luxuries. Then, there is a middle class, consumer-oriented strata made up of people who hang out at Mall City. And, finally, the traditionalists whose old money buys old things.”

For Pre-Crime officers, Scott referenced astronauts and Air Force pilots to “make the cops look like heroes,” she explains. For the Hall of Containment, where the murderers are incarcerated, she fitted the prisoners with costumes loosely based on NASA cooling suits with tubes and wires for life-support type.

One of Spielberg’s most imaginative set pieces was to take place in a tenement hotel. Spielberg consulted with cinematographer Kaminski, McDowell and visual effects supervisor Scott Farrar on how to accomplish one long take that follows robotic spiders from room to room until they locate who they’ve been programmed to identify as Anderton.

“Very early on, I showed Steven a foam core model of the tenement hotel” says McDowell. “Like most models, it didn’t have a roof on it, and within a few minutes, he said ‘Wouldn’t it be great if we could do this in one overhead shot?’ So the crane now follows the action, follows the spiders and reveals piece by piece the action leading up to the spiders discovering Anderton. It was a tremendous challenge for the art department and the grip department but we were aided tremendously by Pixel Liberation Front’s animatics. Essentially, they converted the design into a 3D computer storyboard, so we were able to perfect the crane move before anything was ever shot.”

PLF created animatics not only for how the shot would appear on film, but also how the cranes, cameras, lighting and actors would move to accomplish the scene. “I wanted to do it all in one shot, looking straight down overhead, and I didn’t know if that shot was possible,” Spielberg comments. “So, I designed the shot with the computer guys on their software. They even showed me how to get the shot by actually putting the crane into the set, so on screen you have a pre-visualization of what the shot was going to look like.”

STUNTS AND ACTION

The action Spielberg planned for *Minority Report* encompassed ambitious stunts that harkened back to the director’s work on the landmark Indiana Jones films. “For this film, we’ve gone further with people flying than has been ever put on film before,” says stunt coordinator Brian Smrz (*Mission: Impossible 2*).

Tom Cruise, as he has so often, largely eschewed the use of a stunt double – sometimes to the dismay of his director, who remembers his first encounter with Cruise’s stunt work. “I first visited him on the set of *Mission: Impossible 2*,” Spielberg recalls, “where Tom was doing ninety-foot falls on a wire descender rig ... without a pad underneath. And I went over to [*M:I 2* director] John Woo, and asked, ‘How can you let him do this?’ John looked at me and said, ‘I can’t stop him.’

“So I made a deal with Tom,” Spielberg continues. “I said, ‘You have to let me determine what stunts you can do, and you have to take no for an answer.’ But most of the stunts he did himself.”

Throughout the film, Anderton is chased by Pre-Crime cops who believe he is going to commit murder. Because they can track his every move, eluding and outrunning them requires courage and ingenuity. One of such sequences played out in a tenement alley that involves not only horizontal movement, but a vertical chase that has Anderton struggling to escape from cops in hover packs. “We’ve all seen flying in movies,” says special effects supervisor Michael Lantieri. “Flying always has a feel like you’re hanging from something. In this case, we wanted the hover pack to actually be flying and let the passenger go along for the ride. It goes up, down, drags on the ground, flies inside the tenement building, crashes through the ceiling. It just goes on and on. It’s Steven taking it to the *Raiders* level of action, where you think you’re just about to come up for air and there’s more above you.”

Stunt coordinator Smrz worked closely with McDowell in creating a rig that would allow multiple bodies to be flying in the air in ways that hadn't been seen before. On Hennessy Street, on the Warner Bros. lot in Burbank, the art department and construction crew began work creating a 400 ft.-long, fifty foot-high alley set, complete with real bricks and mortar, to match the physical location in Downtown L.A. "Simultaneously, the grips were building an exoskeleton outer structure thirty feet above our set that was the most incredible flying stunt rig I've ever seen," McDowell says. "For the time it was standing, we had the tallest building in Burbank."

This truss system enabled Smrz to hang pick points from which the stuntmen and actors could fly. "I had 200 cable shivs in the air and a mile and a half of cable that had to be strung just to perform these stunts at various spots in the alley," Smrz describes. "Just to give you an idea of what was going on behind the scenes, it takes two or three people to make one person travel through the air and we had six people in the air at all times. Of course, one of those guys was Tom Cruise. But because we have a history with him, Tom fit into the mix very easily. They're the same group of guys from Tom's last two films so he trusts us and was comfortable on the wires from beginning to end.

"We have a great team," Cruise adds. "They know physically what I'm capable of, and just go in and set it up. They're tricky, but they're really enjoyable. Brian always put safety first, so it's exciting but safe."

"We've created something visually different than what audiences have seen before," Smrz adds. "Some directors would have used visual effects, but Steven felt it was better to make it as real as possible. The irony is that there's going to be a lot of visual effects work just to remove our cables from the shots!"

This sequence exemplifies the combination of physicality and animation that has gone into building the ambitious action in *Minority Report*. "I think it's something that makes Steven's films work so well," says Curtis. "We use a lot of real locations with actors doing stunts. Yes, ILM will have to remove wires, enhance buildings and create the skies and ceilings where cables and rigging were before. But having the physicality of the real world – real actors, real clothes, real hover packs – and adding Michael Lantieri's real fire and dust to the mix puts something on the screen that can't be replicated with CGI."

Another elaborate action sequence unfolds in a car factory in which robots mold, weld, put together and paint the futuristic Lexus cars designed by Harald Belker. The location used for the car factory of the future was originally a bomb factory in Vernon and

is now used for aluminum smelting and polishing. It was chosen for its beautiful natural light. "It has the traditional 'toothcomb' kind of lighting system, with skylights above," McDowell describes. "It has this beautiful natural northern light at all times of the day."

In the action sequence, Anderton fights Witwer on a moving crane and then becomes trapped inside one of the cars on the assembly line. There are near misses with the automated assembly line equipment, parts are slammed into the car and the car turns on its side.

To create this set, McDowell and his team had to essentially invent how these types of cars are made. "We started with the idea that cars were not made of metal anymore," he says. "They're created, or grown, within a stereo-lithography tank, which is a technology that's being used right now on a smaller scale. You can create this very rigid resin body out of liquid that's laser hardened. So we have a tank which has five lasers that rapidly drawing out a shape on the surface as it comes out of the liquid."

Once out of the tank, the fully automated robot assembly line takes over, which was provided for the most part from Kawasaki. "Steven liked the robotic arms so much that he used one as a camera mount," says McDowell.

The car factory sequence, like many other sequences in the film, required close collaboration between all of the various departments – design, special effects, visual effects and stunts. "We set up a framework of the production line, but then as we passed designs over to special effects to modify them according to what could physically be done," says McDowell. "We had the robots with their programmers. Then special effects have a series of mechanical elements that have their own programmers. So, when you see this scene going on there's probably twenty different people working different parts of the machinery to bring it all into sync. It's a giant kind of choreographed ballet."

"That scene in particular may be the most elaborate sequence when it comes to CGI," cinematographer Kaminski points out, "because we did create an assembly line of existing machines that actually manufacture the car, but many of the machines were enhanced by CGI work."

VISUAL EFFECTS

The visual effects challenges of *Minority Report* were not in the number of effects shots, but in the detailed elements and compositing of those elements that would need to be perfect to create a seamless representation of Spielberg's vision. The 481 visual

effects shots in the film were divided up, with the majority of the work going to San Rafael, CA-based Industrial Light & Magic, which has played a vital role in numerous Spielberg films.

For *Minority Report*, the ILM team, led by Scott Farrar (Oscar nominee for *A.I. Artificial Intelligence*) created vast interior environments using digital set extensions and their groundbreaking proprietary software to create 3D modeled people. Further, ILM was intent on matching Janusz Kaminski's grainy and textured visual style. Farrar decided to shoot blue screen work on a very fine grain negative and degrade it to match the rest of the film. With the majority of the scenes taking place in broad daylight, the visual effects team had no place to hide.

One of the more complicated compositing sequences involved the master shots of the Mag-Lev traffic system within 21st century Washington, D.C. "This is a broad cityscape full of buildings, with rising steam and hundreds of cars, a tremendous number of elements," says compositing supervisor Scott Frankel. Add to that racing cars and their drivers, shadows and reflections, and the only physical element of the shot -- Tom Cruise who, when Anderton's car is recalled to Pre-Crime headquarters, must jump out of his own Mag-Lev vehicle and try to escape by leaping from car to car. "The blue screen element of Tom we shot against a blue screen," says Frankel. "The rest is completely synthetic."

Farrar shot aerial background plates of the Washington skyline, which then had to be augmented with touches of the city's newer development. "The idea of *Minority Report* was to somehow combine old and new," says Farrar. "The challenge was that no matter what we did, putting new buildings into pre-existing backgrounds, if you made it too fancy, too modern, too excessive, it stood out like a sore thumb. So, through Alex McDowell, and then our art director Alex Laurant, designing our futuristic buildings had to be pulled way back. We were trying to make it as gritty and real as possible. So, we've spent a lot of time trying to put the grit and texture of real city backgrounds into all the stuff that we're putting into the foreground."

The Hall of Containment sequences take place in a massive, 21st century "jail" in which the prisoners of Pre-Crime are kept in a coma-like state of suspended animation in which their crimes are played out on a continuous loop before their eyes. Spielberg and McDowell decided to use a nineteenth century prison model called a Pentopticon, which has a central tower surrounded by containment pods, that would have been converted into the Hall of Containment. "Layered on top of that old, hundred year old

prison are these shiny, perfect tubes that are keeping these guys really in cold storage,” McDowell describes. “The image that Steven came up originally with was that it would be almost like Arlington Cemetery, and when Anderton walked in it would appear to be a space full of grave stones. And then Gideon reveals that in fact the gravestone was just a cap of a tube full of people. So there's this great moment when this field of gravestones suddenly rises up out of the ground and you realize that there's, you know, thousands of people stored in this enormous space, stacked one on top of each other.”

For ILM, the challenge was to take the actors and a minimal set and create not only the extended digital Hall, but each individual prisoner within each individual sled. “In the Hall of Containment, we have hundreds of people that have to be 3D because we’re going to see them from all different angles,” says Farrar.

To manually paint photo-realistic digital humans on that scale was not time or cost effective, so the production took a chance on software being developed by one of ILM’s engineers, Steve Sullivan, called 3D photo modeling.

Using 19 extras, the effects team set up 12 cameras photographing them from all different angles against a green screen. “Each camera has an outline and you can extract the person from the background create an outline,” says visual effects producer Dana Friedman. “The computer can then piece those outlines together and create a 3D model based on those pieces. Then, you use the textures of the photos and map that back onto the 3D model and voila. You have a 3D model that you can put anywhere.”

Each image had to then be variegated and inserted into each digitally-created containment sled, and composited together with the live action footage and other elements for the scene.

In addition to various wire removal, and adding flames and heat ripples from the jet packs, ILM worked with Michael Lantieri to create supporting footage for a giant hover craft used by the Pre-Crime team to arrive quickly at crime scenes. Though there was an actual physical hover craft built to scale, ILM made it fly, creating the floor and missing parts of the craft digitally. The team also created the fantasy images in the Cyber Parlor, where consumers live out their wildest dream, which provides Anderton with some key clues as he unravels the mystery. Other dazzling surprises include two digital face effects, and a peculiarly aggressive garden maintained by researcher Iris Hineman.

MUSIC AND SOUND

Minority Report reunites Spielberg with five-time Academy Award-winning composer John Williams, with whom the director has collaborated on nineteen films over nearly three decades. For *Minority Report*, Williams creates what Spielberg calls his “first black and white score” – a classic suspense score with little tonality. “I think all of John’s previous movie work has been in ‘color’,” Spielberg explains, “but this score is more experimental. You feel it more than you hear it.”

Multiple Oscar-winning sound designer Gary Rydstrom approached the sound design for *Minority Report* as a “past/future” film. “There are things we’ve never seen before,” he says, “and there are also sounds that harken back to old Hollywood serials.”

Rydstrom and his team started early, recording and experimenting with different sounds that they would eventually match with Spielberg’s striking imagery. Their task was to give sound to the Mag-Lev and its ostensibly silent vehicles; create emotional sound design for the pre-visions of murders and holographic home movies; and record real hover crafts for the hover craft sequence. Jet packs, talking billboards, and a futuristic car factory, among other ambient environments, all had to be accounted for. “The audience has to recognize a sound as matching what they’re seeing,” says Rydstrom. “Our job is to make the audience think that what they’re hearing is really happening on set. But the other part of our job is to make the sound of each of these things reflect the spirit or the feeling of the moment. One of the great things about working with Steven Spielberg is he’s very good at describing that feeling. Early on he said he was trying to make a futuristic John Huston film noir. It has these two opposing elements, and the combination will result in the feeling of this movie.”

One of the most challenging sequences involved the mechanical spiders that track Anderton down to scan his eyes. “They’re robotic,” he describes, “they have a job to do. They’re not living. But they move like spiders. So, I was trying to find the balance between something that would seem very futuristic, just tapping metal, clicking, creaking, things opening on the spiders. But also using things that would give them character.”

Unspooling tape from a tape dispenser and dental floss from a roll helped give the spiders their screech. But for their footfalls, Rydstrom turned to a group of researchers at Cornell University, who had developed a sophisticated way of recording the sounds of jumping spiders, which are inaudible to the human ear. “They did these beautiful recordings of these jumping spiders doing their various rituals,” Rydstrom recalls. “The spiders sounded mechanical, even though they’re natural, and they did

strange things with their legs. They would pop and whirl and sound like little machinery. The natural world is full of interesting sounds we haven't explored yet. It's an amazing, new, untapped source for sounds."

© 2002 Twentieth Century Fox and DreamWorks L.L.C. All rights reserved. Property of Fox.
Permission is hereby granted to newspapers and periodicals to reproduce this
text in articles publicizing the distribution of the Motion Picture.
All other use is strictly prohibited, including sale, duplication, or other transfers of this material.
This press kit, in whole or in part, must not be leased, sold, or given away.