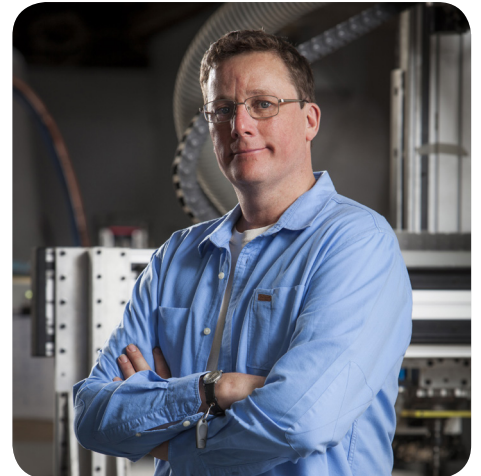


“Almost every job Weta Workshop undertakes has some element of 3D printing in it.”

– Sir Richard Taylor, Creative Designer and Co-founder, Weta Workshop



### The wonderful world of Weta Workshop

It all started in 1987, in the back room of Richard Taylor and Tania Rodger's Wellington flat. Today, almost 30 years, 36 film and creative industry awards - and a knighthood - later, the company is renowned as a truly world-leading design and effects facility.

Weta Workshop houses a complete design and physical effects workshop under one roof. A team of multi-skilled and highly-talented artists and craftspeople collaborate across a range of departments, from 3D modelling to make-up, imaging to IT, costumes to creatures, props to paint. Creativity, passion and tenacity, and the application of pure Kiwi ingenuity, underpin every challenge the Weta Workshop team accepts.

### Demands, deadlines and details

Weta Workshop's highly talented people are more than capable of making everything by hand, but time isn't always a luxury they have in a competitive world. This is well illustrated by the mere 7 ½ weeks of pre-production time they had for 'The Hobbit' compared with the relatively generous 3 ½ years allowed to hand craft everything for 'The Lord of the Rings'.

“We're a design and manufacturing studio servicing the world's creative

industries,” says Richard Taylor. “Doing that, and doing it from New Zealand, gives us a number of challenges. We have to compete against the other effects facilities in the world, and therefore cost effectiveness and time are always considerations for us. To tackle both of these we continually turn to sophisticated manufacturing technologies. The primary one, of course, is 3D printing.”

Weta Workshop picked up the basics from the first 3D printer they acquired, and quickly moved on to building their own custom devices. However, getting the degree of resolution they wanted still required a large amount of hand finishing. What the studio really wanted was more detail on the initial prototypes and a faster process to achieve this.

### Taking flight with Fuji Xerox

When Fuji Xerox installed the ProJet 3510HDMax at Weta Workshop and asked what their first project would be, the team simply said “flies”.

They weren't kidding, and all was made clear when the Fuji Xerox team viewed the staggeringly complex digital file of the flies destined for the Te Papa 'Gallipoli – The Scale of our War' exhibition.

The flies would crawl over and swarm around the four Weta Workshop -created photo-realistic, 2.4 scaled sculptures

of Kiwis at war. Painsstaking attention to detail was essential to create a truly immersive and visceral viewer experience. The flies' legs had to be covered in hundreds of thin hairs and the wings needed to be glossy and clear. The 3D Systems ProJet 3500 HDMax allowed Weta Workshop ZBrush artist, Will Furneaux, to digitally sculpt all of the hairs and details directly onto the 3D fly models ready for printing.

What would traditionally take their team of artists weeks to complete, over 400 remarkably accurate flies of varying sizes were printed in record time and astonishing detail, leaving the Weta Workshop team blown away.

### Precious technology

3D printing is now an essential production tool for Weta Workshop.

“Almost every job Weta Workshop undertakes has some element of 3D printing in it,” says Richard. “We built many of our own 3D printers, but none of these machines reach the fidelity that the 3D Systems machine gives us.”

Even Weta Workshop's range of highly sophisticated film-related collectibles are being developed and produced more cost effectively than ever before, thanks to the ProJet.



The range includes figurines, prop replicas and even memorable environments (for example, Bilbo Baggin's Hobbit Hole).

"Our staff would spend weeks meticulously detailing these collectibles to make them absolutely perfect," says Richard, "at which point we'd would then mould them again. With the ProJet we can now go straight from the ZBrush into a final 3D print with incredible fidelity, incredible resolution of detail, and no requirement to go back in and sculpt. That is a massive cost saving for us."

For Richard this is a win-win result. "The collector gets an unequalled piece of artwork and it's come straight from a single artist's vision and talent. It makes for an incredible pipeline, and gives beautiful results."

### The 3D fellowship

Fuji Xerox's investment in local support has been a game-changer for Weta. Help from a Fuji Xerox 3D engineer is only a phone call away and available 24/7, keeping downtime to a minimum, imperative for the tight lead-times Weta work to

Rob Gillies, Workshop Supervisor, is responsible for keeping things running smoothly and to schedule. So it's not surprising he places a high value on having on-the-ground support.

"Definitely having a partnership with the company supplying the machines is hugely important to us. If anything goes wrong, we've got someone on the end of the phone that we can call that will actually do something about it. With the Fuji Xerox team the technical support has been brilliant. They're always there, and they actually come onto site, which is fantastic, and talk through any issues, problems or successes we've had. We feel like we're building a really strong relationship with a really great team."

David Wilks, General Manager of Weta Workshop, sees the relationship with Fuji Xerox as extending far beyond the normal supplier interaction. Instead of simply installing the device and offering servicing when needed, Fuji Xerox work closely with Weta Workshop to understand what they wanted to achieve, then work closely with 3D Systems to find ways to meet their challenges.

"One of the things that's been really helpful is the Fuji Xerox guys giving us

examples of the sort of technology and materials that are coming down the track. This gives us a sense of where we can go in the future, and the sort of things we can expect to use as we develop our capacity and capability in the space. It really has been a terrific partnership."

The level of support even extends to using the 3D Systems ProJet 3510 in the Fuji Xerox showroom to help manage overflow work from the studio. Fuji Xerox has also arranged for Weta Workshop to utilise a range of 3D Systems devices offshore for special projects and Beta testing.

### The future

The ProJet has been running hot. In the first three months of operation alone they put through more work than most owners of 3D printers do in a year, and Richard is already planning to buy another one.

"We feel very fortunate to be working with this technology, and Fuji Xerox's management and technicians have been extraordinary in helping us adopt it. So roll on 3D printing, and cheers to everyone from the Weta Workshop Team."