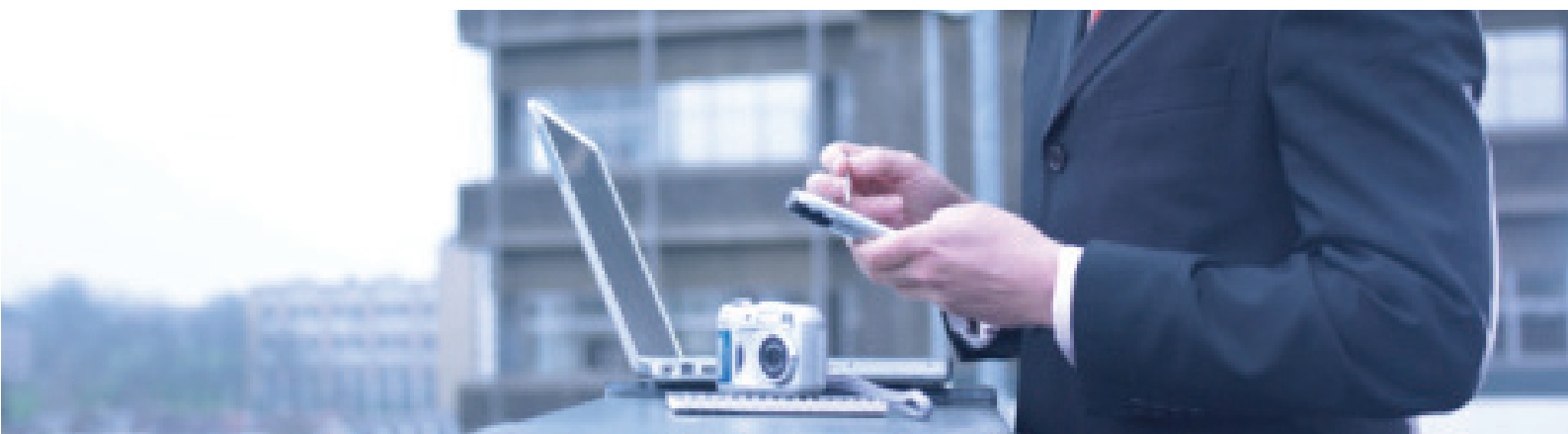




# Wireless Solutions for Business

Nikon WT-2 Wireless Transmitter offers Industry a new edge to image delivery.



Nikon's approach to digital photography is to build cameras that exploit the possibilities offered by digital capture. Nikon's engineers look at every aspect of digital capture, always seeking new possibilities or more efficient solutions to ensure their clients get the results they need.

The introduction of wireless technology for its professional digital cameras is one such innovation. This is an industry first that provides photographers with the fastest and most seamless workflow ever devised.

Moving images quickly has always been essential for media deadlines. However, advances in communications technology has created new areas in which transferring data over wireless networks increases benefits to many business operations.

*“Nikon makes Wireless Transmission easy.”*

The WT-2 wireless transmitter, introduced for the D2Hs and D2X make all this possible. It uses the 802.11g Wi-Fi standard with a data transmission rate to a 54 Mbps and enables large file images to be moved at high speed.

This technology allows image data to be transferred across wireless networks to Wi-Fi enabled laptops, PDA's or into a wired local area network (LAN). This gives photographers a new freedom of mobility and speed of workflow.

Wireless transmission involves extremely complex technology. Nikon knew it was important to make it easy to use as photographers are often working under pressure. They don't have time to get involved in over technical processes. Connection Wizard allows easy set-up automatically prompting connection to the host, inserting the relevant settings while pairing with the receiving device.

Network settings can also be input to the camera manually via menu on the rear screen. The same menu can be used to access advanced features such as security encryption, access controls and modes. The WT-2 transmitter is simple to fit and use. It screws into the tripod socket, integrating with the shape of the body and effectively becoming an extension of the vertical grip. It draws its power from the camera's battery and communicates with the camera through a short cable that plugs into the USB port.

# ➔ Wireless Solutions for Business

When connecting to a receiving device there are two different access protocols to choose from:



**Ad-hoc** allows the device to communicate directly to a wireless enabled computer or ftp server. This also known as "peer to peer" connection. This is a simple connection and works well when the camera and computer are close together and there is minimal interference from other networks.

Either all images can be directly transferred to the server or individual frames can be sent after they have been reviewed and selected on the camera's rear screen. This mode also allows multiple cameras to transfer to one computer.

The WT-2 gives the option to record NEF and JPEG file formats at the same time. By sending the smaller JPEG format to the server for high speed access the photographer can later download the larger NEF files for archive and other usage.



Wireless LAN Access Point



**Infrastructure** allows the camera to communicate via one or more access points connected to a single computer or through a network on to an FTP server. This method offers a more positive connection especially in a busy environment where there are several networks or users in operation. This is an ideal set-up when increasing the range of the network, as multiple access points or antennas can be added.

**PTP/IP** Picture Transfer over Internet Protocol allows images to be sent between the camera and computer via a wireless LAN. However, when the image arrives at the computer it can be dropped into a folder without the use of an FTP server. Picture Transfer Protocol is same method previously used to transfer images via USB cables.

Nikon Capture software 4.2 and above now incorporates a camera control device which allows the photographer to operate their camera via the computer. As well as firing the device, easy access to the exposure modes enable complete camera control. This is very useful for studio or remote shooting. The images are transmitted directly to the computer's hard drive - they are not stored on the card. This can assist the issue of card storage when multiple images are required or long term recording.

The WT-2 also has two different methods of image transfer **FTP** and **PTP/IP**.

For added security the WT-2 offers both WEP and TKIP protocols for encryption of the data being transferred.

**FTP** File Transfer Protocol is used to send images to an FTP server. This can be hosted within the computer or accessed via an FTP client. The client will send files onto the hosting computer such as a picture desk. In FTP mode the images are first recorded to the card giving the photographer several transfer options.

For further information on the WT-2 please go to [www.nikon.co.uk](http://www.nikon.co.uk) or call 0800 230 220.

## Swift Memory Capture



Uzair Kharawala runs SF Digital, a growing business specialising in event photography based at Leighton Buzzard in Buckinghamshire. The company's coverage includes weddings, dinner dances, equestrian events, numerous sporting tournaments plus home portraits.

SF Digital has adopted the WT-2 transmitter for all areas of their work. At equestrian and sports events it allows clients to see images moments after they have been taken, rather than having to wait for a photographer to return to base, or for a runner to retrieve their card. *"Downloading the images via CF cards used to be a slow, stop-start workflow."*

But it is at weddings and dinner dances that the Wi-Fi technology, combined with the outstanding performance of the D2X, is proving most valuable.

***SF Digital believes that instant viewing has boosted sales by 60%.***

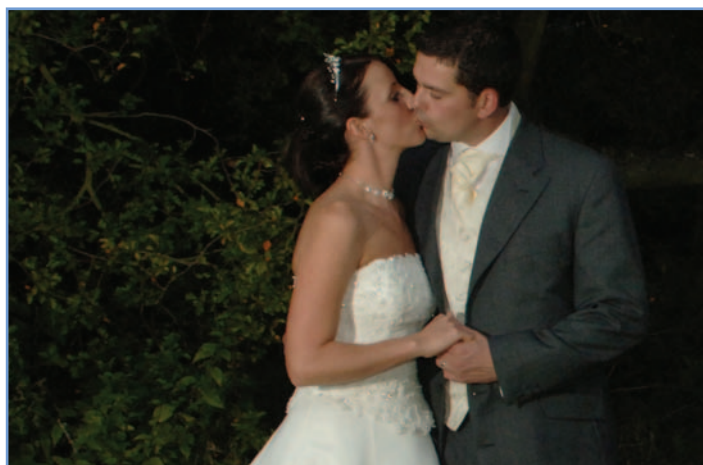
*"At a dinner dance we have to photograph all the guests within a very narrow time slot, usually before the meal," Uzair explains. "Every minute is vital. We used to photograph the guests and ask them to come back after the meal to view the images once they were downloaded. We needed to make sure everyone came back to us. This was impossible as they would be enjoying the event and socialising with other guests."*

Previously a tethered camera was tried as a method of instant downloading but was found to be unsatisfactory. *"The wire restricted our movements and interaction with the client",* says Uzair. *"Wireless transmission proved to be the perfect solution."*

*"Now, as soon as the picture is taken, guests can view their image immediately at our on-site sales desk. The image is sold right there. The orders are printed during the meal ready for guests to collect. As it is still early, we can still shoot some more candids or requested photos and have them ready to take away."*

Uzair also finds Wi-Fi extremely useful at larger Asian weddings at which there are often up to 800 guests. As well as the usual wedding images, a family portrait service can also be offered. Many of the guests come from all over the world and have not seen each other for several years; this is an ideal opportunity to get together for a photo shoot. The wireless technology again saves Uzair valuable time when dealing with so many requests.

SF Digital believes that instant viewing has boosted sales by 60%. Previously guests would often forget to return to view their picture, and many sales would be lost. Sales are now made as soon as the image is captured, eliminating this lost revenue. But that's not the only way in which profits have increased.



*"Before we would have had two photographers at a dinner dance," Uzair explains. "Now one person can quite comfortably handle the whole job: shooting, transmitting and printing orders. There is a direct saving every time we attend an event."*

With so much of the image administration done on site, images can be available on-line much faster, ready for anyone who missed the opportunity to purchase on the day.

This successful business has grown rapidly in the last 2 years by reaping the benefits of new technology.

# Picture Pipeline

In the newspaper business, time is the enemy. Just ask any picture editor. Minutes can make the difference between being able to splash a defining image across the front page, or, having to settle for a picture that has already been out-dated by fast-moving events. In the world of sports and fast-breaking news stories, every second is valuable. Waiting is not a favourable option.



The Press Association is at the cutting edge of news and sports photography. As the national news agency for the UK and Ireland, they supply image services to every national and regional daily newspaper, as well as on-line publishers and a wide range of other commercial markets.

With an unrivalled reputation for quality, speed and accuracy it is up to the team at PA to distribute images around the world as close to real time as possible.

Meeting deadlines for such a vast client base is a demanding task. However, PA are quick to adopt new technology that allows them to deliver their content as fast as new communication systems allow.

Most of PA's shareholders are national and regional newspaper publishers so they need to ensure they deliver. For major, high-demand events PA use a team of photographers. This allows them to gather enough images to ensure their service is the best. At last year's Wimbledon tennis championships, the photo team worked alongside an on-site picture editor to ensure all the major play was covered.



Photographers were equipped with Nikon D2X cameras fitted with the WT-2 transmitter. This meant they could send images directly from court-side.

Wimbledon, like other major sports venues, has an installed Local Area Network (LAN) to accommodate wireless transmission. The LAN consists of numerous wireless receivers, or access points, placed around the courts. They pick up the signals from the cameras and send them to a central server. Embedded codes tell the server who took the image. It is then sent automatically to the appropriate editing suite.

When the picture editor receives the images on his desktop, any necessary adjustments and captions can be added to the file. It can then be immediately updated into the live service which is viewed on picture desks around the world. The whole process can be completed within a minute of the photographer pressing the shutter.

*"This is one of the most practical methods for photographers to quickly send images from difficult and restricted positions,"* says Bob Martin, Photographer's Liaison Manager for AELTC Wimbledon.

For PA photographer, Rui Vieira, Wimbledon 2005 was his first experience with a wireless team. *"You can select and send the image while the players are getting ready to serve, then continue shooting even if the camera is still transmitting. You never have to miss any of the action."*



The simple connection wizards allowed the photographers to set up their own cameras with minimal technical knowledge.

Richard Hall, PA's Editorial IT Business Manager, believes Nikon's WT-2 system has proved totally reliable. *"It's fast, efficient, easy to use and it never gives us any problems,"* he says. *"The photographers love it and our clients get the pictures with virtually no delay."*

*"This is a very competitive business,"* he adds. *"Our clients pay a subscription fee to receive our images. They expect the fastest and most efficient service possible. In today's market, that means using wireless technology to reduce delivery times to the very minimum."*

The host of advanced security features included in the WT-2, such as WEP encryption, enabled PA and Wimbledon Tennis to ensure the system was fast, efficient and secure.

This type of secure encryption is essential when sending important data to and from multiple users across wireless networks.

## The Wireless Studio

Jason Russell is a creative photographer who runs a still-life studio in London's west end. He shoots for high quality magazines such as Marie Claire, Glamour and Easy Living.

An early adopter of digital technology, Jason has kept himself up to date with the latest equipment. Recently purchasing the new Nikon D2X equipped with the WT-2 transmitter has enabled him to create a completely wireless environment for his studio.

*"I like to send the images straight to the computer so I can see exactly what I'm getting on the big screen without the inconvenience and distraction of downloading from the card," Jason explains. "Until now that has meant being tethered to the computer, which is not ideal. It restricts my mobility particularly if there are other people in the studio: cables can cause accidents."*

*"I must admit that I do like gadgets, but this is a very practical idea. I've been using a wireless trigger for the flash heads for a while now, which got rid of the sync cables. The WT-2 transmitter has allowed me to complete the move to a wireless environment."*



Jason's images have to be of the highest quality as they might be used across two pages of a glossy magazine with the very highest reproduction standards. He therefore uses the D2X in its highest quality mode, shooting uncompressed 12-bit raw (NEF) 20MB files. Even these large files are handled at adequate speed. It takes about 4-5 seconds to transmit a raw file, which Jason says is fast enough for his still-life work.

The WT-2 also has the advantage of controlling the camera's functionality from the laptop. Jason can shoot direct from the computer, controlling and adjusting exposures via the keypad. This is extremely useful if you have an intricate set up to photograph and any movements from the photographer could disturb the subject matter.

A wireless studio set-up has many advantages for enhancing workflow speeds, for clients as well as photographers, especially when onsite image approval is required.

## Caught in the Act!



Picture editor requests don't get much tighter than the one faced by showbiz photographer David Nelson during his coverage of the Live 8 concert in Hyde Park.

David was covering the event for the Daily Star Sunday. His brief was to get a great shot of Robbie Williams, one of the later acts in the evening. On top of this, he was asked to get the image in time for the

Star to remake the opening spread of their music section, replacing the pictures taken earlier in the show.

As the paper would be in competition with every other Sunday paper that morning, a photo of Robbie was a key element in increasing paper sales.

Time was definitely against them. The image would have to be with the picture editor within a few minutes of Robbie's scheduled appearance on stage. In his 24 years of shooting music and showbiz events, Cheshire-based David had never

faced a tighter deadline. The only way he was going to meet the challenge was to use Nikon's Wi-Fi technology. There simply wasn't enough time to depend on having the storage card being delivered to a transmission point by a runner fighting through the crowds of fans that would be in full frenzy by the time Robbie appeared.

*"I had to get a good picture early in the act and transmit it almost immediately," David explains. "With Robbie you know he'll do something that will make a good picture during his act, but I hoped I wouldn't have to wait long. Luckily, I was able to get a good strong shot that suited the spread almost straight away."*

David tagged the selected image in camera and transmitted it to his colleague situated outside the stage area, he sent it to the Star using FTP transmission, meeting the deadline with just seconds to spare.

*"Without the Nikon transmitter this would have been impossible," David concludes. "If it had taken five minutes rather than a few seconds it would have been too late. This is the sort of situation where Wi-Fi technology comes into its own."*

David was one of just 20 photographers accredited to cover the event from the stage area. "It's a big privilege to be given that sort of access to such a big event, so you want to make a success of it. I really wanted to be sure of giving the

# Mobile Transmission via PDA

Cambridge Evening News senior photographer Keith Heppell is one of a growing number of photographers who have not only dispensed with the wires, but with the laptop computer as well.

In their place is a Wi-Fi and Bluetooth enabled Pocket PC (PDA) loaded with Phojo image management software. This unit can wirelessly receive images from Nikon D2 series cameras equipped with a WT-2 transmitter. Once the images are received from the camera, the files can be transmitted via FTP or Email function. The Pocket PC can automatically connect to the internet via a Bluetooth phone, WiFi, or even Inmarsat Regional BGAN satellite modem allowing the photographer to be completely mobile.

Keith was the first Cambridge Evening News photographer to adopt the technology. It has been so successful that all eight staff photographers will be using it.

Keith explains how easy it is to use: *"The Wi-Fi transmitter on the camera is the first link in the system. It is configured in a basic ad-hoc mode to transmit images directly to the Pocket PC, which is loaded with Pocket Phojo software and Pocket ITP."*

*The Wi-Fi connection to the camera is enabled using Pocket ITP software which makes the Pocket PC into a mini server allowing full connectivity and folder destination control."*

Both these programs run under Windows Mobile on a Pocket PC. Phojo can do all the main adjustments that a photographer would normally do. All the images can be browsed with large thumbnails. They can be edited with standard features, such as levels and colour balance, resized and finally IPTC captioned ready to transmit. The adjustments can be done manually, or automatically as a batch process as soon as an image is received.

Where urgency is the prime concern, the camera is configured to send images to the Pocket PC as they are taken. The Pocket Phojo software is set to automatically caption and transmit the images to the mobile phone as soon as they are received. In this mode, there is no human intervention after the shutter button is pressed. The images appear on the picture editor's desk in just over a minute, depending on the file size, after the shutter is pressed, regardless of the working environment.

*"You can be very discreet with this system," says Keith. "The PC and mobile are in your pocket and there is no indication that you are, effectively, a walking picture transmitter."*

He says the system also overcomes the increasing problem of not being allowed access to venues with a laptop. *"Sometimes there just isn't room for every photographer to have a laptop and sometimes they aren't allowed for safety reasons. The Pocket PC and a Nikon Wi-Fi enabled camera provide the perfect solution, . It also allows complete freedom of movement."*

Keith has already used the equipment on several high-profile assignments, including coverage of the G8 Summit in Scotland.

*"It has been totally reliable and it allows you to adapt to any situation. You can react very quickly because a Pocket PC is ready the moment you turn it on. At five hours, battery life is impressive too. You don't have to wait for it to boot up like a laptop. The freedom of not having to carry around a laptop is one less thing to worry about in this demanding environment," he concludes.*

The simplicity of the system and minimal cost outlay has led this mode of operation to be adopted by other picture desks and press users.



For more information on Phojo software visit [www.idruna.com](http://www.idruna.com)