

**Introducing the Internet**  
**Part One**  
**What Is The Internet?**

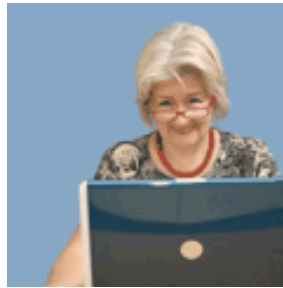


# Introduction

Dear Friend,

Welcome to The Web on Wheels' Intro to the Internet, Part One in this series! In this section, we'll take a quick look at what the internet is, how it began, and the basics of communicating on the Internet works.

Our main goal in this series is to help you to gain confidence with the World Wide Web, and make it into a useful everyday tool, rather than thinking of it as something rather frightening. Believe it or not, if you go through these Guides slowly and carefully, you will become competent at using the Internet, and firm in understanding what it is and how it can help you do what you need.



Part One of this series involves looking at the Internet capabilities out there and how they can benefit you most. Simple and straightforward, we'll lead you through a quickie look at what the Internet is, how the Internet works, and how it started. By the end of this chapter, you'll begin to see some of the fun things to do on the Internet. Enjoy!

# Part 1

## What Is the Internet?

For Part One, let's jump in and see if we can't make the massive information highway driveable. It's popular, it's out there, and it's a blast to explore if you're ready for it.

The word "Internet" comes from the fact that computers are **inter**connected through a **net**work. Your computer can talk to any other computer likewise connected to the Internet instantly, anywhere in the world. Since that opens up, literally, a "world" of possibilities, the Internet has easily become a huge reason most people have computers nowadays. Here's what we'll cover:

1. What Is the Internet?
2. When and How Did It All Begin?
3. How Does It Work?

Since the World Wide Web is full of great information, in this Internet series, we'll point you in the direction of some very helpful sites and videos that will maximise your understanding of the information we cover.

If you see some words underlined and in blue, you can click on it, and your Internet browser, (maybe yours is Internet Explorer) should automatically go to that website. If you click on it, and nothing happens, there is a fix for this. If you're not familiar with copying and pasting, just keep this page in mind and either print it out, or come back to this section when you need to.

The following will make sense a bit later on:

**If your link doesn't work:**

- right click on the linked text,
- click on copy or copy hyperlink,
- open up your Internet browser (maybe it's Internet Explorer)
- paste it in the web address (URL) field, and
- press enter.



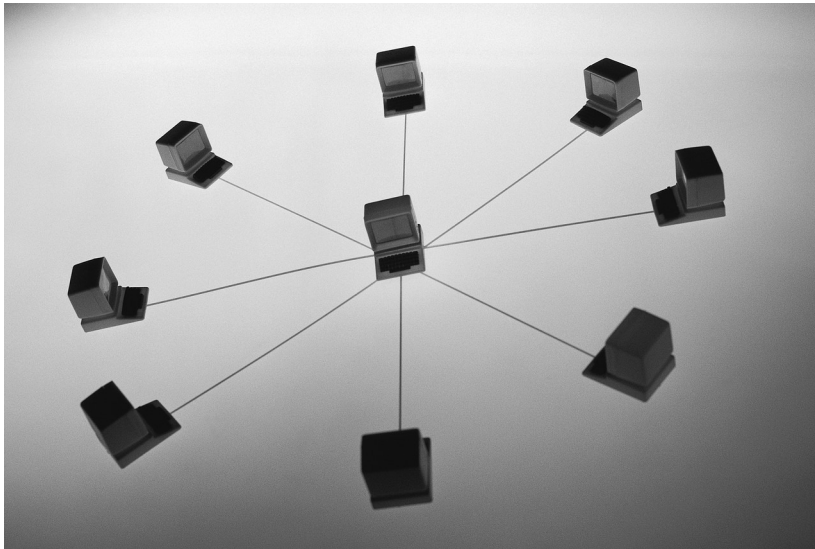
# 1. What Is the Internet?

When you are sitting in front of your computer, it's easy to understand the physical – you're here, and your computer is here. Well, somehow, if you have an active connection, just sitting in front of your computer means that you have the world at your fingertips. How? Through the Internet. First, let's figure out what the Internet is. Then, let's talk about what sort of things are available to you as a result.



**AKA?** The Internet is also called the web, the World Wide Web, the information highway, and the interconnected network of computers.

The Internet is, simply put, many computers connected to one another so that they may share information instantly no matter where in the world they are located. The word “**Internet**” comes from the fact that computers are **inter**connected through a **net**work.



But what does this interconnection mean for you?

**How do you find the best steak restaurant near you...**

**without the Internet?** You can ask friends, look in the telephone book, read through newspaper ads, find coupons, or get menus through the post.

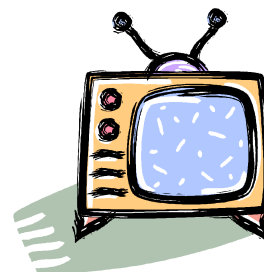
**with the Internet?** You can find steak restaurants nearby on an online map, look at reviews from real customers, or see pictures if they have a website.



## How do you learn to tend a garden...

**without the Internet?** You can go to the library, ask friends, or ask at a local nursery.

**with the Internet?** You can simply search for the experts in the type of garden you wish to grow, find programs that help you plan your plot, and search for nearby nurseries.



## How do you know when your favourite TV show is on?

**without the Internet?** You can look in the newspaper for the TV guide, look at the menu if your TV offers one, or just guess.

**with the Internet?** You can quickly find out when your favourite TV show is on, read a synopsis, see whether it's a repeat episode, the running time etc and connect with other fans from around the world to see what they think of the season or the latest episode.

Sitting in the comfort of your home in Australia, you can instantly communicate with someone in Russia, Ireland, America, or Mexico, and that means you have a limitless amount of resources and connections from which you can make friends, find information, make purchases, and so much more.

So really, this interconnection of computers expands the resources you normally have to accomplish everyday tasks. In a future part of this series, we'll explore the main benefits that the Internet may offer you, and hopefully point you in the right direction for making the most of those benefits.

## 2. When And How Did the Internet Begin?

So the Internet is this big connection of computers that makes it possible to access endless amounts of information – who's the genius who came up with the idea in the first place? Well, you may have heard Al Gore. Contrary to popular lore, Al Gore did not invent the Internet.



Actually, the Internet began with the launch of a satellite and the motivation of jealousy. When the former Soviet Union sent the satellite Sputnik into space in 1957, the idea that some gadget orbiting Earth could communicate with gadgets down here was alarming. The United States suddenly had reason to fear a missile directed at itself. President Dwight D. Eisenhower initiated ARPA to help

the US focus on technological advancements, especially computers.

Well, one of those projects was a challenge – get four computers, each on a different software operating system (like speaking four different languages), to talk to one another. The project was called ARPANET, and it taught computers how to talk to one another despite different operating system languages.

Well, after conquering this challenge, the next challenge was to make computers in different locations talk to each other. If ARPANET was one network of computers, the project was duplicated elsewhere, and thus there were multiple networks in the US. So, two of those networks tried to make their computers talk amongst each other across distances. Once this connection between networks began, the engineers called it **inter-networking**, or, the Internet.

It all started with a satellite and a bit of jealousy and healthy fear... but it changed the world. In 1990, Tim Berners-Lee produced software that made the user's experience of the Internet much simpler. This software that made navigation so easy was the World Wide Web. Now, these terms: Internet and World Wide Web are interchangeable, but really, the Internet is the computers interconnected, and the World Wide Web is the way that we are able to see the Internet's information and access that connection.

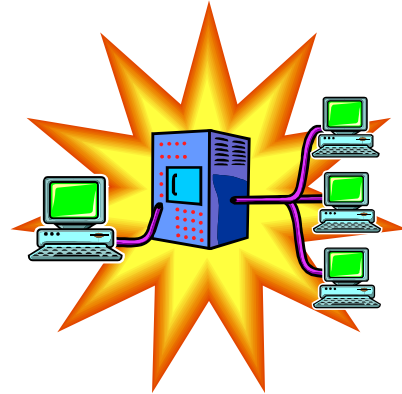
References:

How Did the Internet Start? by How Stuff Works.com

<http://computer.howstuffworks.com/internet/basics/internet-start.htm>

## 3. How Does the Internet Work?

We won't get too technical with the inner workings of the Internet. If you're like us, you just want a broad but easy-to-grasp idea of how the Internet really works. Well, it's as simple as thinking of your own computer as a baby computer that needs a mum computer, called a server, to direct the traffic of all the baby computers and to hold larger collections of information available on the Internet. All that data needs a home, and baby computers just aren't big enough. Let's learn about it one small piece at a time.



### Servers

Imagine if each individual computer were responsible for linking to any other individual computer in the world. For one, keeping track of all the addresses of each computer would take too much time, and for two, the individual computers would overload if too many individual computers wanted to access the same computer at the same time – it's just too much information being requested and not enough connections to send it through. This is why baby computers connect to servers. The servers are responsible for having enough capacity to take on multiple requests for the same data.

### ISP

ISP stands for Internet Service Provider. Your computer and anyone else's individual computer has to go to a network... since that's what the Internet is – an interconnection of networks (not a connection of individual computers). The Internet Service Provider just makes sure that you can get to the big powerhouse servers quickly. Examples of ISPs – Bigpond, Optus, AOL, Internode, iprimus – you've probably noticed ads on the TV for these companies, advertising their 'special offers' of Broadband and maybe even combined with home phone lines. These are the type of companies that are Internet Service Providers (ISPs).

For our purposes, we'll stop with the heavy details at Internet Service Providers. But, just so you know, after ISPs, your computer trickles up through a hierarchy of larger and larger servers until it reaches the Internet. Like a human being's nervous system, the nerve endings (personal computers) are small, and they connect to bigger and bigger nerves until they reach the backbone where the largest networks communicate directly with one another.

Once your computer connects to the Internet and makes a request for information, how does it get that information and make it back to your individual computer? Internet addresses.

## **IP Address and Routers**

Every computer that connects to the Internet has an Internet Protocol (IP) address – a series of numbers. This IP address provides a quick way for all the computers in the world connected to the Internet to grab information and have it sent back. Each part of the IP address identifies the server that connects it to the Internet. In between each server hierarchy are routers that direct the traffic of so many millions of requests to quickly read the IP address and send it zooming to the correct server. This allows for quick connections in fractions of a second.

Think, for a minute, if the Internet were not a web of servers leading to bigger servers leading to the biggest servers in the centre of a hierarchy. Think if the Internet were just a large ring connecting each computer to another like a daisy chain. If the Internet connected each individual computer directly with every other individual computer, then searching on the Internet would demand that your computer ask every single computer out there whether it had the information requested, and that may take days, weeks, months, or years to return results. That's why having an identifying number for each level of servers to which your computer connects makes the traffic flow quickly.

All in all, the Internet is powered by very large computers, called servers. These servers store web page, e-mail, streaming video, and file information. Each individual computer requests information from these servers. Routers, set up to read IP addresses at the speed of light, direct traffic. What makes this information so quickly accessible is the IP address because it uses numbers to quickly identify the correct server.

# Part 1 Summary

You've just been given a taste of the Internet and what you can do from your computer. What you choose to do on the Internet and how you do it is entirely up to you in the end. We certainly hope that our information gives you a solid idea of what's possible and starts the gears turning for ways you'd like to take full advantage of this amazing resource.

We covered what the Internet is, how it all began, and how it works.

What is the Internet? Just one large group of computers all connected to each other.

How did the Internet begin? The impetus that sparked research towards the Internet was a satellite – Sputnik 1. After the former USSR launched the satellite, the US worked towards connecting computers on different servers then in different locations. We also covered how the World Wide Web is a smaller part of the Internet – it's the browsers or software we use to access the webpage part of the Internet and see what it has to offer. That's why we're used to putting www at the beginning of URLs. But that's only one part; e-mail is another part, and we'll cover that in a future section.

How does the Internet work? The largest computers, called servers, hold the bulk of the information that exists on the Internet, and it all trickles down from there onto smaller and smaller servers until it reaches the smallest computers, your home computer. The routers direct traffic from millions upon millions of home computers just by reading the server number on an IP address, and that's what makes it all so fast and fabulous.

In Part Two, we'll explore the Information Highway and what it offers you. We touched lightly in section one, "What Is the Internet?" discussing how finding a steak restaurant, starting a garden, or looking up your favourite TV show might be enhanced when you have the Internet at your fingertips. Now it's time to jump on and surf the Internet's vast ocean of possibilities.

This concludes Part One of the 'Intro to the Internet' series.

If you would like more help, or one-on-one coaching,

please call Viv on: (03) 9787 7500 or email: [info@thewebonwheels.com.au](mailto:info@thewebonwheels.com.au)

