

# Chapter 1

## Cluing In to BitTorrent

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### *In This Chapter*

- ▶ Getting to understand how BitTorrent works
  - ▶ Knowing what all that jargon means
  - ▶ Consuming your BitTorrent content
  - ▶ Creating BitTorrent content yourself
  - ▶ Understanding how copyright law affects you
- 

**F**ile sharing isn't a new concept — we all remember the heady days of Napster downloading. Since Napster was shut down, new file-sharing technologies have been created and used — KaZaA, LimeWire, and others — in addition to traditional data transfer technologies like e-mail, FTP, and other services.

BitTorrent isn't the newest of the *peer-to-peer* (often abbreviated as P2P) file-sharing technologies, but it is one with a major difference. (Peer-to-peer file sharing describes the process of sharing data between computer users, rather than using a Web server to host the content.) BitTorrent was designed to distribute the downloading load among many users of a file. The result is a technology that is ideal for sharing very large files. How large? Think *giga-bytes*. Think movies, TV shows, large software applications, entire databases, complete inventory lists, scanned document collections, and more, all quickly and easily transferred across the Internet, many in their original, uncompressed format.

The implications of BitTorrent are immense for individual home users, creators of movies and other material, and businesses. In fact, a study by CacheLogic, a British peer-to-peer consulting company, shows that BitTorrent was *already* responsible for 25 to 35 percent of all Internet traffic by the spring of 2005 — including e-mail, Web surfing, and traditional file downloading — and that figure is growing.

This chapter brings you up-to-date on the state of BitTorrent today, and gives you some feel for how BitTorrent is already being used. I talk about how you can make use of BitTorrent yourself to obtain media files, or share your own files with others, and I show you what you need to know about copyright law before you get started.

## Reviewing P2P Flaws

What's ground-breaking about BitTorrent, and what makes it fundamentally different from previous file-sharing technologies, is that every time a user downloads a file, that user also automatically distributes the file to other users. This twist in the technology means that every downloader receives the file quicker, but the original source bears much less of the bandwidth burden, even if many people are downloading.

This technology stands in stark contrast to the traditional P2P file-sharing model, which is outlined and evaluated in the following sections.

### *Overviewing old-school file-sharing processes*

File-sharing technologies have generally worked this way:

- 1. You connect to the network of users of the file-sharing software.**

The network enables you to search other members' computers for files you're interested in having.

- 2. You locate the file or files you want to download.**

- 3. After you find a file you want, you connect to the computer that has the file saved on it so that you can download it.**

- 4. You download 'til you drop.**

This process ties up *bandwidth* — Internet connectivity — on your computer and on the computer of the person who is sharing the file during the transfer. If two people want to download the file at the same time, each person only gets half the bandwidth available.

### *Evaluating the holes in old-school file-sharing processes*

The traditional P2P file-sharing model works just hunky-dory for small files that can be transferred across the Internet in a few seconds, or for unpopular files that are rarely requested. But as soon as you enter the realm of multi-media, you know that huge files often require gigs and gigs of bandwidth to

transfer online. Here's an overview of the issues that arise when you try to upload and download big media files:

- ✓ When Internet activity is high, traffic gets jammed.
- ✓ You generally have better download speeds than upload speeds, so the person uploading files usually has the smaller pipe, which determines the speed of the entire transaction.
- ✓ If the person who is sharing the file shuts down his or her computer and goes to bed in the middle of your download, your download is interrupted, and can't be resumed until the user turns on the computer again.

## *Introducing the Magic that Is BitTorrent*

BitTorrent changes the traditional P2P model significantly by *distributing* the file-sharing process. Here's how it works:

- 1. While surfing the Web, you come across a link to a BitTorrent file, called a *torrent*, and click it.**

A torrent is a very small file you download that contains a sort of table of contents to the actual file you want.

If you were using another P2P file-sharing system, you would start to download the actual file at this point.

- 2. You open the torrent in a BitTorrent software client.**

The client connects to a Web site running tracker software that keeps tabs on who else is also downloading that main file. Your client downloads small pieces of the file from all those users who have a copy of it, keeping the file-sharing load from being borne by a single user.

- 3. As you download pieces of the file, the BitTorrent software client assembles the pieces using the table of contents in the torrent.**

The software also begins to share those pieces you've received with other people who are also trying to download the file. By downloading, you're also helping to make parts of the file available. Without even trying. You're such a giver.

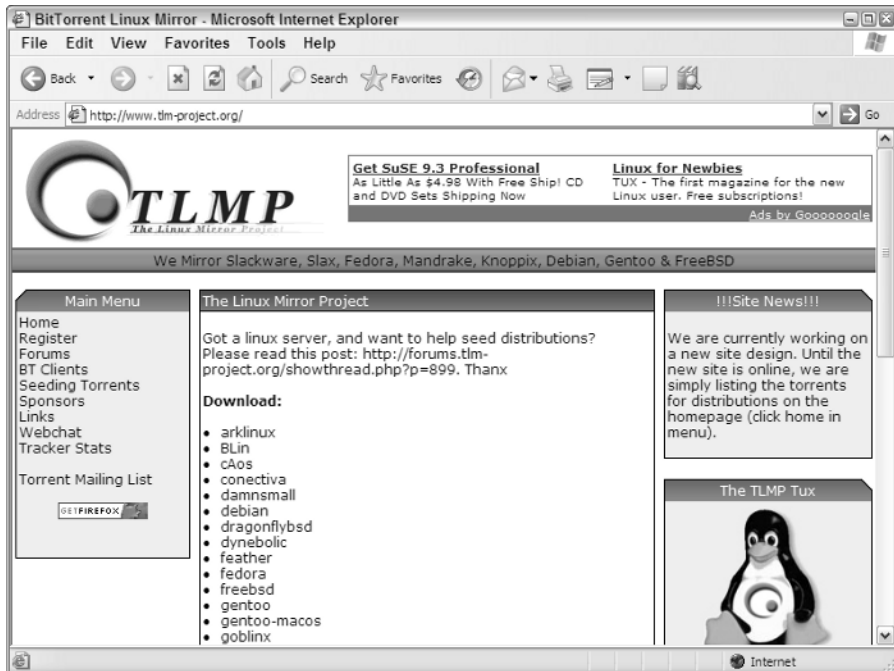
The result is a speedier process for everyone, and one in which the distributor of the data isn't hit with huge bandwidth problems. In fact, the more popular a file is, the faster you can obtain it, because more pieces of it are available; the only limit on the download is the speed of your own connection.

## Getting an Idea of What You Can Do with BitTorrent

All kinds of people and businesses are using BitTorrent to distribute large data files. For example, BitTorrent has found popularity among those people sharing versions of the Linux operating system, and that's just the beginning; there are many more examples of businesses and individuals taking advantage of this technology. Here are just a few ways that individuals, groups, and businesses are using BitTorrent:

- ✓ **Distribute computer operating systems:** The Linux operating system, created by Linus Torvalds, is an open-source operating system available for free. In fact, it is the main alternative for computer users who don't want to be tied to Microsoft Windows or the Macintosh OS. Because of the way Torvalds licensed Linux, any developer can download and alter it, so many versions are available. As you can imagine, an entire operating system can be quite large. BitTorrent has become a favorite method for distributing Linux. The Linux Mirror Project ([www.tlm-project.org](http://www.tlm-project.org)) actually has torrents for most Linux versions, as shown in Figure 1-1. (A mirror Web site is one that duplicates another Web site, so in this case The Linux Mirror Project is bringing together files available elsewhere in one location.)

**Figure 1-1:**  
The Linux Mirror Project provides versions of the Linux operating systems using BitTorrent.





✓ **Distribute your film to create buzz:** Filmmaker Rick Prelinger is one of those who has used BitTorrent to do something he has never been able to do before. Prelinger used clips of publicly available industrial, educational, advertising, and amateur footage from 1940 to 1980 to create the documentary collage, *Panorama Ephemera*. Using BitTorrent, several thousand people have been able to download the film (which Prelinger has licensed for reuse and viewing). For Prelinger, BitTorrent made distribution easy — and inexpensive, which film distribution traditionally isn't.

✓ **Distribute your book:** Author and Stanford University professor Lawrence Lessig used BitTorrent to make his book *Free Culture* available for download. (You can also find and download an audio version of the book, created by volunteers who each read a chapter of the book.)

You can download both *Panorama Ephemera* and *Free Culture* from LegalTorrents ([www.legaltorrents.com](http://www.legaltorrents.com)), a Web site that lists legally downloadable torrents that are licensed for public use or viewing.

✓ **Distribute musical recordings:** Rock groups Phish and the Grateful Dead encourage concert-goers to make recordings of their performances; those large digital files are shared by fans using BitTorrent.

The Web site Etree.org is a community BitTorrent tracker for sharing live concert recordings of artists that permit their performances to be recorded. You can find recordings of Phish, the Black Crowes, Blues Traveler, the Grateful Dead, Radiohead, and many others through Etree. Etree is shown in Figure 1-2, and is online at [bt.etree.org](http://bt.etree.org).

✓ **Distribute beta software:** The game World of Warcraft, a multiplayer online role-playing game created by Blizzard Entertainment, was released in November 2004. Prior to its release, however, Blizzard provided beta versions of the game to its testers using BitTorrent, eliminating shipping and production costs for software that would be patched on a nearly daily basis.

✓ **Today, software, tomorrow the world:** Even the BBC is getting in on the action. Although it doesn't use the BitTorrent format, the BBC is investigating the use of a very similar peer-to-peer technology to provide TV shows to consumers for up to seven days after they are broadcast. The BBC ran a trial in late 2005 and used the interactive Media Player to deliver digital rights managed TV shows and radio programs to 5,000 participants.



Of course, plenty of people are sharing content they shouldn't. Let me be clear, here. When I say they shouldn't, I mean that sharing copyrighted content is a crime. For more on this topic, jump to the "Pinpointing Legal Issues" section at the end of this chapter.



**Figure 1-2:**  
You can find  
live concert  
recordings  
of many  
artists  
available  
legally at  
[bt.etree](http://bt.etree.org)  
[.org](http://bt.etree.org).

## *Understanding the advantages of BitTorrent*

The advantages of BitTorrent are pretty exciting:

- ✓ The more popular a file is — the more people want a copy of it — the faster it can be downloaded, because there are more places to get pieces of it. Whereas with traditional P2P file-sharing applications popular files are more difficult to download, with BitTorrent, popularity becomes a good thing.
- ✓ Distributors of content formerly had to have the bandwidth to deliver a large file to hundreds of individual users (this is no small feat). BitTorrent enables distributors to share the distribution load with all the people who get a copy of it, reducing the bandwidth burden on the distributor.
- ✓ BitTorrent requires that users share files back with the community, so no one can get files without also giving files — this level of reciprocity makes the system stronger and faster.

BitTorrent was created in 2001 by programmer Bram Cohen. (You can read more about Bram Cohen in the sidebar, “A short bio of Bram Cohen,” in this chapter.)

## A short bio of Bram Cohen

Programmer Bram Cohen is best known for creating BitTorrent. After dropping out of State University of New York in the midst of the dot-com boom, Cohen worked his way through a number of technical jobs relating to the Internet, the now-defunct MojoNation among them. (MojoNation enabled simultaneous distribution and acquisition of encrypted data across several computers at a time. It no longer has a Web presence.)

Cohen left MojoNation in 2001 to work on BitTorrent. To get help testing the technology, and to ensure that it was used, Cohen collected free pornography and distributed it using

BitTorrent. Linux developers who were sharing versions of the Linux operating system also picked up and began using the tool.

When asked about the legality of the software he created, Cohen usually notes that BitTorrent is independent of copyright issues but that he nonetheless believes current media distribution methods are outdated and in trouble. Because he wants to protect BitTorrent (and himself) from legal action, Cohen says he has never used BitTorrent to download illegally available copyrighted material.

Cohen now lives in Bellevue, Washington.

## Getting more information about how BitTorrent works

Generally speaking, using BitTorrent is free. For example, there is no charge to download and use the Official BitTorrent client, written by Bram Cohen, although you may want to make a donation to Cohen if you find the program useful. The Official BitTorrent client Web site is at [www.bittorrent.com](http://www.bittorrent.com), and is shown in Figure 1-3.

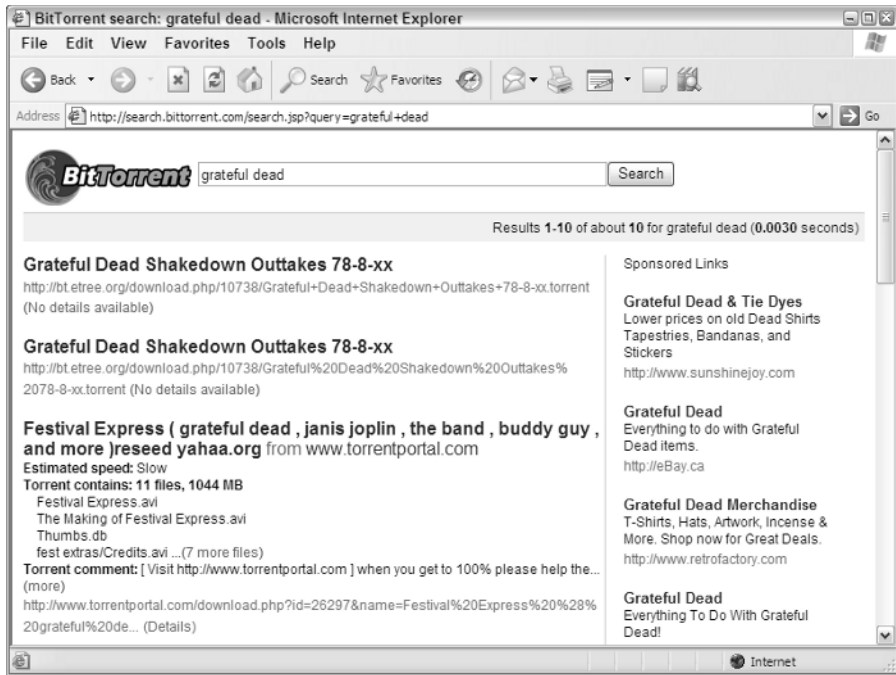


There are other BitTorrent clients available — you can read more about those in Chapter 2. Some providers of torrent files may charge for their content.



Some less savory individuals sell copies of the Official BitTorrent client, or offer versions of it that include spyware. To avoid versions that have been altered, be sure to download your BitTorrent software only from the creator's Web site. Before downloading new software, it never hurts to do a quick search on Google (a search for *software name problems* works) to see whether you find references to problems with it. Read what you find with a grain of salt and be sure to pay attention to the source of the information. After all, the Internet is largely unmoderated.

**Figure 1-3:**  
Bram Cohen  
created  
BitTorrent  
and  
maintains  
the Official  
BitTorrent  
client  
Web site.



## Keeping Tabs on BitTorrent Jargon

Like so many technologies, BitTorrent uses a fair amount of jargon. As you explore, getting a working understanding of terms is important (you need to know the terminology in order to make best use of future chapters of this book, as well!)

Here are a few terms you should know:

- ✓ **Leecher:** A person or computer that is in the process of acquiring a file using BitTorrent; a leecher doesn't have the whole file yet. In some contexts, leechers are people who fail to upload as much information as they download, and so aren't carrying their fair portion of the bandwidth load. In a more general sense, a leecher is just a label for anyone without the whole file.
- ✓ **Peer:** A somewhat more polite way to refer to a person or computer that is acquiring a file via BitTorrent and who hasn't got all the pieces of it yet.
- ✓ **Peer to peer (P2P):** Peer-to-peer distribution occurs when users of a network share files with each other across the network. Each peer, or computer, both distributes and acquires files, as opposed to a more typical *client-server* relationship, in which a single server distributes files to multiple computers, none of which can share content with each other.



✓ **Reseeding:** Reintroducing a file to the network. If no one is currently sharing (or *seeding*) a file, it must be reintroduced the network by someone who has a complete copy of the file.

✓ **Seed or seeder:** A person or computer that has a complete copy of a data file and is actively sharing it.

✓ **Share ratio:** The amount of a file that you've downloaded to your computer divided by the amount of data you've uploaded. As you use BitTorrent, you share the content you download back into the network. A share ratio of 1.0 means you've uploaded just as much of the file as you've downloaded.

Good BitTorrent etiquette means you should continue to share a file until your share ratio reaches 1.0, even if that means leaving the torrent running after you've downloaded the whole thing.

✓ **Swarm:** The whole collection of people and computers involved in seeding and leeching a file. You can see swarm information in Figure 1-4, a screenshot taken during a BitTorrent download using the BitTornado BitTorrent client. See Chapter 2 for more about various BitTorrent clients.

**Figure 1-4:**  
The  
BitTorrent  
client  
BitTornado  
displays  
information  
about the  
peers and  
seeders  
engaged in  
sharing and  
distributing  
a torrent.

bt.etree.org | Community Tracker - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Reload Home Search Favorites

Address http://bt.etree.org/ Go

| Artist                                      | Show   | DL | Files | Chat        | Added      | Size      | Served  | Seeds | Leeches      | Seeded by |
|---|--|----|-------|-------------|------------|-----------|---------|-------|--------------|-----------|
| Mofro                                       | Mofro - 11-14-03 The Social, Orlando, FL - SBD -- SHN ④            | 0  | 20    | 0           | 05/28 3:34 | 658.69 MB | 0 times | 1     | 2            | beanstalk |
| Les Claypool's Fearless Flying Frog Brigade | lcfb2001-07-18.shn.torrent   | 14 | 1     | 05/28 1:59  | 723.74 MB  | 0 times   | 1       | 4     | kkaye        |           |
| Benevento Russo Duo                         | Mike + Duo Athens, GA 4/27/05 set II                               | 5  | 0     | 05/28 1:55  | 528.37 MB  | 0 times   | 1       | 15    | gordeaux     |           |
| Other                                       | Papa Mali, 2005-05-14, Joshua Tree Music Festival, Joshua Tree, CA | 17 | 0     | 05/28 1:06  | 367.04 MB  | 3 times   | 3       | 1     | china_rider  |           |
| Phish                                       | ph98-11-06 .project 98. ④  | 24 | 2     | 05/28 0:13  | 885.88 MB  | 0 times   | 1       | 23    | jedifunk     |           |
| Other                                       | The Big Six 05-25-2005 Cyber Cafe West                             | 18 | 0     | 05/27 23:36 | 768.09 MB  | 0 times   | 1       | 2     | juniper      |           |
| Black Crowes                                | Aragon Ballroom Chicago, IL 3/10/95 DAT MASTER                     | 20 | 5     | 05/27 23:06 | 779.74 MB  | 0 times   | 1       | 10    | crunchywater |           |
| Other                                       | JupiterCoyote2005-05-26flac16_AT853                                | 23 | 1     | 05/27 22:21 | 780.76 MB  | 5 times   | 6       | 4     | mrsoulmusic  |           |
| Phish                                       | ph1992-11-19.flac ::ColchesterVT::[SBD] [SHNfamilyPhishProject] ④  | 29 | 4     | 05/27 21:40 | 1.054 GB   | 1 time    | 2       | 51    | shnfamily    |           |
| Phish                                       | ph1992-11-19.shnfl ::ColchesterVT::[AUD] [SHNfamilyPhishProject] ④ | 29 | 10    | 05/27 21:38 | 984.70 MB  | 17 times  | 14      | 7     | shnfamily    |           |
| Phish                                       | Phish - 12/30/03 - Schoeps mk4 - ** 24 bit **                      | 23 | 3     | 05/27 20:48 | 1.865 GB   | 0 times   | 1       | 19    | jasonsoebel  |           |

Internet



- ✓ **Torrent:** A pointer, or table of contents, of the data file. During transfer, the torrent file is used to map and assemble the pieces of the data.

Although every transfer involves two files (the torrent and the file you actually want to share), users of BitTorrent generally don't make a distinction between the torrent file and the data file; in BitTorrent parlance, everything is called a torrent.

- ✓ **Tracker:** An application that monitors which computers have a copy of the data file being shared, pointing the BitTorrent client software to locations where it can find pieces of the file.

## *Downloading Files Using BitTorrent*

Getting started using BitTorrent requires a bit of technical know-how and fiddling with your computer, but never fear — you've got a book that helps you figure all that out. Read through the following sections to get a view from 20,000 feet of the setup process, as well as the basics of finding and downloading content.

### *Getting a BitTorrent client*

Downloading and installing a BitTorrent client is quite simple, especially if you've downloaded an application from the Web before. Start by downloading the Official BitTorrent client, available at [www.bittorrent.com](http://www.bittorrent.com).



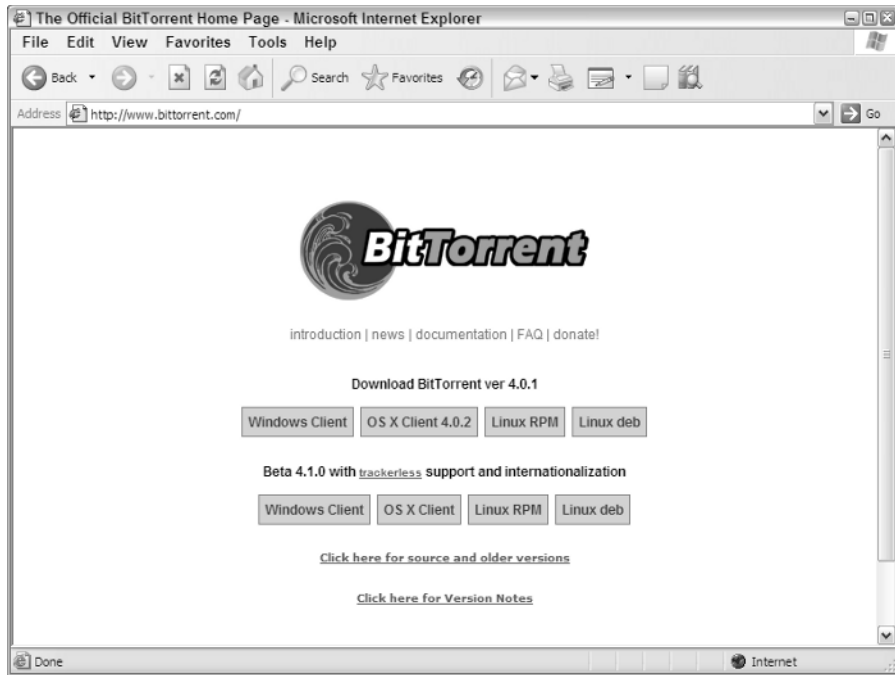
This client was created and is maintained by Bram Cohen, the creator of the BitTorrent technology. Its simple interface is great for beginners who are trying BitTorrent for the first time. You can take a peek at the Official BitTorrent client, which is used in how-to demonstrations throughout this book, in Figure 1-5.



Because BitTorrent is an evolving technology, you may find that the provider of your BitTorrent client offers a *beta* version and a *release* version of the client. A beta version is one that is in development, and possibly buggy. Unless you're an experienced computer user, you're usually in better shoes if you use the release version of the software. A release software version is one that the software developer has decided is good enough to provide to users; it is more stable than beta software.

Chapter 2 contains detailed, step-by-step instructions on downloading and installing a BitTorrent client, as well as a list of some of the various BitTorrent applications available to you.

**Figure 1-5:**  
The Official  
BitTorrent  
client is a  
good client  
to download  
when you're  
getting  
started with  
BitTorrent.



## *Configuring your computer*

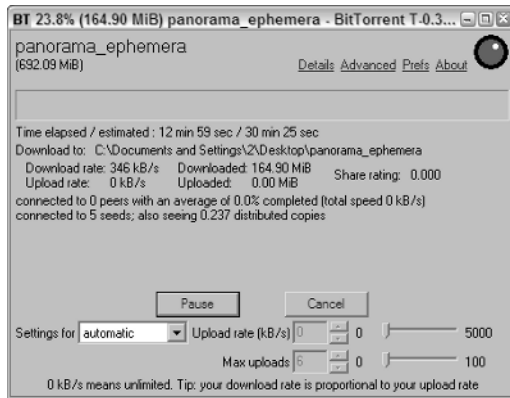
Getting your computer and Internet connection set up to handle BitTorrent traffic is a little more complex, but fortunately you probably only have to do it once. Essentially, if you use a router when you connect to the Internet, you must set it up to allow the use of certain ports, or locations, for BitTorrent traffic. BitTorrent uses separate ports from those that your computer uses for e-mail, Web traffic, and so on. Get some good step-by-step instructions for doing this configuration in Chapter 2.

## *Finding torrents to download*

When you have a BitTorrent client on your computer, and configure your computer correctly, you're ready to jump into the BitTorrent ocean! Finding torrents to download is as simple — and as difficult — as using a search engine. Fire up your Web browser and type the name of the content you're looking for, followed by the word *torrent*, into any search engine Web site. For example, if you want to see what kinds of Linux files are online, type **linux torrent** into a search engine such as Google.

Better yet, visit the BitTorrent Search Engine site created by Bram Cohen. The BitTorrent Search Engine lists only torrent files, so you won't have to wade through other Web content in your search results. You can find the search engine online at [search.bittorrent.com](http://search.bittorrent.com), and shown in Figure 1-6.

**Figure 1-6:**  
Finding  
torrents to  
download is  
pretty easy  
when you  
use the  
BitTorrent  
Search  
Engine.



For detailed information on finding torrent files, read Chapter 4.



Be aware that much of the content you find to download is being shared illegally. Some files are of dubious quality, or even malicious. That's right; the torrent of *Star Wars Episode III: Revenge of the Sith* you found really is too good to be true. See the section, "Pinpointing Legal Issues," at the end of this chapter to find out more about the legal issues surrounding the downloading of copyrighted material. I cover some good strategies for protecting yourself from viruses in Chapters 5 and 17.

## Decompressing archived files

Having downloaded a file using BitTorrent is only half the battle. Many torrent files are compressed, or archived, to make them as small as possible.



In order to actually get at the data you have downloaded, you need to decompress the file or files. There are several good utilities for handling these types of files, and you can download and install free or trial versions quite quickly. WinZip and WinRAR are two good programs to use on a PC, and Stuffit Expander is a good Macintosh utility.

Archived files often have file extensions like `.zip`, `.rar`, or `.sit`. If a file that you download using BitTorrent has one of these extensions, you definitely need to use WinZip, WinRAR, or Stuffit Expander before you can use the files — they are all capable of handling each file type, even those created by other platforms.



Read Chapter 3 for good information on downloading, installing, and running these compression and expansion utilities.

## *Watching, listening, reading . . .*

Download, decompress — and then consume! The last step in using the files you download with BitTorrent is figuring out what application to use to watch them, listen to them, view them, or read them.

Depending on what you've downloaded, you may need to obtain a program that plays video and audio files, or that displays images and text. Most modern computers come with applications that can handle these files automatically (for example, if you use Windows XP, Windows Media Player is built in), but you can find lots of information in Chapter 3 on choosing, downloading, and installing one of these applications.

## *Sharing Content Using BitTorrent*

When Bram Cohen created BitTorrent, the world at large was granted the ability to create and distribute large files with ease. Are you a budding broadcaster? The creator of a documentary? A musician? A photographer? In the past, sharing video and audio content, and even large text and image files, over the Internet was a limited endeavor, and one that was usually expensive.

### *The way it was*

Filmmakers have long been able to produce a digital film on their computers, and can convert films into one of the Web video streaming formats for Windows Media Player or Real Player with the click of a mouse. But distributing these files via the usual means is traditionally pricey for most individuals. Many Web hosting providers don't offer video streaming services, and even among those that do, the costs can add up quickly. The lucky documentary creator whose film becomes popular quickly runs into server load and bandwidth issues, incurring yet more technical headaches and additional fees.

And forget about trying to distribute your multimedia content via more traditional methods — on television, or by creating DVDs, or trying to get your content played on the radio. These methods are nearly impossible for unknown artists with no money.

## *The way it is*

BitTorrent has changed the traditional distribution process for electronic media. Now, the creator of a film can produce a high-quality video file in any popular digital video format (or multiple copies, each in a different format), create a torrent file, and seed the file herself. The peer-to-peer network does the work of distributing the video for the filmmaker.

## *Preparing your files*

A good portion of this book is designed to put the tools for creating your own multimedia content into your hands. Chapter 7 walks you through the tools and methods for creating high-quality audio presentations, and is a must-read for musicians and would-be audio broadcasters. Chapters 8 and 9 are all about getting equipped for shooting video and editing it on your computer.

After you create the content, you want to distribute with BitTorrent, so you need to get your files ready to go. This involves saving them as a commonly accessible file format so that most users will be able to open them after you download them. For example:

- ✓ Format your video files as QuickTime, a format that can be read easily by both the PC and the Macintosh.
- ✓ Save your audio files as MP3s, a format most computer users are familiar with and that can be played back by almost any media player.
- ✓ Save your text in the RTF (Rich Text Format), a format that can be opened by most text editors. Or generate PDF files that can be opened on any computer that has the free Adobe Reader software.
- ✓ Save your images as JPEG files. JPEGs can be opened by any operating system.

## *Creating a torrent*

A torrent file is the table of contents for the files you are sharing. It breaks up the files into pieces and lets BitTorrent clients who are downloading it know how many pieces are left before the file is complete.

Many BitTorrent clients include the ability to create torrents. You can read more about creating a torrent in Chapter 10.

## Identifying a tracker

The next step to sharing your content is to identify a tracker you can use. A *tracker* is a piece of software that sits on a Web server and coordinates communication between seeds and peers for all the torrents you create. This coordination is crucial to the whole process. You can:



- ✓ Set up a tracker on your own Web site.
- ✓ Use the tracker on some of the public tracker Web sites.
- ✓ Use a BitTorrent client that offers trackerless sharing.
- ✓ You can read more about setting up and using a tracker in Chapter 11.

## Seeding your torrent

Seeding a torrent is a process that tells the tracker software you're using about your torrent and your data. After you notify your tracker, you must keep your files (or *seeds*) available for as long as possible to ensure good distribution to others. At the very least, don't stop seeding until at least two other full copies of the file appear on other computers. The more popular your file is the longer it stays available. If you want your file to stay in distribution, check periodically to see if it is still available. If it isn't, reseed using the same process you used to seed your file.

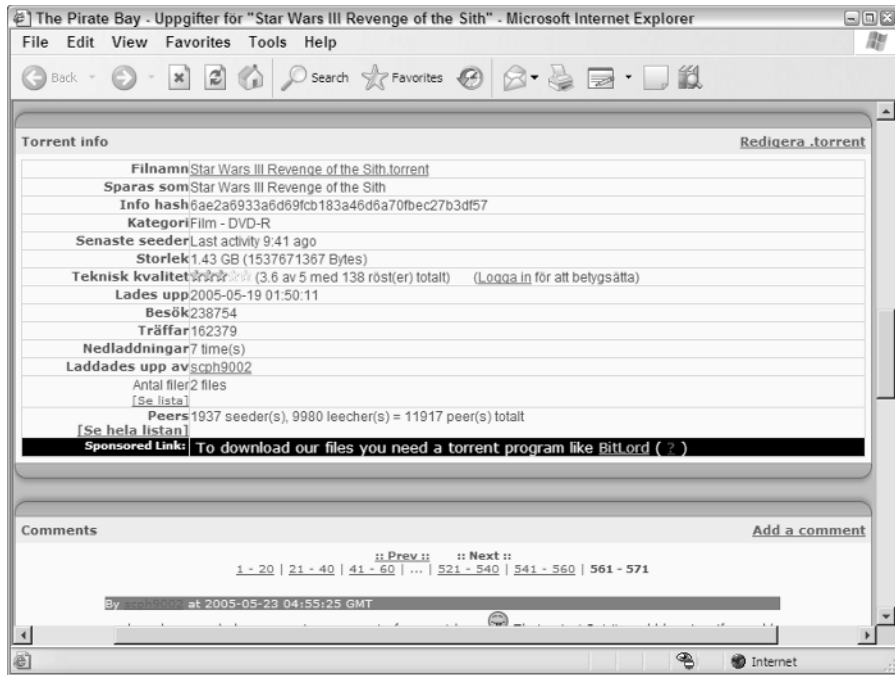
Seeding is accomplished by running your BitTorrent client and pointing it to the torrent you created, whether online or on your computer. Of course, the data files must also be available! There is more information about seeding in Chapter 11.

## Pinpointing Legal Issues

In this section, I talk about using BitTorrent to download large multimedia files like videos and TV shows, and I know some of you are wondering — is this legal? The answer is pretty simple. Using BitTorrent is legal. Using BitTorrent to acquire copyrighted material like TV shows and movies *isn't*.

Poke around BitTorrent Web sites and you find any number of movies and television shows available. *The Matrix Reloaded* hit the network a few days after it could be seen in theaters. *Star Wars Episode III: Revenge of the Sith* was available hours *before* the film was released. You can see one pirate torrent site advertising the availability of the Star Wars torrent in Figure 1-7.

**Figure 1-7:**  
Finding  
copyrighted  
material  
that's  
distributed  
illegally is  
easy, but  
you should  
never  
download  
this kind of  
content.



Think about it this way: VCR tapes are legal to buy and for personal use. But you can't legally make copies of someone else's movie on VCR tapes and start handing them out to all your friends, let alone sell them.

You should know about some inherent dangers to using BitTorrent to download movies and TV shows. Organizations like the Recording Industry Association of America (RIAA) and the Motion Picture Association of America (MPAA) actively prosecute people and companies that are engaged in making copyrighted content available to others illegally. Internationally, the laws are even more complex.



You are not anonymous when you use BitTorrent, because the process itself involves sharing of identifying information about your computer. This lack of anonymity puts you at risk if you use BitTorrent or other file-sharing technologies to download or share music, movies, TV shows, and other content.

In Chapter 6, I outline the ways in which you might be at risk if you choose to use BitTorrent to download or distribute copyrighted material.