

# Windows Movie Maker

## Product Positioning

### Mission

Windows Movie Maker is a widely available, easy-to-use tool that makes it simple, fast and fun to share personal video content in the Windows Media format.

### Customer Promise

#### 1. *“Go digital with your movies”*

**Windows Movie Maker makes it easy to transfer your videotapes into digital form on your computer.**

Simply plug your camcorder onto your PC<sup>o</sup>, select record and transfer your video right into your PC in real-time. Windows Media makes it possible to store more than 20 hours of video per gigabyte of hard drive space.

#### 2. *“Easily share personal video moments with friends and family”*

**The easiest and quickest way for the home PC users to share video clips with friends and family.**

Simply select the clips you want to share, arrange them in the order you want, and click one button to email them to friends and family or to post them to your personal web page. Because Windows Movie Maker has already compressed the video for you during the capture phase, this happens really quickly. Or bring your family into the den and show them your full-length movie right there on your computer screen, or burn it onto a CD-R and send it in the mail. No special software is needed at the far end to playback your movie creations.

#### 3. *“Get organized”*

**Put your entire video library at your finger tips**

Because Windows Movie Maker compresses your video as it captures it, you can store a phenomenal amount on your hard drive. 5GB of disk space is enough to satisfy even the most demanding home videographer with over 100 hours of space (at standard quality). But Windows Movie Maker does more; it creates a visual index of every tape in your collection making it easy to find any shot on any tape in a matter of minutes. You can go further and add keywords to each shot making it a snap to gather every birthday party or soccer game you've ever filmed into a new folder.

#### 4. *“Immediate results”*

**Windows Movie Maker is lightning fast.**

Because Windows Movie Maker does all the hard work while you are away from the computer (capturing, compressing, detecting shots, and building visual indexes) your time at the computer is much more productive. Creating a movie with Windows Movie Maker takes less than half the hands-on time you would need with a more traditional video editing application.

---

<sup>o</sup> Requires a supported capture device or for digital camcorders an IEEE1394 (Firewire or i.Link) connection.

## 5. “Automatic assistance”

### Windows Movie Maker “auto-edits” your movies for you

“Getting rid of the bad bits” is easy as each “ground-shot” or “sky-shot” is neatly segmented into a clip you can select and delete. Windows Media Movie Maker’s Auto-editing feature means you’ll probably never need to trim a shot to remove unwanted material – just drag the good bits to where you want them and delete or ignore the bad bits.

## 6. “Make better movies your friends and family will enjoy watching!”

### Windows Movie Maker helps you make a richer video experience

Windows Movie Maker allows you fade between clips; add background music, sound effects and voice-over narration. You can even mix in still images from a scanner or digital still camera to make narrated or musical slideshows.

## Product Features Delivering the Promise

Key features which address the various areas of consumer needs and interest:

- Video Capture – Video “ripping”, Automatic shot detection.
- Video Organization – Visual browsing of imported media, keywords, date and time, keyword and date search capability
- Video Editing – Smart editing of Windows Media to drastically reduce processing time of edited shots. Storyboard organization of shots presents the user with a highly visual and easy to understand method for sequencing shots in their video production.
- Video Sharing – Creation of video e-mails and the easy posting of Windows Media files to partner and personal web sites for sharing.

## Customer Scenarios

### 1. **Special Family Moment – birthday party, graduation, baby’s first steps, ...**

You have just captured a special family moment with your camcorder and you would love to share it with friends and family across the country or around the world. Plug your camcorder into your PC, launch Windows Media Movie Maker, select Record, capture the moment to your hard drive, drag the good shot down to the storyboard (leaving behind the bit before and after your ‘just-shot’ scene) and hit “Send Movie”. You can do all of this before the birthday ice cream has melted.

### 2. **50 tapes, one messy closet, hand written labels, and no idea where little Johnny’s first steps are ...**

That precious moment is in there somewhere – but your chances of finding it before your friends have gone home is almost zero. But now, with Windows Movie Maker you can store all your tapes on your hard drive and you can quickly scan through a visual index or search on keywords to locate the precise scene you want to show your friends. Bring them to the computer and show it right there on your monitor or quickly locate the original tape by name, fast forward to the precise spot on the tape where Johnny makes his first step and be the hero of the moment.

### 3. **Soccer Club End-of Season**

“If only I could make a short video”. Your daughter’s soccer team won the championship; you have all 16 matches on tape and would love to make a five-minute video to send to the team. No problem. After you have ripped all 16 tapes, you sit down at your PC, rapidly scan through to find those memorable goals, drag and trim clips on the storyboard, add some inspiring music, add your own commentary and hit save. “The worst thing you can do is make someone sit through uncut film”, now you have an alternative.

#### **4. “Hello Mum”**

You want to say happy birthday to mum but forgot to send a card and those awful electronic greeting cards are just too impersonal. No problem, plug in your USB web camera, open Windows Media Movie Maker, hit record, start talking. If you make a mistake, just say the sentence again you can always edit it out. Bring in a couple of recent clips from your camcorder archives to spice it up, add a still image on the end “Happy Birthday Mum”, add some happy birthday music you found on the Internet and email it off.

**Other interesting scenarios include: -**

#### **5. Science Homework 2000**

Using your new Intel Microscope you leave Windows Movie Maker running in record mode overnight. In the morning you come down, scan through the detected shots, and pick out a short segment where an amoeba splits into two. You add some audio narration about cell mitosis and hit email to submit your finished homework project to your teacher. Next week in class, the teacher uses your video clip in front of the whole class.

#### **6. Security Camera**

Someone has been stealing pens from your desk drawer. No problem, simply plug in your USB web camera and leave Windows Movie Maker running while you are out. It records everything that happens while you are gone and the built in “shot detection” algorithm becomes the “shot detective” algorithm as you scan through the thumbnails it produced while you were out to see who came in to raid your desk.

#### **7. How embarrassing!**

You’ll have to be more careful now when the camera is running because when you fall over and get covered in mud that precious moment won’t just be shown once on TV at home, no, it will be on the Internet in the morning for all your friends and co-workers to laugh at!

#### **8. International News Grass Roots Network**

“Email from Kosovo” provided a fascinating insight into what was happening on the ground half way around the world, but maybe in 2001 we will start to get video email showing up on the national news. Windows Movie Maker could make this a reality.

**Note:** In focus groups the length of video most end-users wanted to send was surprisingly short. There will be the odd young Spielberg out there but most end-users of Windows Movie Maker will be sending short 30 second to one-minute clips.

## **Product Goals**

The business goals for Windows Movie Maker are:

### **1. Help drive adoption of the Windows Media format.**

Through its unique features and simple operation, Windows Movie Maker will lead consumers to create and share a great quantity of personally valuable video in the Windows Media format. Each person with whom they share a movie becomes another user for Windows Media Player and quite likely they also ask “how did you do that?” driving more people to want Windows Media Movie Maker. Rapid proliferation through this network effect will generate more end-users than we could reach by any other one-on-one direct effort.

### **2. Help drive sales of Consumer Windows**

As a key component of the Millennium release of Consumer Windows, Windows Movie Maker will help win reviews and drive sales. It also brings PCs back up to par with Apple’s new iMac DV in terms of features offered (albeit in a different manner). As discussed above, the self-promoting aspect of Movie Maker will help drive awareness and sales for Consumer Windows.

### **3. Thought leadership – “Innovator”**

Windows Movie Maker showcases several new technologies from Microsoft including excellent 1394 and DV support, real-time transcoding between DV and Windows Media formats, smart recompression, and shot detection. Together with the Windows Imaging Architecture, Millennium will be the first Windows operating system to offer a complete range of multimedia tools for working with all kinds of continuous media.

### **4. Serve as a powerful evangelism tool to attract industry development based upon the Microsoft technologies used to create the Windows Media Movie Maker**

Windows Movie Maker will help encourage third party software developers to take a serious look at the Windows Media SDK, Directshow, WDM, Dexter, and other recent Microsoft technologies. We do however need to make sure these developers understand the positioning of Windows Movie Maker as an entry-level application that in no way competes with their higher-end offerings. Movie Maker shows what is possible: we want the third party tools community to realize the benefits of using Windows Media technologies throughout their products from capture to publish and to use them in making their own full-blown tools handling all the aspects of video editing that we do not touch. The market for this kind of high-end tool is too small to interest us per se, but we want to enable and drive the players in it towards adopting Windows Media wholeheartedly instead of treating it as just another output format.

## **The Movie Maker Approach**

Windows Movie Maker takes a different approach to traditional video editing applications in several important aspects:

1. With Windows Movie Maker you capture all the video you ever shot onto your computer directly into a highly compressed format that requires either the same or close to the final output bandwidth. With the traditional approach you only capture the bits you need for the current project because that's all you can fit in the low-compression format they use.
2. With Windows Movie Maker there is little need to trim shots to remove junk of the beginning or end because each shot has been segregated into a separate clip that you can easily manipulate by drag and drop. With the traditional approach you spend a significant amount of time trying to split the good bits and the bad bits apart from each other.
3. With Windows Movie Maker the final 'publish' step goes quickly because the video is already in the right format and does not typically need to be transcoded from, say, DV into MPEG.
4. With Windows Movie Maker, clean up work you do on your source material for one project is preserved for all future projects. With the traditional approach you run out of space quickly and have to delete all your previous projects losing a lot of valuable information in the process.
5. With Windows Movie Maker you build a library of all your video and can enter metadata about each clip so you can search through it easily later to collect together related shots from disparate tapes (e.g. you can easily make a birthdays-over-the-years tape). The traditional approach has no real persistent library and making such a movie would be extremely difficult and time consuming.
6. With Movie Maker, still images are supported very directly both on the creation side (clipping a still image from a video) and on the video timeline. Digital still cameras are growing rapidly in popularity and make an excellent source of material from which to construct a movie. Just adding music and a few cross-fades to a bunch of still images turns them into something far more impressive and valuable to share.
7. With Movie Maker you can mix all manner of imported video and stills on the timeline. You don't need to convert your video into the same format as your project, indeed you don't even need to tell it what format to use when creating a new project. This makes life easier and simpler for the end user.

We know Movie Maker will get compared with traditional video editing applications. We know too that it will get marked down for omitting several features that we have deliberately decided not to include. Therefore we should make every attempt possible to educate reviewers about the different approach described above: we need to explain why we believe it more closely meets the needs of consumers and thus why ultimately more people will use this than the traditional back-to-tape approach.

Here is a list of features we do not do that traditional editing applications do and some of the reasons why we do not support them:

- **Transitions:** We have a single cross-fade transition while most products for consumers have a large library of effects you can apply from the simple wipe to the comical dripping wax. Transitions are in general the enemy of compression algorithms. Whilst we have the technology in Directshow to handle all manner of transitions and effects we have deliberately chosen to simplify things for the end user and, as a result, they will produce better looking video. Or as one industry commentator put it *“Transitions are for people who don’t know how to make cuts.”* Creating a story is all about the “suspension of disbelief”. If a transition is noticed you have broken the spell and ruined the story. That having been said, we may well add transitions back in for our second version to satisfy the “I want to have fun” desire of our users, even though in doing so they will “ruin” their video in our not-so-humble opinion.
- **Back-to-tape:** We do not have this feature because (i) we want to make the PC the focus of your video experience not the TV set; (ii) the PC and the VCR are in different rooms and most people don’t want to move them to achieve this. The alternative of going back-to-tape on the camcorder and then doing a tape to tape copy in the living room is also very time consuming and fiddly<sup>®</sup>; many modern graphics boards let you do it anyway without any need for us to change our software – we even have a full-screen mode so you can do back to tape on your preview if you want to.
- **Titles:** You can actually put titles on a Movie Maker movie by simply importing GIF, JPG or BMP files with the text on that you want. You can make these titles in PowerPoint or any other graphics application. But we don’t support the creation of titles in Movie Maker itself because (i) they look terrible when compressed. MPEG compression schemes do not do well with the harsh transitions and fine lines in title text; (ii) there are better ways to display text alongside a Movie Maker video through the use of web templates wrapping the entire video frame.

---

<sup>®</sup> Incidentally, many DV camcorders sold in Europe do not allow you to record back to tape from the DV input. They do this in order to avoid European import tariffs on recording devices. Sad but true.

## **Customer Profiles**

Our customers are **recording their lives**. Every major life event is dutifully recorded. This habit often begins with the birth of the first child.

*"I got it for childbirth, the birth of my daughter."*

*"In my baby's closet, on a shelf, are 12 years worth of pictures."*

*"I videotaped my son and his team for training and for college."*

*"We put on Shakespearian plays and then go back and watch the tapes. The students edit them."*

*"My husband's grandparents are 89 and 90 and we like to tape them talking about their heritage. Major life time events."*

Our customers are **frustrated with camcorder technology**, batteries especially. But despite this they still dutifully record events in the hope that one day they will be able to use it.

*"The batteries are dead again"*

Our customers may be really well organized in their business and social lives but when it comes to their video collection they score poorly. To put it mildly, they are **not very organized** at all. For most, the organization of family videos is a chore not an adventure. Even the organized few are easily overtaken by the rate at which un-watched, un-labeled tapes accumulate: nobody wants to miss capturing an important life event on tape so they dutifully record it and file it away for later. Their camcorder offers little help in labeling or indexing the video they record with it. So nearly everyone is in need of a way to improve upon the stacks of videotapes, labeled or not, stuck in the closet. Movie Maker offers them a chance to get organized and make sense of their analog (or digital) tape collection. Respondents liked the idea that they could *"organize them, date them"*.

*"My videos are all in boxes under the closet."*

*"It takes time to organize everything."*

*"Take the videos, look at them once (sometimes), and put them in the closet."*

*"I would really love to get rid of all of those tapes and have everything on the computer. I could label it. I could find it, know where things are."*

Our customers are **socially connected**. They **want to share important life events with distant friends and family**. Making a VHS copy is a fiddly and cumbersome process – connections to make, hard to find the bits you want on the tape, end-result is messy and most definitely un-professional. Our users think it is way too hard to add music or narration to a video after they've copied it. Our users want instant gratification, they want a quick result and they want their relatives to see it immediately and to respond saying in effect "that's cool, how did you do that". The end result of a VHS copy lacks instant gratification – by the time that VHS tape has been mailed to Aunt Mary the event has long since passed and been discussed at length on the phone. Windows Movie Maker and associated hosting services offered on the Web will enable the end user to instantly share their videos with Internet-enabled friends and family.

*"We tape our Christmas and we express mail the videotape to my parents (in Florida) the day after Christmas. How cool it would be to email it. We got our parents online and they love it."*

*"Making VHS copies is such a hassle."*

*"Making copies of the VHS is such a pain. Then you need to make multiple copies to share. It would be so great to email the video to a friend."*

Our customers **need it to be easy**.

*Digital video would be "great for editing," "We made a goodbye tape for some friends of our who were moving away. It was such a pain. We had to do it from the camera from the VCR. It was a nightmare. We'd never do it again ...unless you can do it through the computer."*

Our users **want better video** – “I had fun taking the video but to watch it is dull”, some say, while many are just “generally disappointed with their video experience”. Our customers have told us that if the PC could make the video better they would use their camcorders more. To most “better” means the ability to get rid of the bad bits; to some it means the ability to edit the audio and add music or narration; and to some it means the ability to fix image stabilization problems and adjust to visual quality (brightness, contrast). “I’d like to put better sound quality, sound behind it”, “I would use my video camera more. I would take it with me more.”

*“Video is like life. Most of it is junk so you want to throw it out and keep the 20% that’s good.”*

*“Most of what is on the tape is X!X!X! (not very good)*

*“you are generally disappointed with your video”, “Only some of it is worth keeping.”,*

*“The worst thing you can do is make someone sit through uncut film.”*

Our **see themselves as being creative**– They are looking to make a memory even more personal and special or just to share their experiences. The creation of new home movies from your personal collection for the purpose of *pure fun, memory making or sharing* is a huge new area of creativity. Some see themselves in the role of a film director, they want to create something that goes beyond a documentary.

*“I want it to tell a story and not just have a record.”*

While the creation of gifts or family memories is often a female activity, the men and kids get involved more for fun aspects of home video. Men are especially attracted to the technology factor of this activity.

Our users are also most definitely **looking for fun** – Catching my friends at the right moment can be so embarrassing! This is the America’s Funniest home video segment of our user base.

*“I am looking to have some fun with my friends.”*

*“Sharing embarrassing videos online would be fun”*

Our users are busy and to some degree are frustrated with the complexity of modern technology. They want it to be easy to learn; otherwise they will not use it.

*“I don’t have time to learn to be technical but I want to do it all!”*

## **Customer Perceived Barriers**

Despite recognition of the advantages of digital video and photography, many potential users are not ready to make the leap right now because of the perceived problems listed below. Many of these perceived barriers are just that, perceived. Windows Movie Maker in cooperation with our industry partners can address most of these barriers.

- **Perceived extensive expenditure of time and energy**  
Time constraints were the biggest issue on virtually every subject discussed during the groups. While group members have strong desires to organize, be creative, have fun, tell a story, and share their videos, even the thought of adding to their daily yoke was likely to trigger concern.
- **The perceived cost of equipment**  
Most believe that equipment related to editing on a computer is likely to be expensive. They claim that digital still cameras cost at least \$500 and assume that a digital video camera would be at least double that. Few were aware of cheap USB capture devices that work with their existing analog camcorder.
- **Lack of awareness.**  
Editing on the computer has not yet reached most respondents’ consciousness. As many freely

volunteered, the media has not yet made the concept 'mainstream' and until this occurs, most will shy away from any level of consideration.

*"Main reason we haven't done (editing) is because we don't know enough yet, it's not popular enough yet to be accepted."*

- **Intimidation over learning new technology that is not yet 'mainstream'.**

*"Waiting for the wrinkles to be ironed out".*

*"Seems intimidating."*

- **Perceived lack of appropriate skills**

Respondents repeatedly discussed the difficulties of learning a new technology including the time, energy and frustration it involves. Many resist this unless there is a family or friend available to show them the way.

Even those who appeared to have evolved far beyond the 'newbie' stage, were very concerned about their skill level and ability to achieve some of their 'wishes.' Some of this may be due to past experiences but because digital editing has always lived in the realm of the professional, this fact may influence their fears as well.

- **Perceived need to upgrade existing equipment**

According to nearly every participant, their computers would not be adequate to perform digital editing tasks. Some felt they had enough memory but believed that their machines would be too slow. Most were convinced that upgrading would have to be part of the equation.

- **Perceived hassle of setting up a new system.**

Respondents anticipated that setting up the equipment for digital video would be a problem. There is major dislike for the cable mess that results from many of the users attempts to enter into new uses of their computer or consumer electronics for that matter. Some expressed concern about having to get to the back of their PC. Video/audio or IEEE1394 connections on the front of the computer or the use of USB dongles that can reach up to a desk are critical.

- **Fear of obsolescence**

Some recognized that digital video technology is improving rapidly and that prices are dropping quickly as well. Likewise there is concern that the users efforts in creating a useful video library on their PC will be impacted by future upgrades to the PC platform.

- **Problems with Email**

There are concerns over 'industry standards/compatibility (can my friend receive this?), the length of the upload and download times for video email and the issue that the ISP rules on the size of attachments and the size of the email account.



## **Competitive performance for a typical end user scenario**

This table is still being worked on but already you can begin to see some of the times it takes to produce a compressed video using the traditional approach (capture in high quality and then transcode). The consumers we met with in our focus groups are unlikely to want to spend 10 minutes waiting for a 1-minute video to render.

Table to be updated

<b>Video Features</b>	<b>Windows Movie Maker</b>	<b>Apple iMovie</b>	<b>MGI VideoWave III</b>	<b>Ulead VideoStudio 4</b>	<b>Avid Cinema</b>
<b>Performance</b>					
<b>DV source to 1 minute 320x240 MPEG1 at 29.97 fps with 44khz audio</b>	n/a: no MPEG1 saving option	n/a: no MPEG1 saving option	In progress	In Progress. Not working with ATI card.	n/a: no MPEG1 saving option
<b>DV source to 1 minute 320x240 MPEG1 at 15 fps with 22khz audio</b>	n/a: no MPEG1 saving option	n/a: no MPEG1 saving option	In progress	In Progress. Not working with ATI card.	n/a: no MPEG1 saving option
<b>Hi8 source to 1 minute 320x240 MPEG1 at 29.97 fps with 44khz audio</b>	n/a: no MPEG1 saving option	n/a: no MPEG1 saving option	5:30	In Progress. Not working with ATI card.	n/a: no MPEG1 saving option
<b>Hi8 source to 1 minute 320x240 MPEG1 at 29.97 fps with 44khz audio</b>	n/a: no MPEG1 saving option	n/a: no MPEG1 saving option	6:43	In Progress. Not working with ATI card.	n/a: no MPEG1 saving option
<b>Native source to 1 minute 320x240 MPEG1 at 29.97 fps with 44khz audio</b>	n/a: current build doesn't save to file	9:57 MOV	n/a: MPEG1 is native source	In Progress. Not working with ATI card.	1:30 AVI
<b>Native source to 1 minute 320x240 MPEG1 at 15 fps with 22khz audio</b>	n/a: current build doesn't save to file	4:43 MOV	n/a: MPEG1 is native source	In Progress. Not working with ATI card.	1:35 MOV
<b>Boot</b>	1 sec	5.47 sec	10.06 sec	2 sec	8.93 sec