A hand holding a silver remote control is visible in the lower-left foreground. The hand is wearing a light blue sleeve. The background is a vast desert landscape with rugged, brown mountains under a bright blue sky with scattered white clouds. The terrain is covered with sparse, dry vegetation.

Intel's Vision of the Future of Networked Consumer Electronics

Design to Redefine



Transforming the TV Experience from the Ordinary to the Extraordinary



Television is powerful. It entertains. It informs. It changes the way we think about ourselves. And the digital television experience is poised on the threshold of dramatic change.

At Intel, we believe digital technology has the power to redefine the TV experience for hundreds of millions of consumers throughout the world. How will these changes occur? The CE industry, service providers and consumers themselves must ultimately decide. But one thing is certain. Intel® platform solutions have the potential to help consumers do more with their TVs than they ever imagined—harnessing the power of digital media, computing and communications.

Design to Redefine the TV Experience

Intel's solutions will ultimately help manufacturers design new generations of networked media platforms that will redefine the TV experience:

- The performance and headroom of Intel processors will accelerate the development of intriguing new usage models, services and applications for entertainment, information and personal communications.
- Standards-based network connectivity solutions from Intel will maximize the industry's R&D investments through platform re-use and ensure that networked consumer electronics devices, including Intel® Viiv™ platforms, interoperate seamlessly throughout the home.
- Consumers will be able to enjoy new bundled services ranging from IPTV and on-demand video to online games and Karaoke, enhanced by voice over IP, video conferencing and a variety of personalized news, sports and e-commerce applications.

New services, enabled by Intel digital technology, are arriving in the living room. Their potential will be limited only by your imagination.



Welcome to the Future

Your personal connection to the digital world has never been more exciting—or more powerful.

We are in the midst of a non-stop revolution in IP-based services, driven by rapid advances in computing power available in networked CE platforms, high-definition TV displays, the growth of broadband networks and the increasing popularity of home networking.

If consumers can imagine a new service for digital entertainment, shopping, information or personal communications, chances are they will soon be able to effortlessly experience it in their living room with a simple click of a remote.

To make this vision come true, networked CE platforms including digital set top boxes, PVRs, DVD recorders and other consumer electronics devices will need to be even more intelligent, flexible and adaptive. In the emerging digital world, Intel technologies and platform solutions will empower a rich menu of TV-based services, while keeping the user experience simple and intuitive.

Interacting with the Digital World

Together with many of the world's leading consumer electronics companies, content creators and service providers, Intel is working to help consumers get more from their TV experience.

In addition to using their TVs to watch digital broadcast programs and on-demand movies, viewers will discover new services, from music and games to shopping, learning, personal media and video-enhanced communications.

Moving forward, the new TV viewing experience will provide generations of consumers with an active, lifestyle-enhancing extension of their personal world. This is Intel's vision of the future of consumer electronics. It is a world based on the solid foundation of Intel-powered building blocks including silicon, software, networking and platforms.

Consumer choices are richer than ever before.

A sophisticated user interface and integrated program guide makes it easy for users to select their favorite content and services from a rich spectrum of options. Networked devices verified with Intel Viiv™ technology can bring personal photos, music and videos as close as the remote control. Future generations of networked CE devices will have the built-in intelligence to learn personalized programming preferences, combining the power of the Internet and broadcast services in compelling new ways.

Consumers will be able to easily see what live events are coming up in their area. And if they are planning a trip, they can program the networked media platform with their travel schedule, enabling it to deliver personalized alerts for concerts and other events.

When verified with Intel Viiv technology, networked CE platforms such as set top boxes and digital media adapters will provide an easy way to access and enjoy thousands of digital photos and songs stored on an entertainment PC. Users will be able to access and view digital home movies on their big screen display.



The "personal channel" provides a unique interface where individual users can access their preferred content. They can check favorite programs, stocks, traffic alerts, news and sports scores. Viewers can create personal lineups of on-demand services, including movies and music.



Create a Personal Channel Lineup



Intel's Vision: Bringing People Together
with Forward-Looking Technology



Personal digital photography is about to become even more fun.

Using a high-speed USB connection, users can plug a digital camera into their networked CE platform to upload their latest photos and home videos. Ultimately, consumer electronics platforms will be able to discover wireless-enabled digital cameras and automatically upload new content, automating the process of saving and archiving photos.

Increased computing performance will enable consumer electronics devices to automatically crop, rotate and enhance photos, perform red-eye removal, enhance color and contrast and get the pictures right-side up. And that's only the beginning.

Networked CE platforms will also have the processing power to give home videos that professional touch when family members view them on their big-screen digital TV. The enhanced display quality will bring personal photos and video to life, with razor-sharp clarity and great color reproduction.

Because the networked CE platform can be connected to the Internet, consumers will be able to order prints online and have them sent to family and friends—all with a few clicks of a remote.



The networked CE platform's photo interface lets users access digital photos stored on other connected consumer electronics devices and PCs. Consumers will be able to download new photos from connected cameras, automatically correct them, and share them with networked devices.



Photos and Home Videos
on the Big Screen



Transform the
Live-TV Experience

TV sports-viewing will become even more compelling—enhanced by the power of connected PCs, consumer electronics devices and digital TVs working together.

Networked CE devices will be able to discover and share tuners and storage resources in other devices connected to the digital home network, including entertainment PCs based on Intel® Viiv™ technology.

In the future, consumers will be able to subscribe to a multiple-stream TV sports service that lets them call-up favorite camera views from both ends of the field, sidelines or overhead shots. Picture-in-Picture will never be the same.

Zoom and pan controls will enable users to frame live action in real time. Users will be able to even download screen captures from the game and store them on their entertainment PC.

The ability to display multiple video streams concurrently will let users watch multiple camera angles at the same time—or even watch a completely different program using the TV's split-screen mode.

Viewers will be able to use their remote to select multiple camera views in either full-screen mode or a variety of Picture-in-Picture, Picture-by-Picture and Picture-on-Picture combinations. Consumers will have control capabilities once reserved for the network director at the stadium.



The remote will give consumers easy access to the services, information and entertainment choices they prefer.

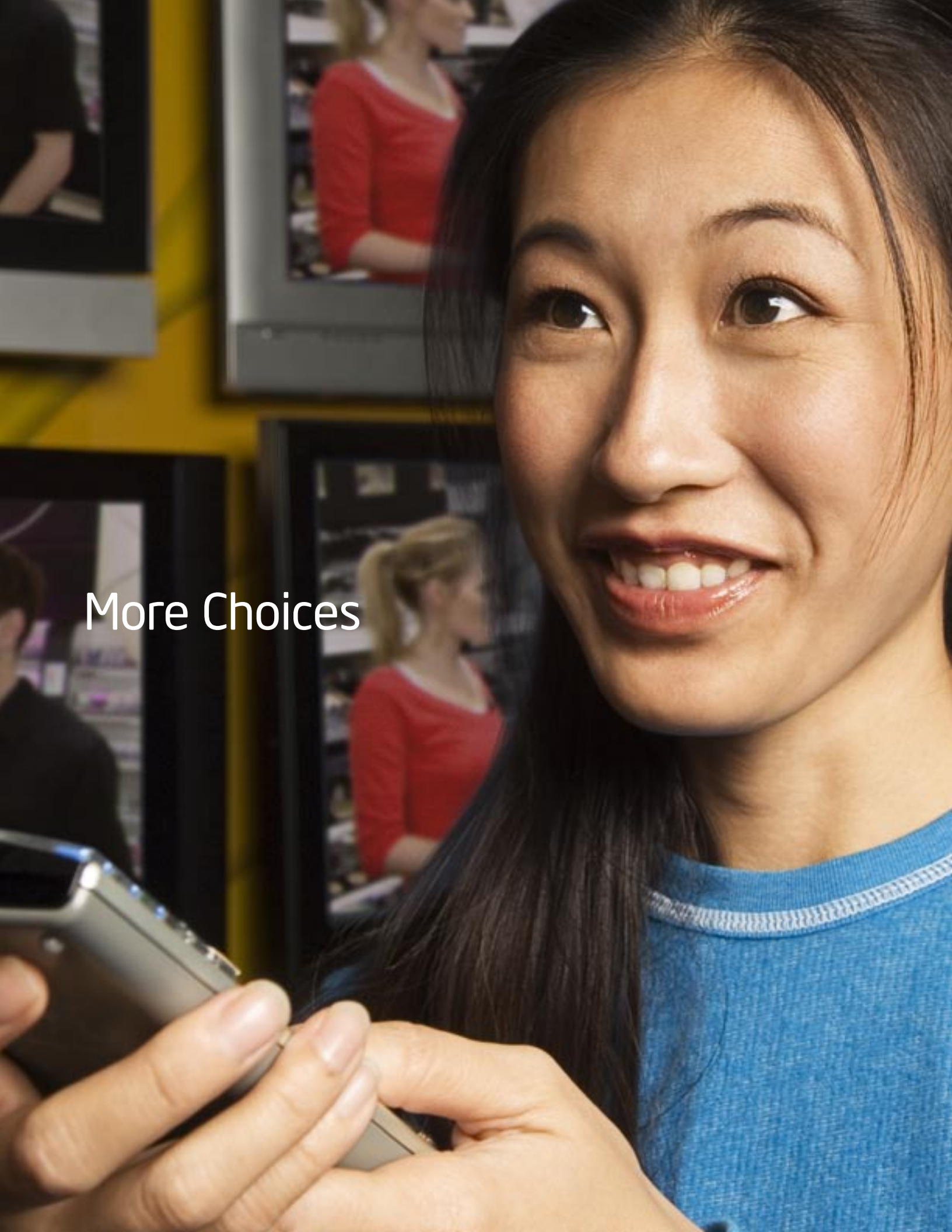
With a simple click of a remote, viewers will receive complete up-to-the-moment statistics on players in a sporting event. Or they can access an e-commerce menu to order game tickets and memorabilia while watching the action.

Because the networked consumer electronics platform is designed to interoperate seamlessly on the home network, it gives users other ways to take advantage of the combined power of other CE devices:

- **Share a tuner.** Connected CE devices throughout the home will be able to access and view available tuners in other devices. Now users can watch TV on a connected PC—or even on a mobile PC—around their home.
- **Enhance the capacity of a personal video recorder (PVR).** Running out of space on the PVR? By accessing extra storage on other networked devices such as a PC hard drive, users can extend recording time for no extra cost.
- **Burn a DVD.** Just select a favorite show, click the remote, and let the PC's DVD-R drive burn the disk.



With a simple click of the remote, consumers will be able to shop for featured products, complement their programming with additional information or check out related links on the Web.



More Choices

Ready for the Road

Users will be able to enjoy personalized TV experiences—even while traveling.

Simply connect a portable media player or mobile PC to the networked CE platform and pump it up with favorite shows to enjoy on the go. The networked consumer electronics platform will have the processing power to adapt programs to a format optimized for each portable viewing device, so the content always looks its best and takes up the least amount of storage space.

When users are away from home, they will log in using their mobile PC or other device to remotely access personal content—from photos to music and videos.

With just a few clicks, travelers will be able to use a cell phone or Internet-connected mobile PC to program the networked CE platform to record a favorite show.

While they are traveling, consumers can use their TV's location-aware content-access feature to check personal channels for updates on cool places to visit and roadside attractions along the way.



Take Control of Content Access

The integrated intelligence of next-generation consumer electronics devices will open the door to a wide world of new capabilities.

Networked CE platforms will be capable of restricting access to selected content and will be designed to support a variety of digital rights management and conditional access systems.

Parents of young children will have enhanced control over content.

Viewers will stay in close contact with friends and family with text, voice or video-phone applications—even while watching a favorite program or playing an online game.

Consumers will be able to enjoy the convenience of voice-over-IP and video phone service in the living room while watching an IPTV program, watching a video or playing a multiplayer online game.

If a call comes in while a program is in progress, the video phone application's caller ID feature will let viewers know at a glance who's calling. The recipient can choose to take the call, save it to voicemail or relay it to the phone of another family member.

If the viewer takes the call, the networked CE platform will be able to pause the show automatically.

Viewers who like to text chat will be able to receive and send instant messages while they watch their favorite TV programs. Users can stay in touch with friends or even host a "telechat" with others while watching their favorite shows.

Users will enjoy live video-phone calls with distant family and friends. With its IP connection and built-in camera, the networked CE platform will put users just a couple of remote "speed dial" clicks away from sharing a child's birthday with a grandmother who lives three states away.



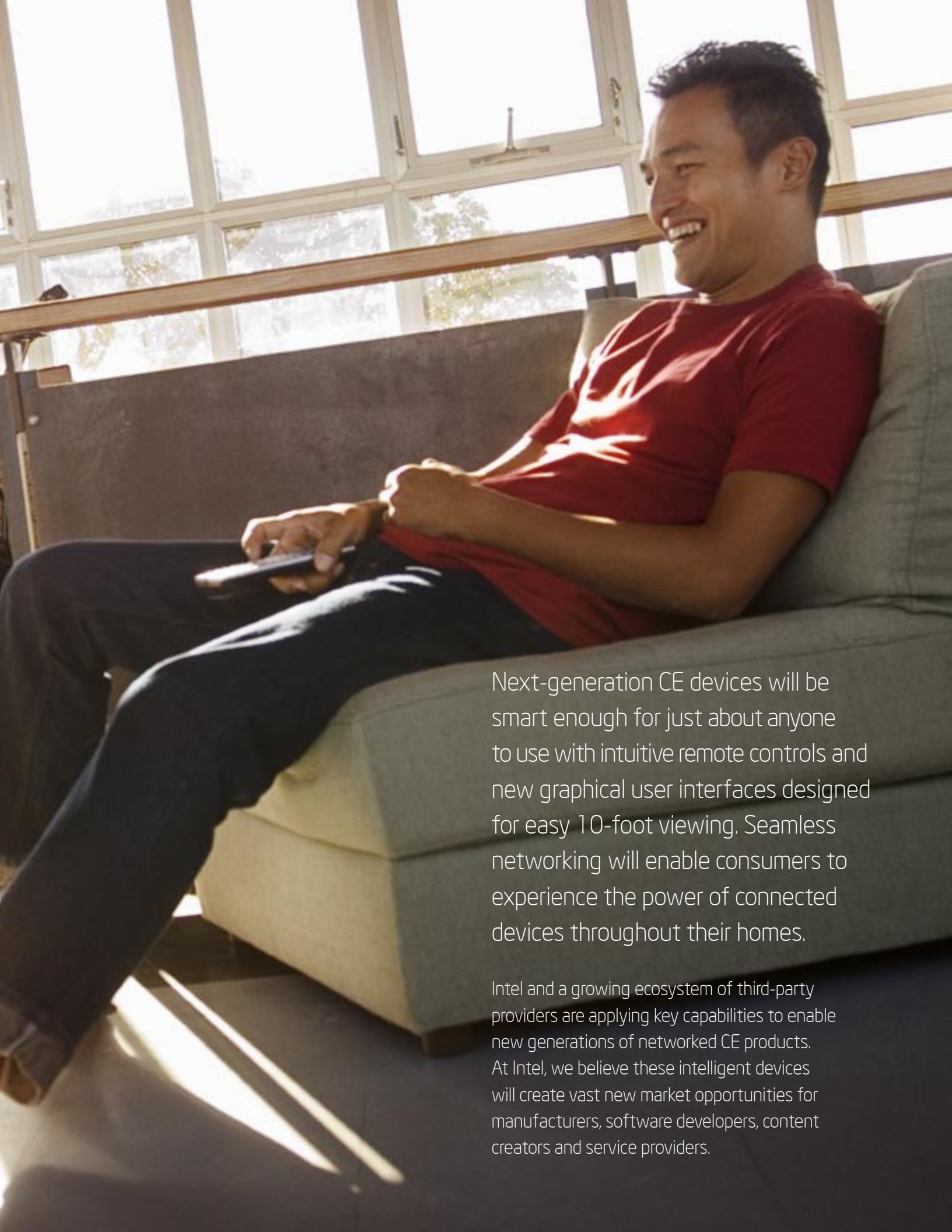
The networked CE platform's built-in camera and IP connection will allow consumers to connect to family and friends like never before.



Connect With Family and
Friends Like Never Before

Smart Enough to be Easy





Next-generation CE devices will be smart enough for just about anyone to use with intuitive remote controls and new graphical user interfaces designed for easy 10-foot viewing. Seamless networking will enable consumers to experience the power of connected devices throughout their homes.

Intel and a growing ecosystem of third-party providers are applying key capabilities to enable new generations of networked CE products. At Intel, we believe these intelligent devices will create vast new market opportunities for manufacturers, software developers, content creators and service providers.

Design to Redefine

Intel's Networked Consumer Electronics Vision

These are just some of the emerging consumer usage models and services that will be made possible by the new generation of intelligent set top boxes and other devices powered by Intel platform technologies. While we look forward to these new usages, their key features and benefits are based on very real capabilities:



High Performance Applications and Media Processing. High-performance Intel processors are at the heart of next-generation consumer electronics platforms including digital set top boxes and networked digital media players/recorders. Intel processors will power a broad range of exciting new features, enabling the consumer electronics industry to deliver the innovations that will achieve this shared vision.



Standards-Based Networking and Interoperability. To enable seamless connectivity and interoperability, while accelerating time-to-market for new features and services, Intel supports industry standards such as the guidelines established by the Digital Living Network Alliance (DLNA).



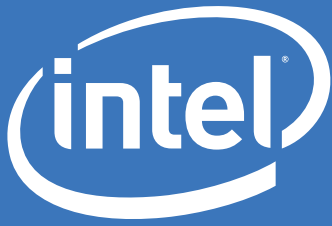
Modular Software Building Blocks and Tools. Intel supports rapid software development with comprehensive software building blocks including media drivers, platform drivers, display drivers, OS support packages and a software development environment based on an open multimedia development framework.

For more news on how Intel is helping the industry design to redefine the TV experience, visit us at www.intel.com/go/consumerelectronics



Powering the Transformation of the Digital TV Experience





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