SimpleWay Technologies Ltd.

UXify Laptop

The modern professional and enthusiast often requires a delicate balance between computing performance and device portability, especially with the rise of hybrid work environments. Current solutions often force users to compromise, either opting for less powerful, highly mobile laptops or high-performance, less portable workstations, often leading to the burden of managing multiple devices and the friction of data synchronization.

The UXify Laptop introduces a revolutionary approach to overcome these limitations by enabling a seamless synergy between a lightweight, highly mobile laptop and powerful desktop workstations. At its core, the UXify Laptop concept allows the laptop to operate in two distinct modes: a standard standalone mode and an innovative "interoperability" mode when connected to a desktop via a high-speed interface like modern USB or Thunderbolt standard. In this connected mode, the UXify Laptop allows the desktop to boot and run the operating system, applications, and access all data directly from the laptop's storage. This means users experience the full processing power of the desktop while working within their familiar and consistent environment stored on the laptop.

This innovative technology delivers significant benefits, including: easy access to enhanced computing power when needed; a unified user experience across different hardware, eliminating the need for manual data transfer, synchronization, or dealing with disparate operating systems and applications; and enhanced data privacy by keeping the user's entire workspace on their personal device, removing reliance on cloud-based synchronization. The UXify Laptop is ideally suited for professionals in fields like 3D design, video editing, game development, and complex simulation/modelling, as well as anyone working in a hybrid model who requires both high performance and mobility. By uniquely positioning itself in the computing landscape, the UXify Laptop addresses the growing demands of the hybrid workplace and the continuous need for high-performance computing in an intuitive and seamless manner.

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Background and key issues

Introduction

1. Today, laptops are frequently used in both mobile (“on-the-go”) and stationary work modes. During stationary sessions, users typically work on laptops at home or in the office and occasionally switch to mobile usage for meetings, cafes, travel, etc.

2. The most crucial factors for mobile use are battery runtime and portability. Conversely, in stationary work mode, computing performance and desktop-like convenience are often prioritized.

3. These characteristics are somewhat mutually exclusive. Enhanced computing performance (CPU, GPU, RAM) consumes more energy and generates more heat during operation, thus necessitating larger cooling systems and stronger power supply. This inevitably leads to reduced portability and battery runtime.

4. A laptop represents a compromise between these qualities, with existing models designed to strike a balance between mobility and battery life on one hand, and performance and stationary convenience on the other hand (mobility/performance ratio). Specific laptop models can be either more mobile (smaller, lighter, and less powerful) or offer greater computing power (gaming laptops, mobile workstations), which involves trade-offs in energy efficiency, size, and cost.

5. Currently, users can take limited steps to mitigate these compromises:

    a. Docking station[1], can be connected in stationary mode to expand and simplify laptop connectivity.

    b. External display(s)[2], can be connected in stationary mode to increase the display area.

    c. eGPU (External Graphics Processing Units)[3], which consist of a desktop-grade graphics card housed in a separate enclosure (including a

[1] https://www.lenovo.com/us/en/glossary/what-is-a-laptop-docking-station
[2] https://www.lenovo.com/in/en/glossary/external-monitor
[3] https://www.lenovo.com/ca/en/glossary/external-gpu

power supply unit and cooling system), can be connected to a laptop in stationary mode via a high-speed interface (e.g. Thunderbolt) to provide additional graphics performance. eGPUs are gaining popularity among gamers and graphic/video processing professionals.

Workstation performance gap

It is well-established that within the same architecture and generation, improved performance generally requires increasing clock speeds and/or the number of computing units, resulting in greater heat generation. As illustrated in the chart[4] In Figure 1, laptop power consumption remains relatively constant at around 180W. This is due to the limitations of the small cooling systems in laptops. In contrast, desktops offer different possibilities. Their cooling systems can dissipate significantly more heat, and more advanced cooling options (e.g., liquid cooling) are available.

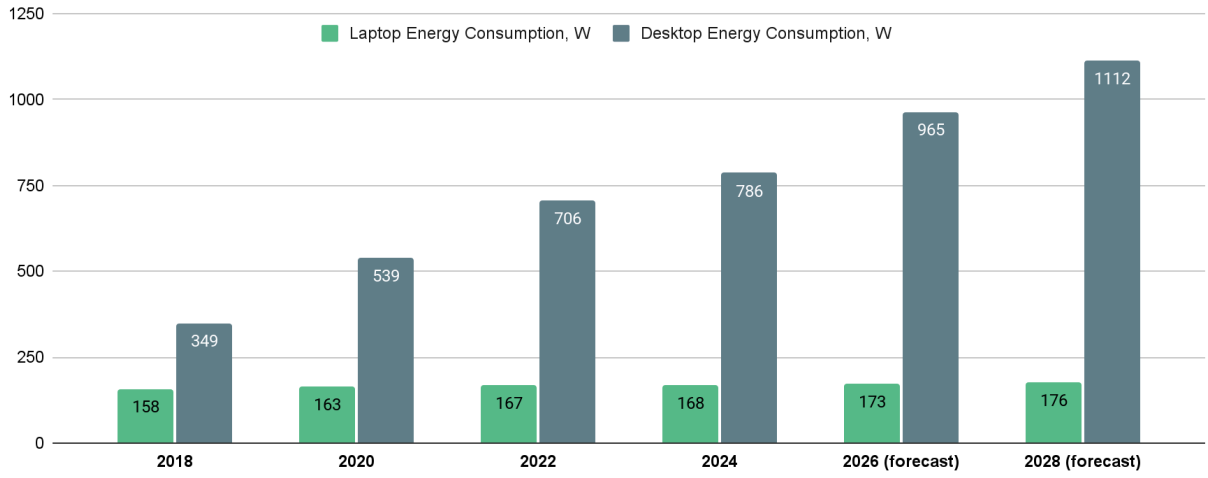

Figure 1. Laptop & Desktop Performance Gap

As a result, the amount of heat that desktops can handle continues to rise. This

[4] Note: the estimation is based on the maximum non-throttled consumption of higher-end Dell Precision mobile workstations and the total consumption of consumer higher-end CPU and GPU models (Intel Core i9 & Nvidia RTX xx80)

means that within the same architecture + generation, desktops are increasingly able to deliver more processing power over time.

Furthermore, unlike laptops, desktop-based workstations allow for additional upgrades, such as equipping multiple GPUs, further enhancing their computing capabilities.

Challenges

Today, many people have become so-called “hybrid workers”[5] - someone who splits their work time between multiple locations, such as an office and a home office. This trend had already been growing, but the COVID-19 pandemic significantly accelerated it.

Moreover, even users who are not traditional hybrid workers often work in a hybrid fashion, integrating flexible work habits into their daily routines. Think of coworking space clients, out-staff employees, digital nomads, or even those who simply move between their desk and meeting rooms within the same office.

At the same time, some professionals require powerful devices for their work, for example, 3D artists or engineers working on complex projects.

Figure 2. Trends of today

So, what options do users currently have?

1. Users can opt for a single, relatively powerful laptop for all their tasks. However, as previously explained, laptop workstations represent a trade-off between performance

[5] https://www.zoom.com/en/blog/hybrid-work

and mobility. More powerful hardware results in a heavier and bulkier laptop with reduced battery life, making it less convenient for mobile use. And even the most powerful and expensive laptops cannot match the potential computing power of desktop-based workstations.

2. A user can choose to use two devices: a lightweight laptop[6] for on-the-go tasks and a dedicated desktop for heavy processing. This approach leads to increased maintenance, as both devices need to be kept updated, and software needs to be installed and configured on each.

Furthermore, this introduces what we term “device switching friction,” where users must transfer documents and data between devices to keep them synchronized. They also encounter discrepancies in their digital workspaces, which can hinder productivity.

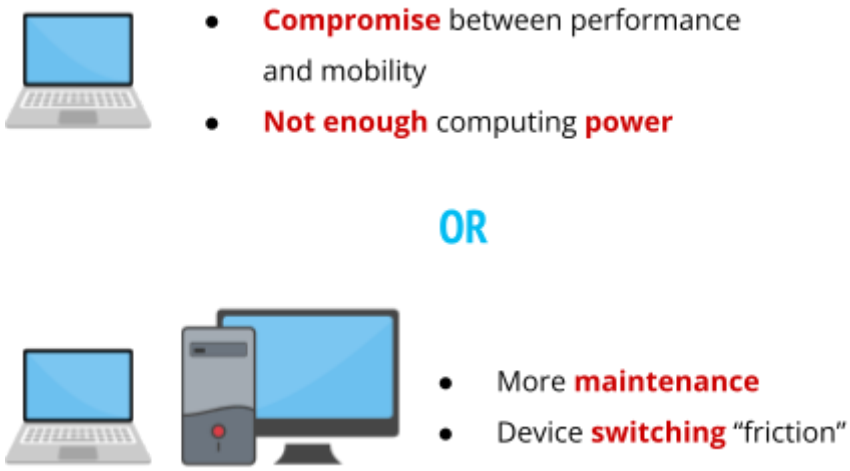

Figure 3. User options

[6] https://www.hp.com/us-en/shop/tech-takes/laptops/basics

UXify Laptop

Idea in essence

The core concept is to apply the UXify Ecosystem[7] idea to a more specific scenario involving only two devices: a laptop and a desktop.

The laptop is able to work in 2 modes:

1. Usual Mode: The laptop functions like any standard laptop, running the operating system installed on its storage and utilizing its integrated hardware. This is the conventional operation.
2. Interoperability System Host Mode: When connected to a desktop via a high-speed interface cable, the laptop enters a “connected mode” with the following characteristics:
    a. It does not run its primary OS.
    b. The laptop provides the desktop with access to its internal storage through the high-speed interface.
    c. Essentially, the laptop emulates and acts as a simple external storage device connected to the desktop. The desktop, in turn, boots and operates as if it were booting from this connected storage, rather than its own internal storage.
    d. The OS boots and runs on a desktop’s hardware (including CPU, GPU, RAM, PSU, cooling systems, etc.).
    e. All data stored on the laptop's storage is accessible to the operating system and applications running on the desktop hardware.
    f. (Optional) The laptop display can also be utilized through the same high-speed interface, serving as a main display or an additional one if the desktop already has a connected display.

The laptop operates in the first mode when started independently and in the second mode when started while connected to the desktop.

Regardless of the chosen mode, the user works with the same workspace (same operating system, applications, and data). The only difference is the underlying hardware,

[7] https://www.simpleway.ie

which transitions between the energy-efficient internal components of the laptop and the powerful hardware of the desktop, and vice versa.

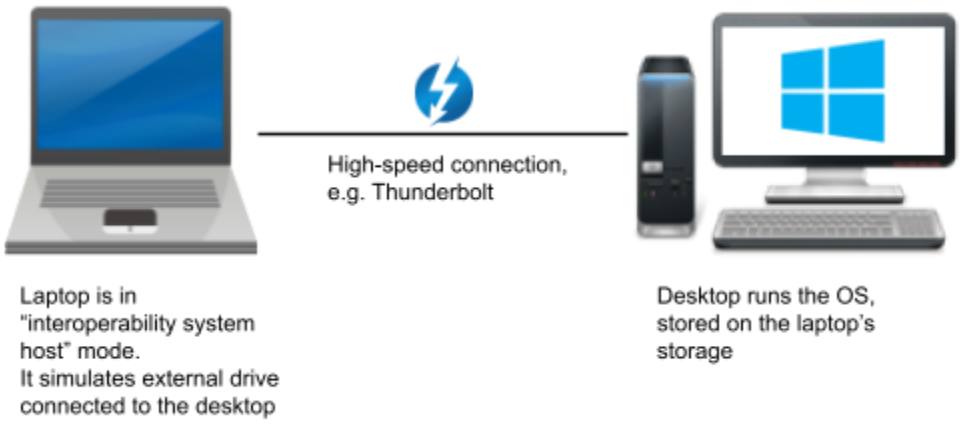

Figure 4. “Interoperability” mode

This approach does not introduce any special hardware requirements and simultaneously allows for a greater focus on the qualities that enhance a laptop’s mobility and convenience for “on-the-go” use:

- Hardware Specifications:
  - Low to moderate processing power
  - High portability
  - Long battery life
  - Large & fast storage
  - Available high-speed port (e.g. USB4 or Thunderbolt)

How does this look in practical scenarios?

A typical hybrid worker might have the following work environments: a home office, an office, and on-the-go locations (e.g., meeting rooms or client sites). This individual might be a 3D designer or work in architectural visualization, often requiring resource-intensive tasks.

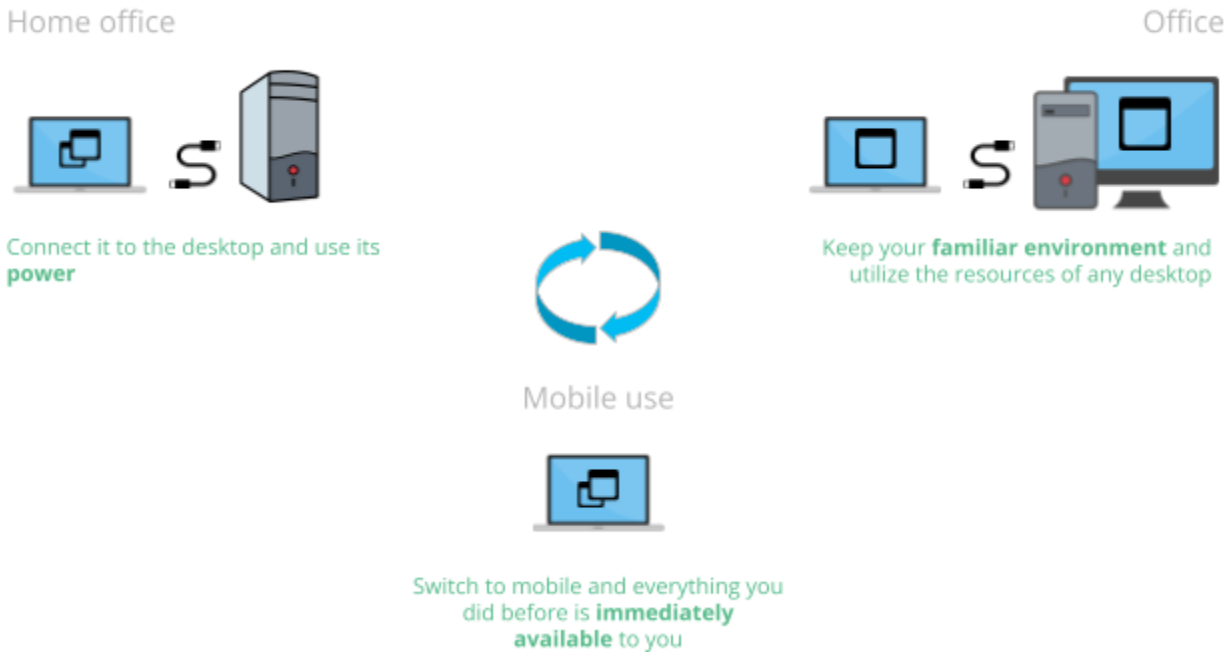

Figure 5. UXify laptop use cases

- In the home office, the user simply connects their laptop to the desktop via a cable to leverage the desktop's power, utilizing its CPU, GPU, and RAM. Gaining significantly more computing power for the laptop is as straightforward as connecting it to the desktop with a cable.
- For work in the office, the user takes their laptop, connects it to another desktop in the office, and continues their work in their familiar environment without any interruption, utilizing the office desktop's power.
- Subsequently, when attending a meeting or visiting a client, the user simply takes their laptop, and the end result of their work is readily available in a smooth and efficient manner, eliminating any need for synchronization.

Technical details

Let's examine some technical aspects of how the UXify Laptop works.

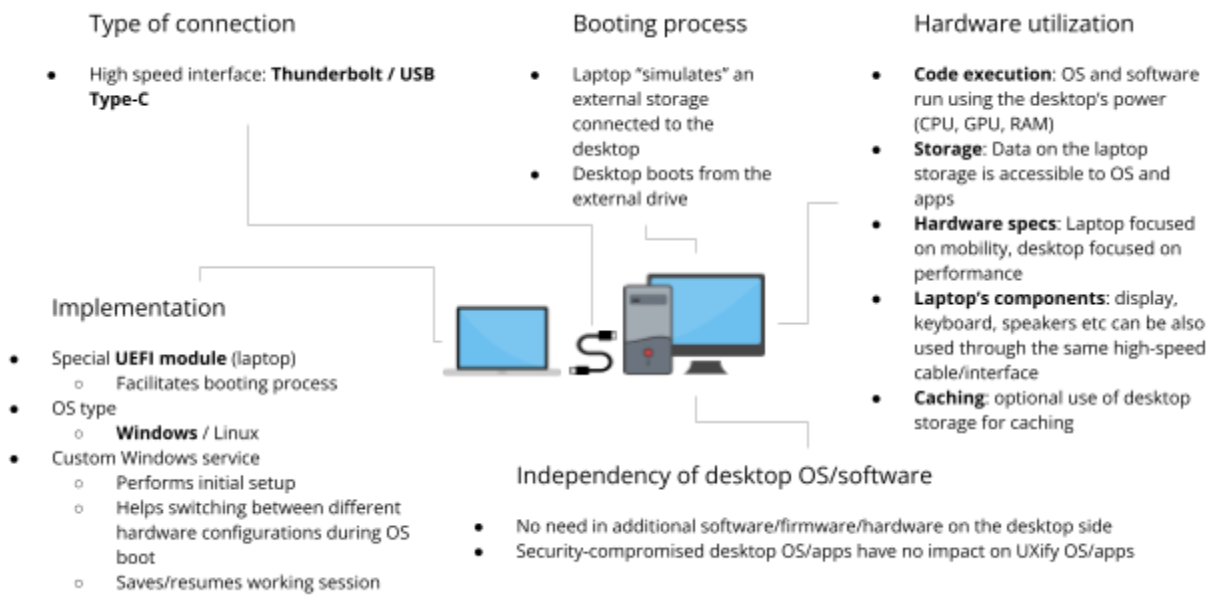

Figure 6. Technical overview

Type of connection

The connection is established using a high-speed interface: Thunderbolt or USB Type-C[8] based standards.

The selection of the wired interface between the laptop and desktop should consider several factors:

- Speed (throughput and latency)
- Popularity (availability in existing products)
- Native support for connecting external data storages
- Ability to supply sufficient energy for charging the laptop
- Cable length limitations
- License issues (if any)

To estimate the interface speed requirements, we can examine examples of existing storage solutions, interfaces, and their transfer rates.

[8] https://www.hp.com/us-en/shop/tech-takes/usb-c-vs-thunderbolt

Product	Details	Transfer rate
Storage Interface examples		
SATA rev. 2	Older version, latest rev.2.6 is from Feb, 2007	3 Gbit/s
SATA rev. 3	Current version, first rev. is from Jul 2008, latest rev.3.5 is from July 2020	6 Gbit/s
M.2 NVME PCI-e 3.0 x4	Used by most current high-performance consumer SSDs	31.52 Gbit/s
M.2 NVME PCI-e 4.0 x4	Available from approx. mid 2020	63.04 Gbit/s
Storage product examples		
5400 rpm HDD Seagate ST4000DM004		1.52 Gbit/s
7200 rpm HDD Seagate ST2000DM008		1.76 Gbit/s
SATA SSD Samsung 860 EVO SATA III		4.4 Gbit/s
NVME SSD WD Blue SN550 1 TB	M.2 NVME PCI-e 3.0 x4 SSD	19.2 Gbit/s
High-end SSD Samsung 980 PRO NVMe M.2 SSD 1TB	M.2 NVME PCI-e 4.0 x4 SSD	56 Gbit/s

Figure 7. Examples of storage devices and interfaces

The currently available options for the wired interface between laptop and desktop provide enough throughput for the outlined functionality:

Interface	Transfer rate, Gbit/s	Popularity (as of early 2025)	Native storage support	Energy supply	Cable length limitations	License
Thunderbolt 3	40	Currently n/a on AMD chipsets (but can be installed as add-in cards)	yes	Up to 100 W	< 2 m (active cables)	Intel released it to the USB-IF on 4 March 2019, making it royalty-free
Thunderbolt 4	40	Currently n/a on AMD chipsets (but can be installed as add-in cards); products available from late 2020	yes	Up to 100 W	< 2 m (active cables)	Intel proprietary standard
USB4 (Specifications includes Thunderbolt 3 features, but support for tbt3 is optional)	40	Popular	yes	Up to 100 W	< 0.8 m; < 3 m (active cables)	Open standard
USB4 v2.0	80	Relatively new standard	yes	Up to 240 W	< 1 m; < 3 m (active cables)	Open standard
Thunderbolt 5	80	Already in use in some devices	yes	Up to 240 W	< 1 m; < 3 m (active cables)	Intel proprietary standard

Figure 8. Wired connection options

Booting process

- During the boot process, the laptop enters a special mode that "simulates" an external storage device connected to the desktop, and the desktop boots from this external drive, similar to booting from a standard USB boot drive.

- The operating system boots and runs on the desktop's hardware, utilizing its processing components (CPU, GPU, RAM) and supporting components (power supply unit, cooling systems etc.)
- All data stored on the laptop's storage is accessible to the operating system and applications running on the desktop hardware. Consequently, the user experiences the same operating system, software, and data environment as they would on the laptop.

Hardware utilization

Firstly, as previously mentioned, the desktop hardware is fully utilized. The operating system and software run directly on the desktop's CPU, GPU, RAM, and other components. This helps to focus the laptop on mobility, and desktop - on performance.

Secondly, the laptop's display, keyboard, speakers, etc., can also be used to provide users with greater flexibility. When in "interoperability system host" mode, certain hardware components of the laptop can be presented to the desktop as externally connected devices. This connection is facilitated through the same wired connection used to connect the laptop and the desktop, offering additional convenience. For example, users will be able to use a laptop display as the second or even first display, use the laptop integrated webcam for making video calls, etc.

This increased functionality raises the bandwidth requirements for the connection, but as shown below, these requirements are still well within the capabilities of modern wired connectivity options.

Hardware component of the laptop	**Details**	**Priority**	**Required bandwidth**
Display	Highly desirable. Provides a "free" second display, which users buying a laptop and external display expect. Alternatively, it allows the user to work without a separate display	highest	FullHD@60Hz 4,95 Gbps 4K@60Hz 18 Gbps
Keyboard/Touchpad	Useful when a user does not have a separate display/keyboard/mouse for "desktop mode"	high	12 Mbps
Speakers	Same as Keyboard/Touchpad	high	<=480 Mbps
Mic/Webcam	Useful for communication in desktop mode	high	<=480 Mbps

Hardware component of the laptop	Details	Priority	Required bandwidth
USB ports	Less practical because a) desktops usually have ample ports; b) would require reserving significant bandwidth	low	10-20 Gbps per port in case of USB 3.2
Wi-Fi card IEEE 802.11ac	Allows the desktop to utilize the laptop's Wi-Fi capabilities, potentially useful in situations where the desktop's Wi-Fi is weaker or unavailable. Could also enable seamless transition of network connections when switching modes	mid	1.3 Gbps

Figure 9. Additional hardware components

Therefore, the desirable transfer rate would be:

[‘mid-to-high-performance SSD’ transfer rate] + [‘some components as external devices’ transfer rate]

Desirable transfer rate		
Required for	**Transfer rate, Gbit/s**	**Details**
Storage	30	Enough for high-performance pci-e 3.0 SSD
Display	5	Enough for FullHD@60Hz laptop display
Keyboard+Touchpad	0.01	
Speakers+Mic+Webcam	1	
Wi-Fi	1.5	Enough for 802.11ac AC1300 connectivity
Total	**38**	

Figure 10. Minimal required transfer rates

Thirdly, to enhance the performance of file operations, caching on the desktop storage can be implemented using the following basic algorithms.

When some piece of data is read from the UXify Hub laptop for the first time, it is also cached on the desktop storage. Subsequent readings of this data are performed from the cache.

The OS maintains the file-checksums correspondence database for the main storage as well as for every cache (from your different desktops if there are several of them). When the OS boots and discovers previously cached data, the checksum database of that cache is compared against the reference one (from the main storage) to determine which data is still unchanged, and therefore whether the cached copy of that data can be used. The data writes are performed in write-through mode to ensure that the UXify Hub storage always contains the most up-to-date data. The checksum database is also updated after any data modification or creation.

Additionally desktop storage can be configured to be used as a swapping space or a cache / additional storage for specific software to improve its performance or reduce the utilization of laptop’s storage and the wired connection.

Independency of desktop OS/software

UXify operates independently of the operating system and software installed on the desktop. No additional software, firmware, or hardware modifications are required on the desktop side. Furthermore, any security vulnerabilities/issues in the desktop's operating system and applications will not affect the UXify operating system and applications.

Implementation

On the laptop side, the implementation includes:

- Special UEFI module which helps to facilitate the booting process
    - For the main OS, we aim to use Windows, as most professional applications are developed for Windows, and it is a very popular operating system. However, using a Linux desktop distribution is also possible and technically even more feasible.
- A special custom Windows service / Linux daemon that provides additional features to enhance the user experience:
    - Handling initial setup

- Switching between different hardware configurations during OS boot
- Saving and restoring work sessions

The main functionality that needs to be added to the existing operating system functions includes:

Ability to switch between different hardware configurations during boot.

a. Determine what device is connected
    i. If it's a previously known device then:
        - Load the corresponding configuration (enable/load necessary drivers, services, settings; disable unnecessary drivers, services, settings)
    ii. If it's a previously unknown device then:
        - Authenticate it (this might not even be necessary due to the exclusively wired connectivity)
        - Analyze its hardware components and install all necessary drivers/software to support them
        - Prompt the user for per-device settings
        - Save the collected configuration for future use
b. Boot the operating system on that device using the appropriate configuration

Additional feature: Session saving

Since it's highly likely that the OS has to be restarted (rebooted) during the transition between "usual" and "interoperability system host" modes, implementing a "session saving" feature will improve user convenience. This includes (but is not necessarily limited to):

1. Gathering and storing information about the current session:
    a. User ID/name (for multi-user systems, potentially iterate through all logged-in users)

   b. Running apps
   c. Opened files
   d. Last browser session (Opened URLs in browsers)
   e. Current viewing position in supported file types (text/document files, video files, etc., depending on the viewing applications)
   f. Relative positions of application windows
   g. Additional connections states (e.g, VPN)

2. Prompting the user after system boot and login if they wish to restore the previous session
3. Restoring the session using the gathered information

Additional feature: Settings saving per device

Most user-defined settings should be consistent across both “interoperability system host” and “usual” modes, minimizing the effort required to set up different devices. For example, startup applications should generally remain the same. However, some settings are specific to the hardware used in each mode and should therefore be individual (e.g., font/UI scaling, speaker volume level). The custom service software will address this by detecting the current mode and automatically applying the relevant individual settings.

Benefits

Customers who require high computing performance for some of their tasks (professional usage, processing-intensive interactive work) but still desire a device for less demanding tasks while on the go can currently choose between:

- Owning a high-performance laptop for all their tasks (e.g., a gaming laptop or workstation laptop)

or

- Owning a high-performance desktop for compute-intensive tasks and a highly mobile (lightweight, long battery life) laptop for on-the-go use

The UXify laptop offers the following benefits:

- In comparison to owning a single high-performance laptop:
    - A desktop can deliver significantly more processing power than even a high-performance laptop due to fewer limitations in energy consumption, space, and cooling. This translates to enhanced performance in stationary mode for gaming and professional tasks.
    - Desktops offer greater flexibility in hardware configuration, allowing customers to better tailor them to their specific requirements and potentially save money.
    - The laptop used for on-the-go tasks can be based on energy-efficient hardware. Instead of carrying a heavy, bulky laptop with short battery life, customers can use a lightweight, highly mobile model better suited for travel and meetings.
- In comparison to owning two separate devices (a desktop and a laptop):
    - Customers enjoy a consistent user experience when working on either the laptop or the desktop.
    - The same operating system, applications, data, and settings are available when switching between laptop and desktop(s), eliminating the need for synchronization.
    - Customers do not need to rely on cloud services for synchronization, thus removing associated privacy concerns.

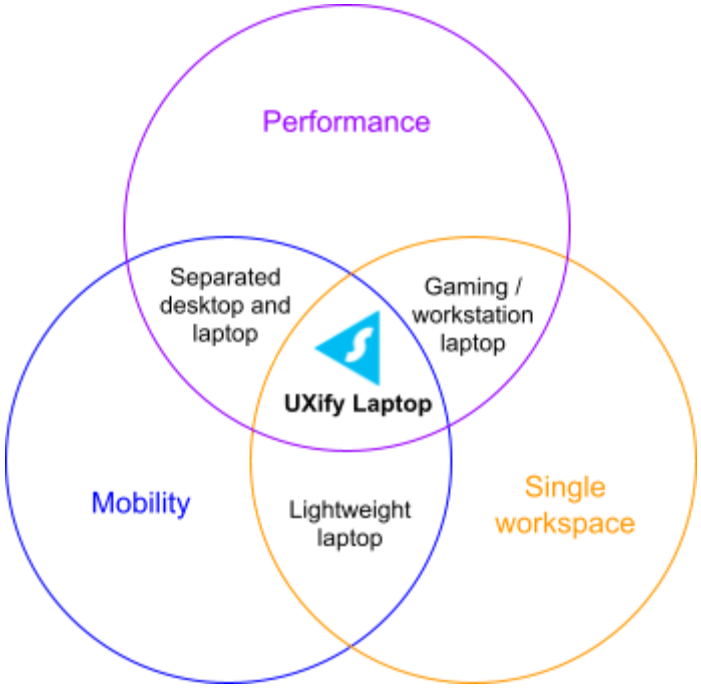

Figure 11. Unique value proposition

Essentially, our customers will have the ability to use inexpensive, lightweight, and small laptops for mobile use and powerful desktops when high performance is required, all while benefiting from the same operating system, applications, data, and settings without the need for synchronization, thus enjoying the benefits of a seamless UXify ecosystem.

Market

Target audience

Our primary target audience comprises individuals who require a powerful computing device for interactive and computationally intensive tasks. This includes, for example, people falling into one of the following groups:

- Professionals who own a workstation-grade laptop but are dissatisfied with its computing performance, price, or mobility and battery runtime.
- Professionals (freelancers) who have a desktop with powerful hardware for work tasks (e.g., code compiling, video rendering, 3D modeling, extensive machine learning calculations, statistical analysis, multitasking, etc.) at home or in the office and simultaneously need a lightweight, small, and energy-efficient laptop for on-the-go use (e.g., for presentations, coding, editing, entertainment, traveling).
- Professionals (employees) who switch between desktops with powerful hardware in the office (or coworking space) and at home.
- Gamers who own a gaming laptop and want to improve its gaming performance in a stationary mode.
- Gamers who have a desktop with powerful hardware for gaming at home and simultaneously need a lightweight, small, and energy-efficient laptop for on-the-go use.

Basically, the ideal UXify Laptop customer is someone who is 1) working in a hybrid mode or at least incorporates hybrid environmental elements into their workflow and 2) requires or desires a high-performance PC.

Figure 12. Global Hybrid Workplace Market Size (USD Billion)

The chart above illustrates the past growth and future forecast for the hybrid workplace market[9]. With a Compound Annual Growth Rate (CAGR) of 18.3% and a projected market size exceeding 20 billion USD in 2032, it clearly indicates the transformative impact of hybrid work.

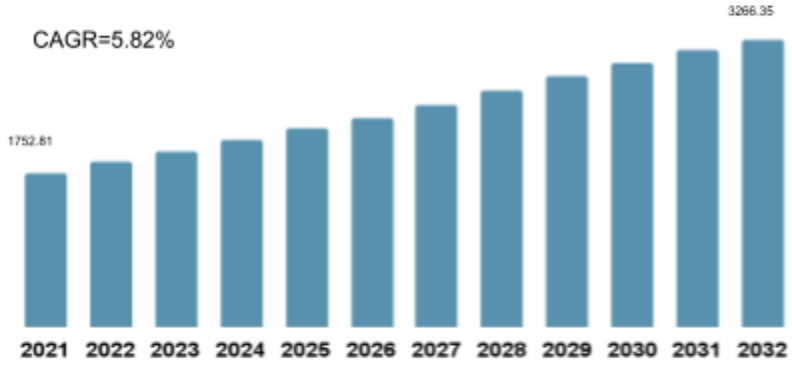

Figure 13. Global Computer Workstation Market Size (USD Billion)

The second chart demonstrates that the market for powerful desktop workstations[10] not only withstands the popularity of laptops but continues to grow steadily with a CAGR of nearly 6%. This growth is driven by the increasing demand for devices capable of handling complex tasks in the IT and related sectors. Recent developments in Artificial Intelligence (AI) and Large Language Models (LLM) are expected to further fuel this trend[11].

Combining these two market trends demonstrates a very favorable outlook for UXify technology.

Our market research has identified several potential customer groups across various professional domains.

Professional areas:

- Film, animation & VFX production
- Complex 3D rendering & modelling, 3D engines
- Architectural modeling

[9] https://market.us/report/hybrid-workplace-market/
[10] https://www.businessresearchinsights.com/market-reports/computer-workstation-market-102681
[11] https://www.grandviewresearch.com/industry-analysis/ai-enhanced-hpc-market-report

- VR & AR development
- Scientific & engineering simulation/modeling
    - Plants / Marine engineering
    - Materials and products reliability/safety simulation
    - Fluid, heat, electromagnetics, vibration, acoustics simulation
- Complex game development
- Computer enthusiasts and anyone seeking enhanced efficiency across multiple devices

Here are also only a few examples of professional software which may require a powerful workstation desktop hardware:

- Adobe Premiere Pro; Avid Media Composer (film and video editing)
- Foundry Nuke (VFX and Film Editing)
- Autodesk Maya (3D animation and visual effects)
- Unreal Engine (3D computer graphics)
- Avid Pro Tools (music creation and production)
- SolidWorks (solid modeling computer-aided design and engineering)
- Bentley OpenBuildings Designer (building design)
- Siemens Simcenter STAR-CCM+ (Computational Fluid Dynamics based simulation)
- Dassault Systèmes Simulia (simulating the performance, reliability and safety of materials)

Competitors landscape

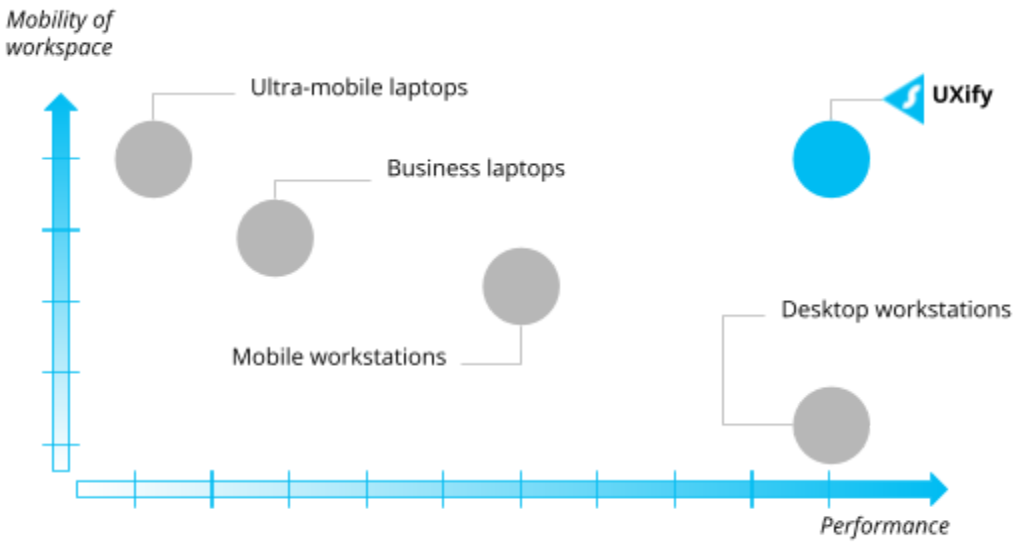

Figure 14. The product positioning and potential competitors

The illustration shows different categories of modern computer devices plotted against two crucial parameters: their ability to provide a mobile, portable workspace and their ability to deliver computing power.

Manufacturers try to achieve a certain balance between these parameters. For example, ultra-mobile laptops primarily focus on mobility but offer the least processing power. Desktop workstations have virtually no mobility but provide significant computing capacity. Business laptops and mobile workstations occupy their respective niches in the middle ground.

What distinguishes UXify is its potential to offer a very lightweight and energy-efficient laptop that can also deliver significant computing power in a stationary mode without the need to switch workspaces.

Alternative solutions

Given the unique and patented nature of UXify technology, there are no direct competitors. However, some alternative technologies aim to address some of the challenges we have discussed. This section focuses on the distinctions between these alternatives and our technology, highlighting the advantages that make UXify stand out.

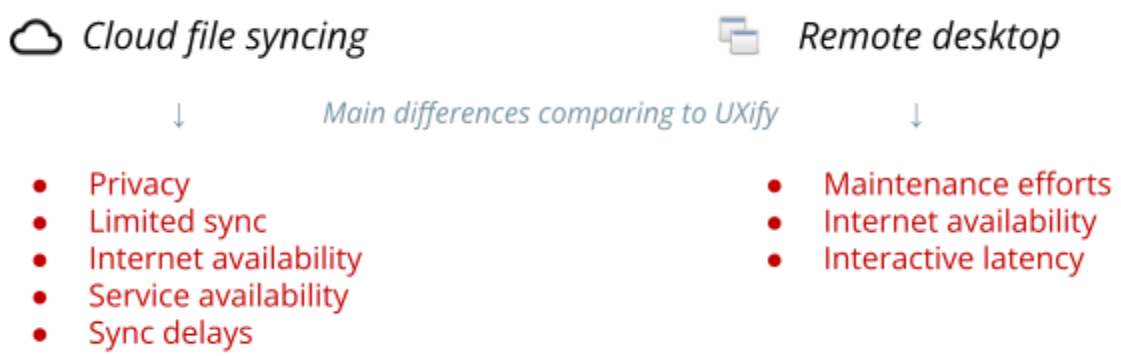

Figure 15. Alternative technologies and UXify

The first alternative technology is cloud-based synchronization, where a cloud service is used to facilitate file synchronization between devices (e.g., DropBox, MEGA, or pCloud).

- This approach raises potential privacy concerns due to data being processed and transferred by a third party.
- Its synchronization scope is limited, typically only including files and some settings, while most applications, configurations and updates are not synchronized.
- This technology is dependent on internet availability and the quality of the user's connection.
- It also relies on the reliability of the service provider itself.
- Finally, there are synchronization delays - the time required for the synchronization process to complete. Professional creators often work with large datasets, and larger files result in longer synchronization times.

The second potential alternative is Remote Desktop, which involves connecting to a desktop computer through Remote Desktop Protocol (RDP) software (like TeamViewer, RealVNC, or Parsec) and using it remotely.

- Unlike UXify, each computer maintains its own separate environment with Remote Desktop. This increases the maintenance burden for the end user, requiring, for example, the installation, configuration and updating of applications on each device.
- Similar to cloud synchronization, it depends on network connectivity.
- Also, interactive latency is a significant concern. Our research indicates that many professionals in the fields we mentioned previously engage in highly interaction-intensive workflows, making them sensitive to any interactive latency

and micro-delays. Remote Desktop solutions might not feel sufficiently smooth and responsive for such users.

Evolution of laptop extensibility

Throughout the history of the laptop market, manufacturers and solution providers have consistently sought ways to enable customers to "extend" the capabilities of their laptops.

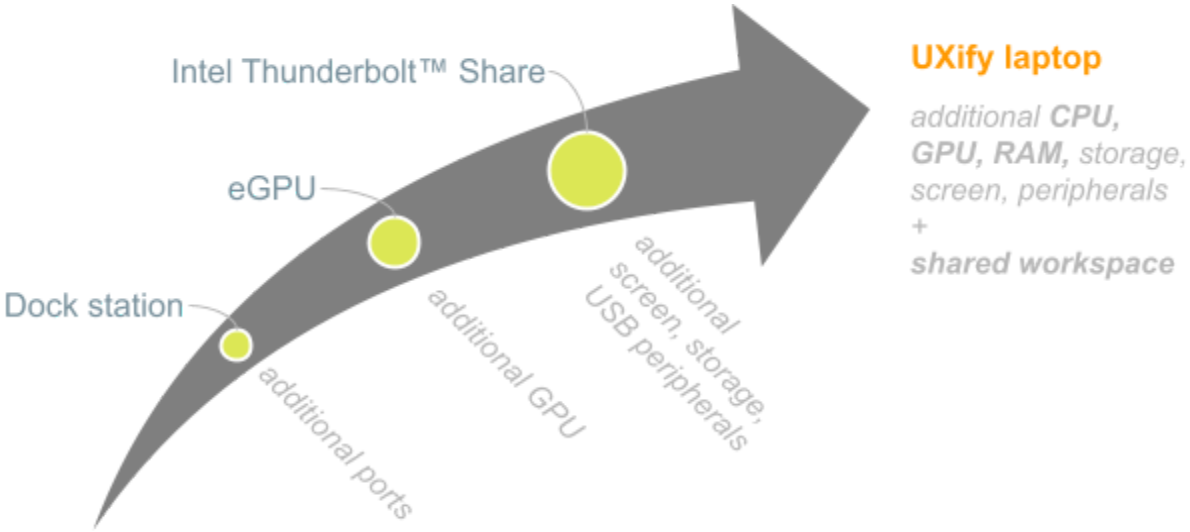

Figure 16. Evolution of laptop extensibility

The traditional docking station is an early example, providing customers with easily accessible additional ports. Later, external GPUs emerged, offering additional graphics power through separate enclosures housing graphics cards and power supplies, connected to laptops via high-speed interfaces. Another recent example is Intel Thunderbolt Share[12] technology, which enables the interconnection of laptops and desktops, enabling the sharing of USB peripherals, screens and data transfer.

Finally, UXify technology represents the next step in this evolution, extending laptop capabilities by providing not only shared screens, peripherals, storage and ports but also shared CPU, GPU and RAM, along with a shared workspace encompassing data, software and the operating system across devices.

[12] https://www.thunderbolttechnology.net/content/thunderbolt-share-landing

Key takeaways

Mobile professionals, such as 3D-designers, engineers or content makers who require high processing power in one or more locations, encounter challenges related to data and environment inconsistency. Our solution addresses these challenges by providing a laptop which can be connected to any desktop/workstation, and can run the same OS and set of software/data from the laptop's storage on the desktop's powerful hardware. This empowers mobile workers to seamlessly transition between locations without disrupting their workflow.

Problem:

- Synchronization issues between two or more powerful workstations at different locations.
- Synchronization issues when switching between a powerful desktop workstation and a laptop.
- The current laptop might not be powerful enough for all tasks, but setting up a new environment on a more powerful desktop adds complexity and time.

Solution:

- Consistent operating system, applications, data, and settings on the laptop and desktop (or multiple desktops) at any time, without the need for synchronization or cloud services.
- Simply connect your main laptop to any desktop workstation and run the operating system and software/data from the laptop's storage on the desktop's powerful hardware.

Notices

The Uxify technology is patented. For further details, please refer to www.simpleway.ie