



PHISON

CES 2025

Phison Unveils Lightning-Fast Gen5 Storage,
Expanding Suite of High-Performance Solutions

Presented by | *Chris Ramseyer*



AGENDA

Consumer SSD Lineup

- E28
- E31T
- U21
- **New Enterprise SSD**
- D205V 122.88TB

aiDAPTIV+

- AITPC



1

Consumer SSD Update



PS5028-E28

**The Weapon of Choice for Serious
Gaming and Productivity**



Highlights

- PCIe Gen5x4
- TSMC 6nm Process
- 8 Channels with 32CEs
- Capacity up to 32TB
- Up to 4200 MT/s Flash Transfer Rate

Sequential Performance

Read: Up to 14.5GB/s

Write: Up to 14.5GB/s

Random Performance

Read: Up to 3,000K IOPS

Write: Up to 3,000K IOPS

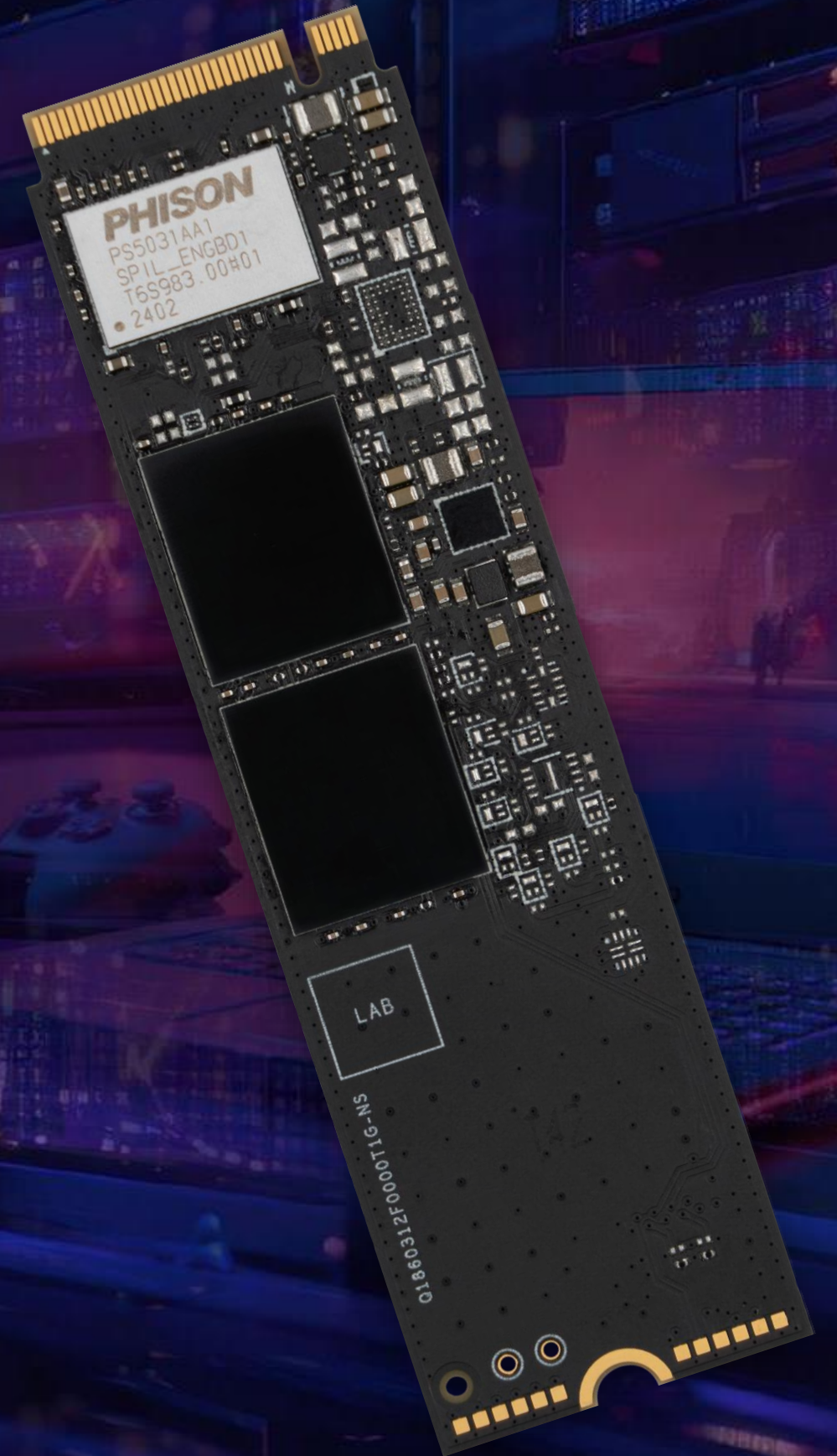
Power: 8.5W Avg.





PS5031-E31T

World's First Mainstream Gen5 SSD



Highlights

- PCIe Gen5x4
- TSMC 7nm Process
- DRAM-less
- 4-channel with 16CEs
- Capacity up to 8TB
- 3D TLC / QLC supported
- ARM Cortex R5 CPU
- Phison 7th Gen LDPC + RAID ECC
- AES 256 / TCG Opal / Pyrite
- Form Factor: M.2 2280 / M.2 2230

Sequential Performance*

Read: Up to 10.3GB/s

Write: Up to 9.5GB/s

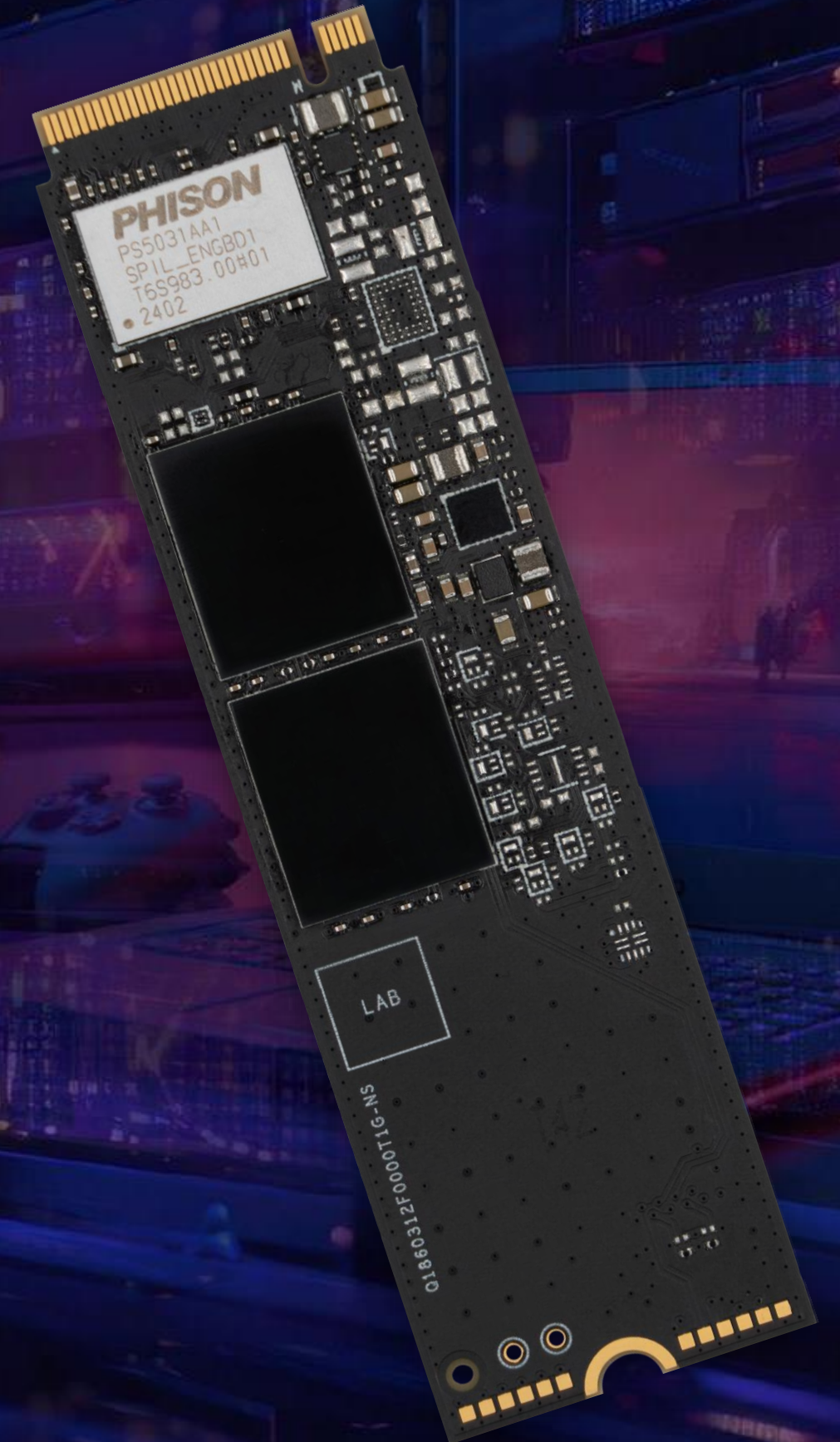
Random Performance*

Read: Up to 1,300K IOPS

Write: Up to 1,600K IOPS

*Based on 3600MT/s NAND, performance may vary with different configurations and power limitation.

Power: 5.35W Avg.



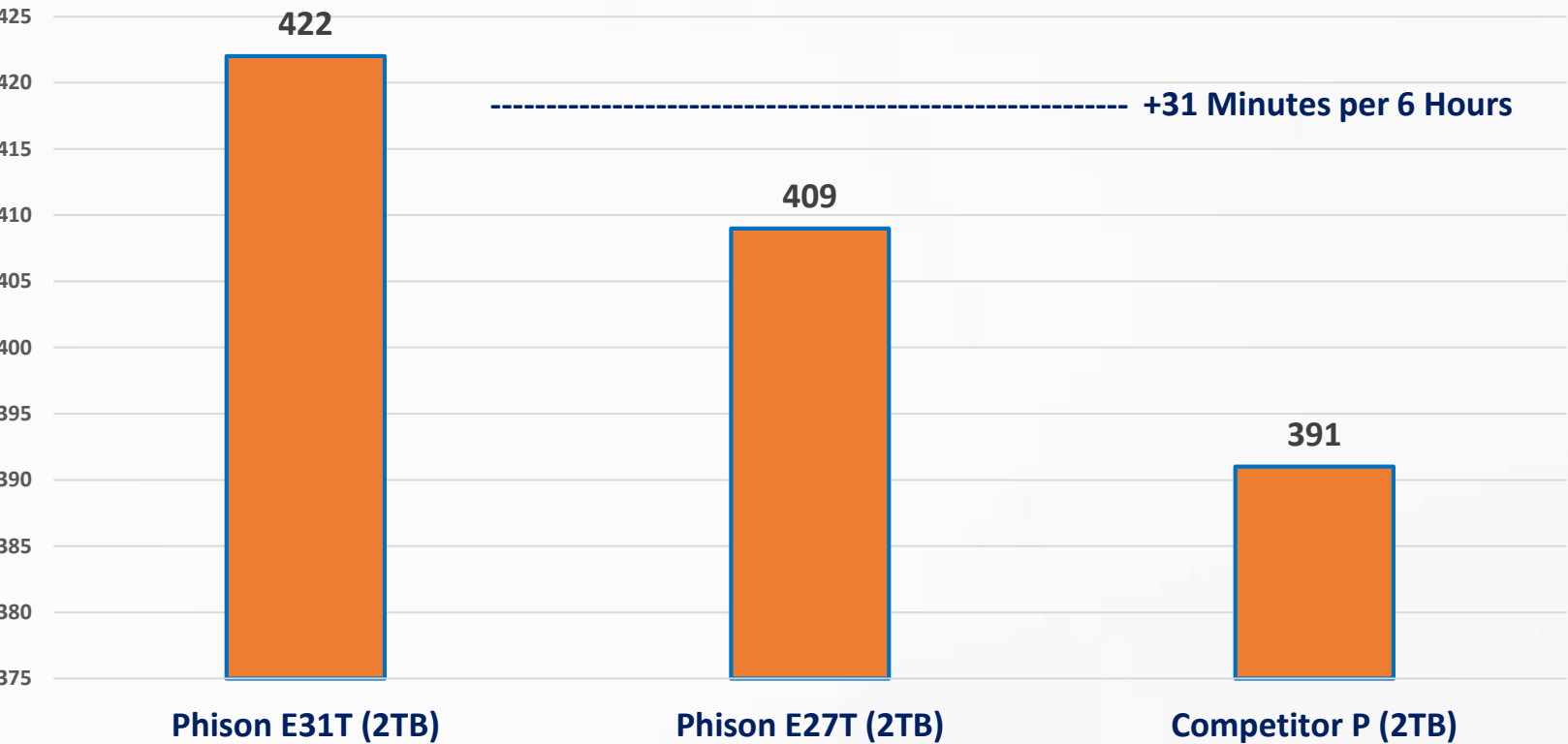
Efficiency in Focus

- **Battery Life:** Measured from 100% to 0% in minutes
- **DC Performance:** Performance compared to reference system (baseline of 1000)
- **MobileMark30 Index:** Battery Life *in minutes* x DC Performance *score* ÷ 1000

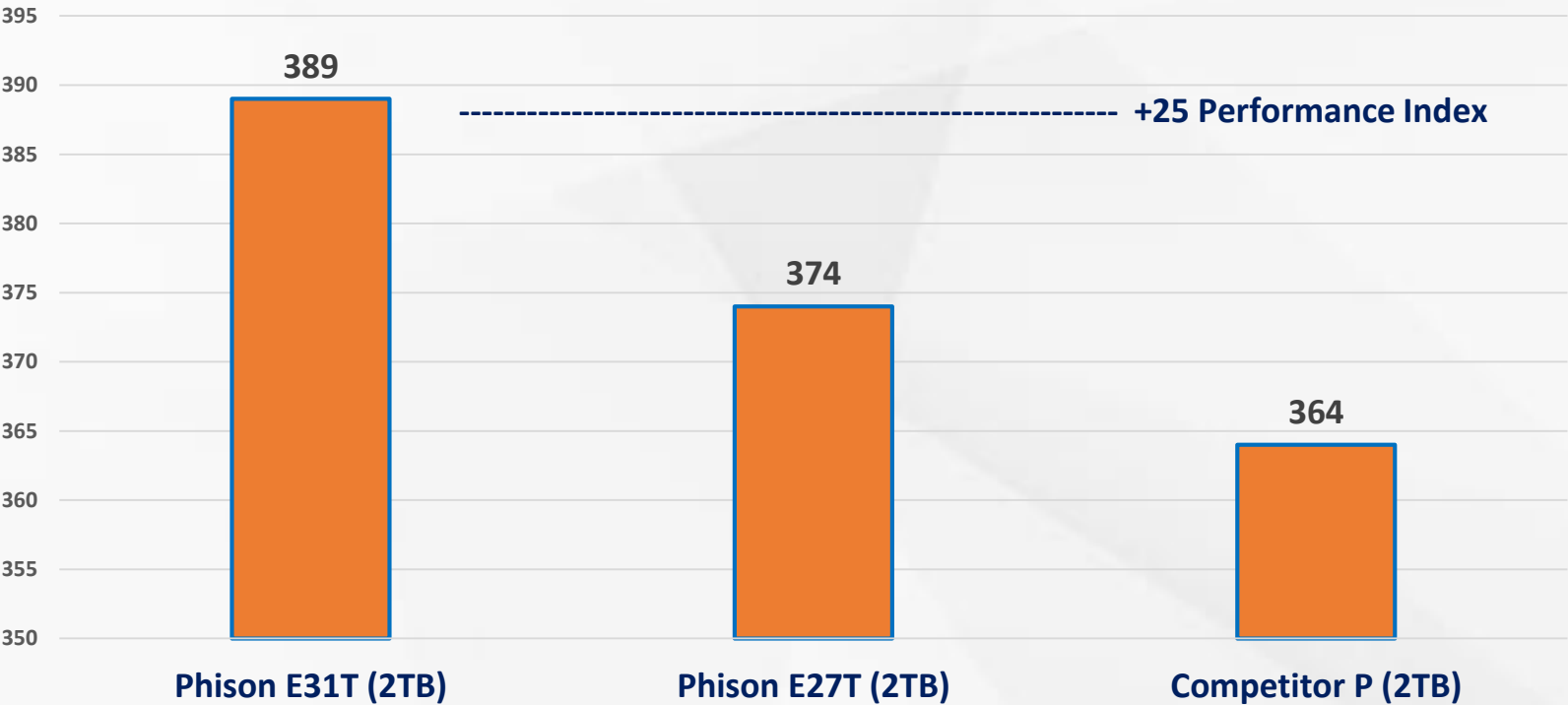
Note: The MM30 Index shows that a system saves power while still maintaining strong performance

Conclusion: Phison SSD is better for notebook use even in Gen4 environments

MobileMark 30
Battery Life (Minutes)



MobileMark 30
MM30 Index (Performance/Efficiency Score)



Test System: Dell Inspiron 5502 Business-Class Notebook



PS2251-21(U21)

World's First Native USB4 Controller



Highlights

- Designed for the USB4 interface
- (40Gb/s Bandwidth)
- 1st available direct USB-to-NAND solution on USB4 Gen3x2
- DRAM-less design increases cost efficiency
- 4-channel with 16 CEs
- Capacity up to 32 TB*
- 3D TLC / QLC supported
- TSMC 12nm process
- Phison 4K LDPC & RAID ECC
- AES 256 support
- Form Factor: External SSD (U32C)

Sequential Performance

Read: Up to 4GB/s

Write: Up to 4GB/s

**HW Max Capability*



Summary

PS5028-E28 – World's fastest consumer SSD with up to 14.5GB/s sequential read and write performance. Synchronous random performance at 3M IOPS read and write. 8.5W Avg power consumption, no heatsink required*.

* Heatsink recommended for workstation and sustained workloads.

PS5031-E31T – World's fastest mainstream PCIe Gen5 SSD optimized for desktop and notebook use. The E31T is the Gen5 efficiency leader and delivers exceptional response time, throughput, and increases notebook battery life for all day computing.

PS2251-21 (U21) – The world's first USB4 SoC delivering up to 4GB/s read and write performance in a small package. U21 is versatile design that transcends typical form factors so customers can create exciting new designs and be creative with the layout. Expect to see U21 and its class-leading performance in large and small form-factor custom enclosures.



2

Enterprise SSD Update



Pascari D205V

Ultra High-Capacity Gen5 Data Center Storage



Pascari D205V Highlights

- PCIe Gen5 1x4 (Single port) / 2x2 (Dual port)
 - NVMe 2.0
 - ISE, TCG OPAL supported
 - Capacity up to 122.88TB
 - QLC supported
 - NVMe-MI Support
 - Power Loss Protection (PLP)
 - 128 Namespaces
-
- DWPD: up to 0.3
 - MTBF: 2.5 million hours
 - Form Factor: U.2 / E3.L

Sequential Performance

Read: Up to 14.6GB/s

Write: Up to 3.2GB/s

Random Performance

Read: Up to 3,000K IOPS (4K)

Write: Up to 35K IOPS (16K)



Summary

Ultra High Capacity PCIe Gen5 Data Center Storage Solutions to Reduce OPEX Costs

Next-Level Performance: The Pascari D205V SSD delivers 14,600 MB/s sequential read speeds and 3,000K IOPS random read performance, doubling read speeds compared to Gen4 technology.

Unmatched Capacity: With capacity exceeding current 61.44TB enterprise SSDs, it enables larger datasets per server for enhanced scalability.

Efficiency Redefined: Combines top-tier capacity-per-watt utilization with industry-leading read performance to address data center footprint, cost, and power constraints.



3

aiDAPTIV+



AI Training PC POC

Reducing the cost of LLM Training

Highlights

- **AI Training PC (New)**
- **Training up to 8B Models**
- **Less than \$4,000 USD (Target)**
- **Consumer-Level Hardware**
- **Single GPU or Dual GPU**
- **Data Conversion (to JSON)**
- **Fine-Tune Training (LLM)**
- **Inference (Chat)**
- **Pascari AI100 320GB SSD Offload**
- **Several Large-Language Models Supported**



Summary

AI Training PC: Affordably Teach Yourself LLM Fine Tuning

Cost-Effective, Personal Platform to Learn LLM Training LLM training on-premises is increasing dramatically across businesses, universities and government agencies. However, there is a shortage of skilled talent to train LLMs locally with your own data. With aiDAPTIV+, an AI Training PC address this gap by providing a proven platform for organizations and individuals to learn how to fine-tune LLMs on-site at a price they can afford.

Benefits

Fits Your Budget - Offloads expensive HBM & GDDR memory to cost-effective Flash memory. Significantly reduces the need for large numbers of high-cost and power-hungry GPU cards.

Simple to Use and Deploy - Offers all-in-one AI toolset enabling ingest to fine-tuning to inference using an intuitive graphical user interface. Deploys in your home, office, classroom or data center using commonplace power.

Keeps Your Data Private - Enables LLM training behind your firewall. Gives you full control over your private data and peace of mind over data sovereignty compliance.

Thank You!



PHISON