What is HEPiX ?

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including ideas and contributions from the many over the years

HEPiX - High Energy Physics Information Exchange

- originally derived from older initiative HEPVM, HEPiX was born with a focus on Unix

- In the late 1990 the parallel HEPNT (Windows) meetings arrived and were merged into HEPiX as it is now

- HEPiX is organized twice a year, with a rotation of venues
  - covering Asia, Europe and North America

- many meeting in the past were live-streamed

- during COViD, we switched to online-only meetings

- now returning to in-person meetings, with limited remote participation

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- the programme features 7 pillar tracks:

  Site Reports   Basic IT Services & End User Services

  Networking & Security   Computing & Batch Services

  Storage & Filesystems   IT Facilities & Business Continuity

  Grid, Cloud & Virtualisation and Operating Systems

- and regularly there are new additions ('Show us your toolkit') and themes (BoFs) being discussed
  as well as contributions from other research fields and industry

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- Information
  Information is abundant – on the Web, on YouTube, on TikTok

- What we as the professional community providing IT resources for our users need, is
  - qualified, trustworthy information and
  - an exchange with our peers

- HEPiX is about the creation of professional networks between organisations by groups of experts from all participating institutes

- with the aim of creating a space for honest, open and frank discussion

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- we also need this exchange in a timely manner
  - things are developing so fast in our IT field that the frequency of the workshop needs to be high as well
  - twice a year has proved to be a good number
    - although it poses challenges for many organisations to send participants to every meeting, for all themes
- furthermore we feel strongly this exchange should be in person
  - because a lot of the discussion will not fit in the regular presentation and Q&A schedule
  - it takes place during coffee breaks, at dinner and in the evening sessions – usually organized decentrally

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- we also foster the mingling of different audiences by
  - co-locating our meetings with other ones, like LHCOPN-LHCONE or
  - having back-to-back meetings, as in Taipei with ISGC
  - inviting and encouraging participants from other research fields to join our workshops as many of the IT challenges are very similar
    - e.g. interaction with Genome Research and Fusion Research in the past
    - we have a steady participation from Photon Science and Life Sciences now
  - increased interest from Astro Particle Physics and other fields

- by organising the workshops alternatingly between Asia, Europe and North America, we ensure that interested institutes that may not have funds to travel globally, have the opportunity to regularly attend a HEPiX in their region

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- other strong instruments in HEPiX are the 'Working Groups'
  - they are established from within HEPiX itself or
  - on the request of other entities that see HEPiX as a strong platform to rely on (for reliable information)

- Past Working groups have centred on themes like
  - Batch Monitoring
  - BIT Preservation
  - Configuration Management
  - Virtualization
  - Storage

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- active working groups are
  - CPU Benchmarking – providing a common metric for resource requirements and accounting across the LHC computing grid and beyond
  - IPv6 – long running to stimulate the uptake of IPv6 in our shared infrastructures, determining and reporting problems and finding solutions
  - networking performance – making sure we understand global networking for our science better, implement diagnostics and steering instrumentation
  - technology watch – looking at new technology and new solutions

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- the board and conveners are always on the lookout for new or acute themes that are of common interest – and potentials for new WGs
  - we have been discussing AAI (Authentication and Authorisation Infrastructure) for a long time in HEPiX
  - and the expansion of federated usage of IT resources will bring up new challenges that many of our institutes will need to address
  - common OS platforms for compute, stoarge and data management services
    - what happens should a company suddenly change its business practices ?
  - the useful use of ML or AI in our fields

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- the combination of all of the ingredients of HEPiX meetings and activities lead to the establishment of personal, professional ties between colleagues in all participating institutes

- they are based on the trust relation that (imho) can only be built through person-to-person interaction

- they are the unseen, sometimes unrecognised ways that enable colleagues from around the world to make our complex and interacting infrastructures work for science every day

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Thanks for your attention

Additions, Comments, Questions?