



2020

Åre 2019 – Remote Produktion der Superlative

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**Create
Control
Connect**

Content your way.

Today



Is this still necessary?



Why now?



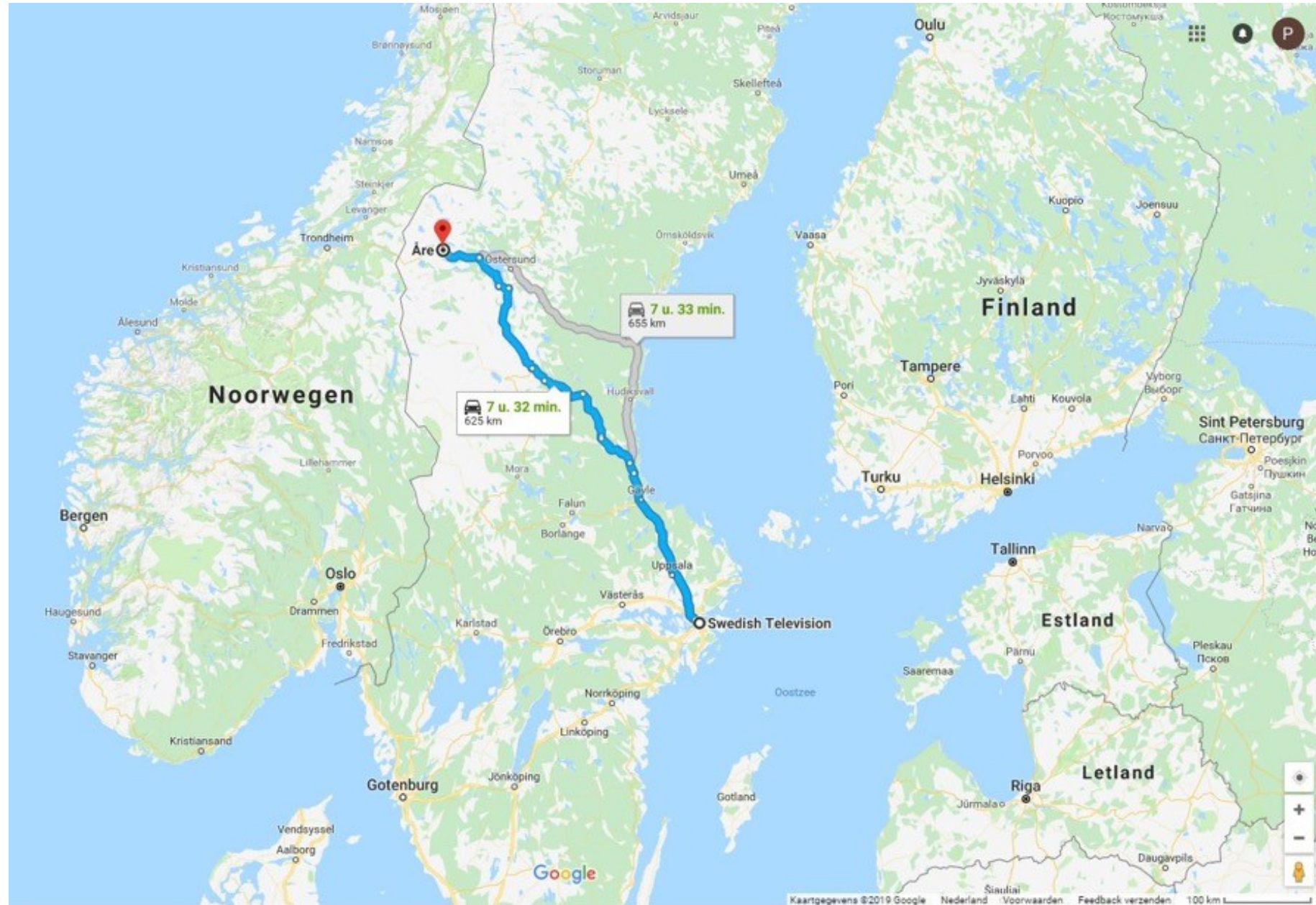
More platforms require more produced content. Live production must become more efficient and sustainable.



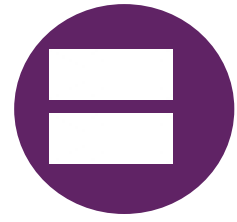
  **ÅRE** 4-17 FEBRUARY
2019
FIS ALPINE WORLD SKI CHAMPIONSHIPS SWEDEN
PRESENTED BY  **SKISTAR**

svt

Åre to Stockholm - > 600km distance



SVT's Requirements



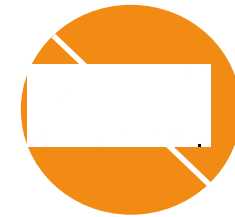
80+ cameras remote,
control at home



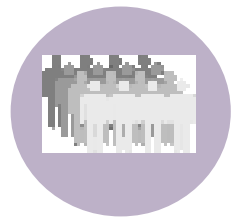
All feeds synchronized
and low latency



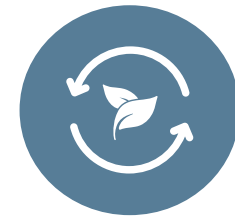
No difference in the
viewers experience



No OB vans in Åre



Fewer staff &
equipment on site

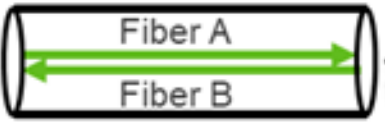


Sustainable workflows

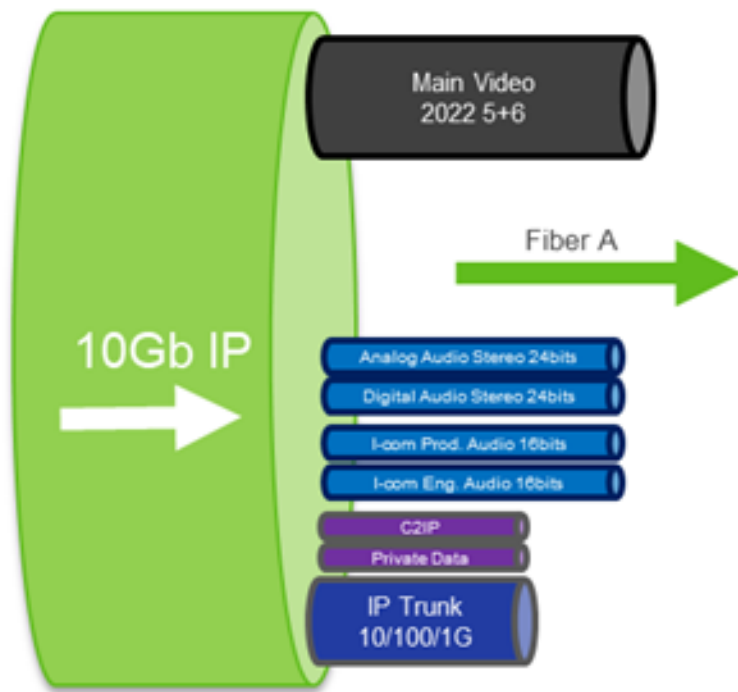
DirectIP



XF Transmission
Communication Protocol
between Camera and XCU



SMPTE Hybrid Fiber cable
 incl. 2x single mode fiber

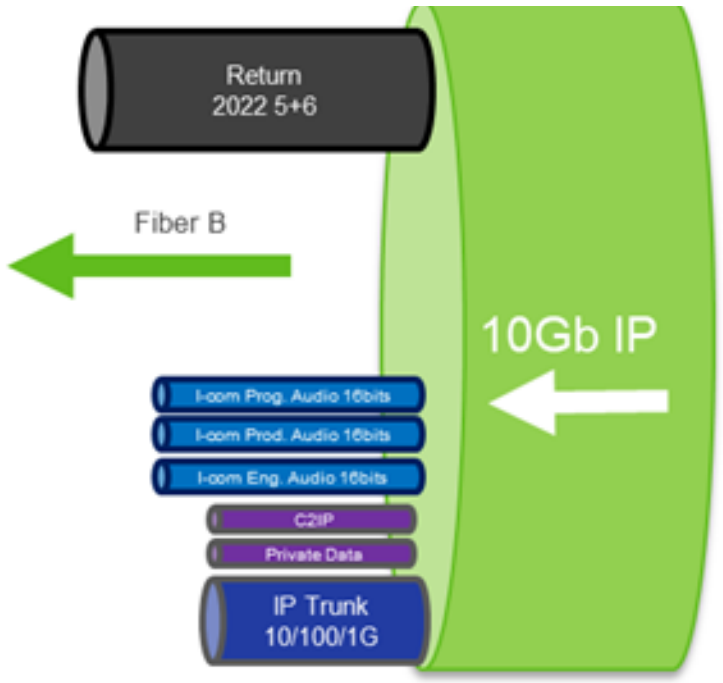


Main ; 1 Channel SMPTE 2022-5+6
 1080i50/59 = 1,8Gb
 1080p50/59 = 3,4Gb

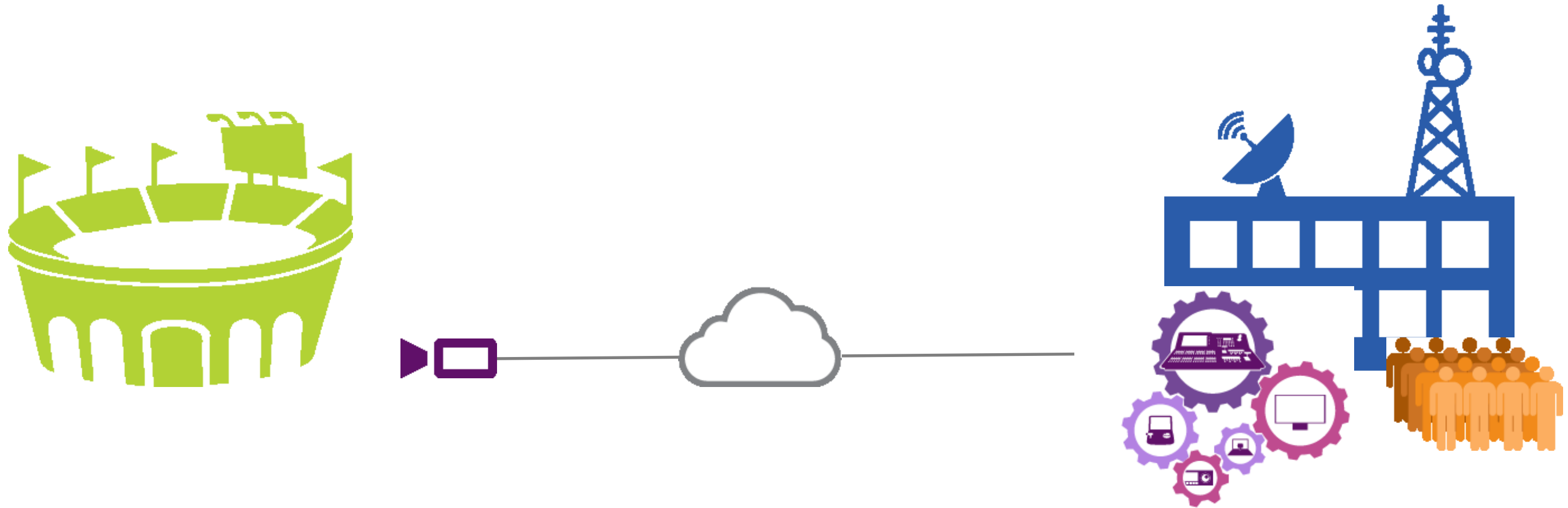
Return ; 1 Channel SMPTE 2022-5+6
 1080i50/59 = 1,8Gb
 1080i50/59 = 1,8Gb

C2IP + Private Data + I-com +
 Analog Audio + Digital Audio =
 ~ 8Mb

IP Trunk =
 0Mb (when not connected)



DirectIP



All processing at home. Only camera heads at location. Least amount of equipment at venue.



Bandwidth requirement is high. Uncompressed video streamed to production hub.

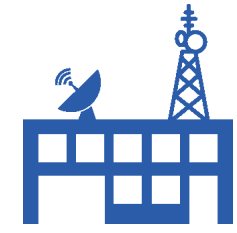


Delay is minimal and not an issue for the production team.

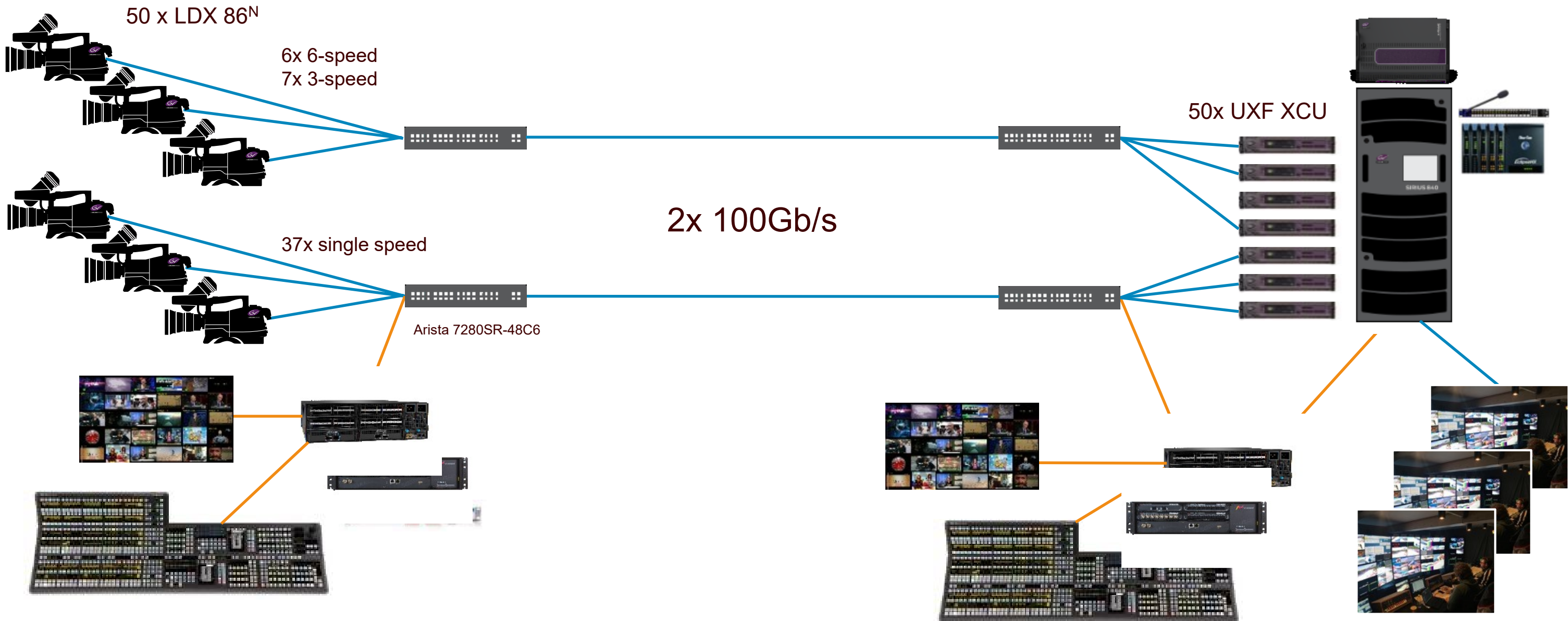
Remote Production setup Åre



Venue - Åre
Field production



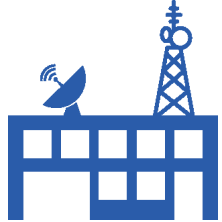
SVT - Stockholm
Centralized processing



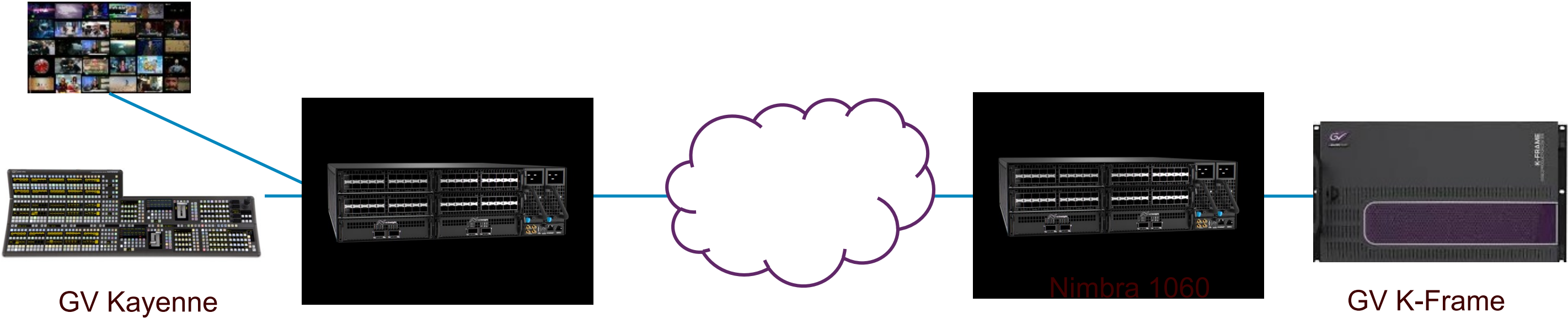
Director wanted to be on site



Venue - Åre
Field production



SVT - Stockholm
Centralized processing







SVT Production in Stockholm



Technical highlights

- Centralized processing
 - All processing equipment in centralized control room at SVT in Stockholm
- End to End IP remote production infrastructure
 - 2x 100Gb/s to carry all signals, cameras, video, audio, control
- Open standards architecture
 - SMPTE 2022-6, 2110-10,20,30, COTS IP switches



Åre FIS Alpine World Ski Championship

- Sustainable remote production



900 hours content
1100 Mio viewers



10% cost
savings



Sustainable
production
workflow

More platforms require more produced content. Live production must become more efficient and sustainable

Two remote productions close to each other



Åre -

Alpine World Championship

4th to 17th February 2019



Östersund –

Biathlon World Championship

6th to 17th March 2019

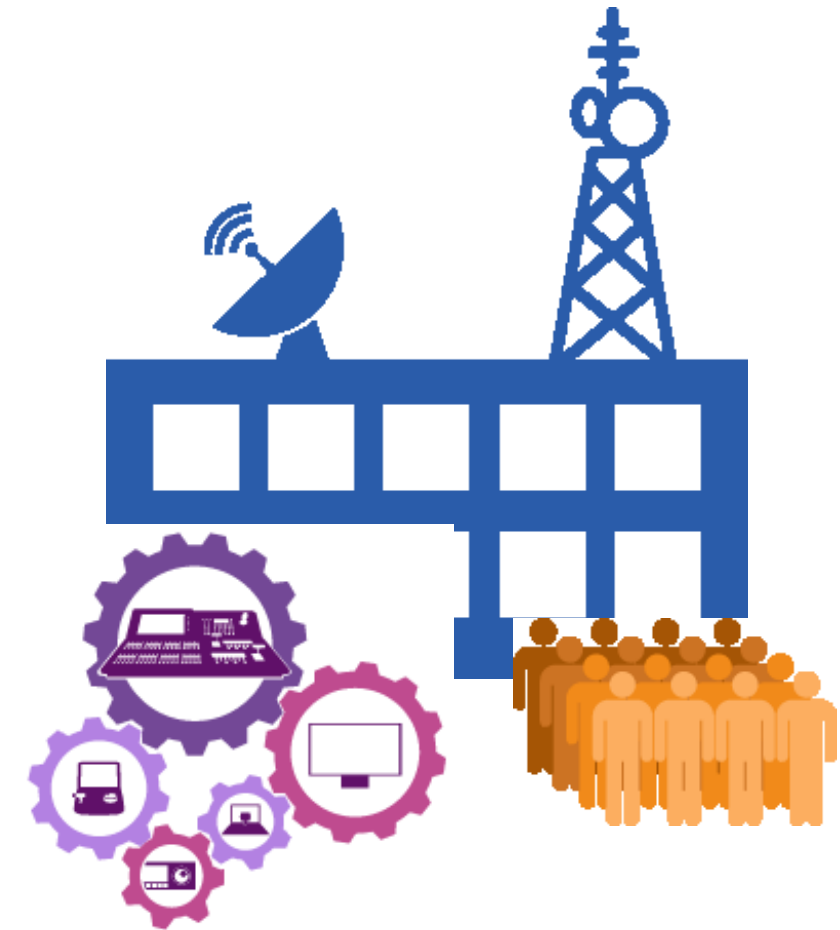


“If we would have done Åre and Östersund – the world championships for Alpine skiing and Biathlon – 15 years ago, we would have needed at least four or five weeks between the championships.”

“With the technical facilities that we have now, I do the same operation in 24 hours. We can do much, much more with less. This is a fantastic system to work with and to face the future with.”



DirectIP+



All processing at home. Only camera heads at location. Least amount of equipment at venue.



Bandwidth requirement is reduced up to 90% with compressed video transported to the production hub.



Slightly higher, but no operationally significant delay for operation due to compression workflow.

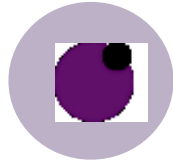
DirectIP+



Minimum deployment on the venue site



Depending on the overall system 100 ms plus network latency



JPEG2000 compression with Net Insight's Nimbra
Saving up to 90% of the bandwidth



Summary

- Remote productions are a big topic today
- Different solutions are required depending...
 - ...on the specific production requirements
 - ...on the infrastructure available
- Multiple use cases have proven the different workflows and solutions

Join the Conversation



Danke !

