

TTF, IVS/GLOSA

Hinkley Point C GLOSA
next steps?

13 November 2023



ameyconsulting

>eastpoint

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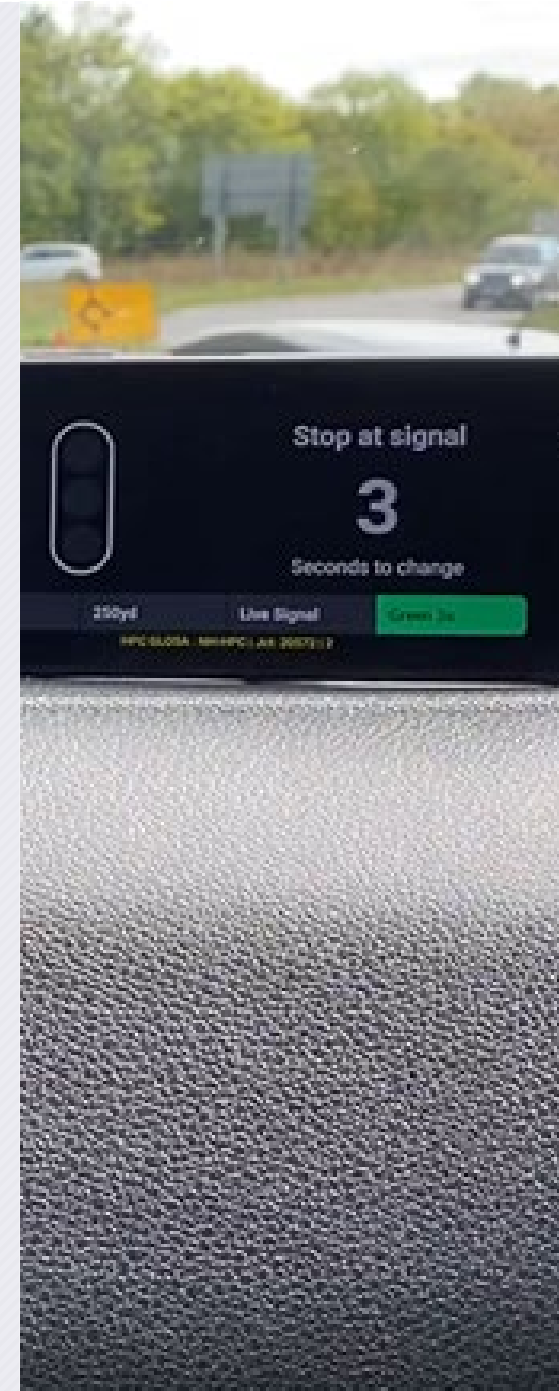
Current knowledge

- It has been proven that GLOSA can reduce emissions of NO_x and CO_2 for both light commercial and heavy goods vehicles at SCOOT controlled junctions – Off-slip GLOSA project at A627(M), Oldham and M66, Bury
- For GLOSA to be a viable service on the SRN it needs to work with MOVA traffic signals in a similar way
- Objectives of Hinkley Point C GLOSA trial were:
 - establish if GLOSA can work safely and effectively with MOVA on a high speed road
 - if so, what are the changes in driver behaviour?
 - and what are the benefits resulting from the changes in driver behaviour?
- This would establish if there is a viable business case for the further development and roll-out of the service (technology and commercialisation)



Results

- At the end of the feasibility/design stage we had a prediction engine that predicted, using real world historical data from a junction similar to M5 J23, at an average level of 86% accuracy, 81% of the time.
- During implementation, the prediction engine predicted, using real world historical data from M5 J23, at an average level of 67% accuracy, 85% of the time.
- During implementation, the prediction engine predicted, in runtime using data from M5 J23, at an average level of 44% accuracy, 72% of the time (but with a lot of inherent variability in performance).
- Many second by second predictions 'jump around'.
- On-road trial aborted as performance not accurate or reliable enough with no immediate prospect of improvement.



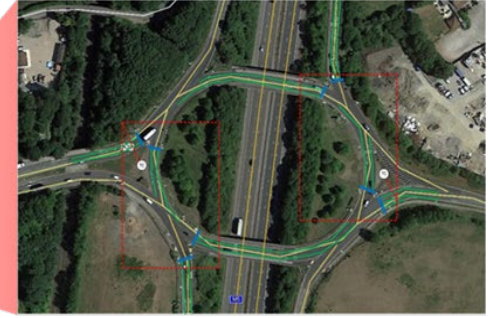
Next steps

In order to take this forward, I think we need to examine the business case to see how it stacks up, on the basis that GLOSA could work with MOVA the same way as it works with SCOOT, and identify if there is a service that would be attractive to users and a market that would be attractive to 3rd party service providers, in order for it to be worthwhile for NH to publish its traffic signals data in real-time.

This I think comprises 3 workstreams:

1) Is there still a business case for GLOSA on the SRN? **What are the benefits?**

Using the results on from the successful off-slip GLOSA project which demonstrated reductions in tail-pipe emissions at signal-controlled junctions under SCOOT control, understand what the benefits of GLOSA successfully working at MOVA controlled traffic signals would look like.



Next steps (cont.)

2) Is there still a business case for GLOSA on the SRN? **Who are the users?**

Examine the use cases for GLOSA and identify if there are early adopters such as the haulage industry and what appetite other road users have for the service both on the urban and inter-urban networks and whether universal or partial coverage supports the creation of an ecosystem. It will also examine the possible deployment pathway and the roles and responsibilities of those involved in the ecosystem.

3) Is there still a business case for GLOSA on the SRN? **What are the costs?**

Examine the how a GLOSA system could work with MOVA and if so, what are the costs of implementation. It will require engagement with industry/sector to build consensus and validate the approach.

Examine the feasibility of publishing MOVA data in real-time, and the ways in which GLOSA could work with MOVA, including the improvement/development of a predictive algorithm, updating/adapting MOVA, using inputs instead or together with outputs, different signal control strategies such as switching off MOVA in the inter-peak, the capabilities of existing signal control technology and new disruptive technological developments in traffic signal control.



Next steps (cont.)

- This work could help establish if there is a business case for GLOSA on the SRN.
- No funding for this work, so deliver in-house with help from Transport Technology Forum IVS/GLOSA working group.
- Possibly deliver elements with academia and other stakeholders.
- What are your thoughts?



Thank you

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13/11/23

home
safe
and well

