National ERTMS Implementation Plan and Strategy - Ireland

General Context

The Irish rail network has many unique characteristics which must be taken into account in considering and implementing EU proposals. The rail network in Ireland is relatively small and, as an island, is isolated from the rest of the Community. Furthermore the rail gauge at 1600mm is different from Great Britain and the rest of mainland Europe which gives rise to the need for special rolling stock. Ireland has a low population base and train services are uneconomic in nature. Examination of ERTMS and the preparation of an ERTMS Implementation Plan has progressed having regard to these general factors as well as the need to take economic considerations into account. The baseline conclusion is that of necessity the full implementation of ERTMS in an Irish context is difficult to predict at this point in time. The general approach proposed for adoption is that the deployment of ETCS/ERTMS will be considered and planned on an asset renewal basis into the future having regard, inter alia, to the carrying out of a cost benefit analysis on each route as the occasion arises. This asset renewal based strategy towards ERTMS will facilitate a controlled migration towards ERTMS deployment and is a strategy approach that is shared by both IE and NIR. It is considered that a more accelerated ERTMS deployment approach in advance of the existing systems reaching their end of life could not be justified and would not be an efficient use of resources.

Iarnród Éireann – ERTMS Strategy

The following is the general strategy that Iarnród Éireann intends adopting in relation to the deployment of ETCS / ERTMS over the conventional rail routes.

1. Many of the signalling systems throughout the country have been renewed and upgraded in the last 15-20 years. Modern solid state interlockings have been deployed for many of these schemes and this philosophy is being adopted for all current signalling renewals. The age profile of signalling assets, particularly over the main intercity routes, ranges from new to mid-life. The deployment of ETCS/ERTMS will be considered on an asset renewal basis into the future. When the assets over a complete route are due for renewal, ETCS/ERTMS would be considered for that particular route bearing in mind the fleet deployment for the specific route and elsewhere throughout the network. The adoption of ETCS on any particular route would be subject to a cost benefit analysis. Example, when all the signalling assets on the Dublin - Belfast line are due for renewal ETCS/ERTMS will, at that stage, be considered for the complete route. This policy is consistent with that being adopted by Northern Ireland Railways.

2. Iarnród Éireann will make an assessment of the level of ETCS that is most appropriate on a route by route basis after all the existing assets on that route are life expired and due for renewal. When a signalling critical mass is reached on a route, Iarnród Éireann will then decide what level of ETCS would be most appropriate at that stage to deploy.

3. Considering the scale of any ETCS deployment, it is not viable to implement ETCS/ERTMS over sections of a route on a piecemeal basis. A full route approach must be taken covering rolling stock and signalling over the route concerned. As rolling stock and signalling have different life cycles, asset renewal occurs at different intervals. Additionally this renewal will not occur on a route basis. Consequently the approach to be taken by Iarnród Éireann is that all future rolling stock and signalling will be compatible with ETCS and not preclude its

implementation at a future time when an appropriate critical mass may be reached. ETCS/ERTMS will then be considered as a separate project based on information that is current at the time the decision needs to be made.

4. Iarnród Éireann will ensure all its new signalling schemes will be controlled from Solid State Interlockings thereby rendering them compatible with future ETCS/ERTMS deployment.

5. Iarnród Éireann will also ensure that new wayside signalling equipment include provision for the future installation of ETCS/ERTMS.

6. IE will adopt the philosophy that any signalling undertaken will be a step towards ultimate adoption of ERTMS/ETCS in future. To this end any signalling design will make passive provision for the future deployment of ETCS/ERTMS.

7. Iarnród Éireann will make passive provision on all new rolling stock for ETCS/ERTMS. This will include:

   a) Sufficient space for ETCS/ERTMS on board equipment.
   b) Sufficient space for Driver Machine Interface or use of an ETCS/ERTMS compatible Driver Machine Interface.
   c) Sufficient space for European Vital Computer.
   d) Provision for train interfaces to the ETCS equipment
   e) Cabling for all the above.

8. It will be necessary for Iarnród Éireann to continue to utilise it's current Class B systems, CAWS/ATP, until such time as appropriate route conditions prevail, i.e., ETCS compatibility of all signalling and rolling stock on route, to allow the consideration of the adoption of ETCS.