



Office of the Director of
**Telecommunications
Regulation**

Decision Notice: D3/98

SwitchLink Operational Review

A review of the ‘SwitchLink’ Access Service, following a consultation process by the Office of the Director of Telecommunications Regulation

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1. Introduction

The Director of Telecommunications Regulation (the Regulator), in her Decision Notice D1/97, announced the introduction from 20 October, 1997 of a new access service for telecommunications Service Providers (SPs) operating in the Irish marketplace. This dedicated new service, which can carry both voice and data over the PSTN, is known as SwitchLink. As SwitchLink is an innovative service and has now been in operation since October 97, the Regulator decided to undertake a formal review of its operation. A number of individual communications about the service, received in the interim from user SPs, also contributed to the latter decision.

On March 4, 1998 the Regulator initiated a systematic review of all practical experiences of SwitchLink use to date. Opinions and experiences were invited¹ from fifty-four licensed telecommunications SPs, as well as from Telecom Eireann (TE). Her aim was to ascertain whether the service was seen to be operating effectively and/or whether changes or refinements are now deemed necessary in the light of real operating experience. Five sets of responses were received in answer to the Director's call. These responses were analysed carefully and their detailed comments were categorised, with further information being sought where necessary. As certain matters under consideration were found to be network dependent (i.e. PSTN) and/or needed clarification or support from TE, an exploratory meeting was also held with TE.

Following that process this Decision Notice was drawn up. Its recommendations and decisions take immediate effect.

This Notice is not a legal document. The Director is not bound by this Notice and may amend it from time to time. This Notice is without prejudice to the legal position or the rights and duties of the Director to regulate the market generally.

¹ Letter TRC 25/10/3, accompanied by document ODTR 98/07: 'A Review of the "SwitchLink" Access Mechanism for SPs in the Irish Telecommunications Market'

2. Review of Inputs

The call for submissions on SwitchLink, in document ODTR 98/07, invited inputs under any or all of the following headings:

- billing mechanism
- ordering procedure
- delivery times
- level of availability
- quality of service
- customer experience
- impact on cost of providing services
- TE's Service Level Agreement - including targets
- Compensation Levels
- Technical aspects of implementation
- Any other relevant information

Inputs were received from four of the eight existing users of the SwitchLink service, (namely ESAT Telecom, ITL, TNSL, Cable & Wireless) and also from TE.

The received inputs were analysed carefully and a total of 58 individual comments (with many overlaps) were identified. A detailed recategorisation process was undertaken of these responses and it was found most efficient to group them under the following broad headings:

1. Outside the scope of this review
2. Service Provisioning issues
3. Interfacing² problems between SP and TE
4. Quality of Service Issues
5. Problems related to uni-directional nature of SwitchLink
6. Contract Issues in Relation to SwitchLink
7. Issues more appropriate to the Wholesale Price Review

Each of these seven groupings is addressed separately in its own sub-section below.

2.1 Issues outside the scope of this review

All comments were found to be valuable but not all were amenable to further review-based action, for various reasons. Examples of such inputs, which amounted to 12 in total, included:

- once-off situations
- temporary situations
- non-general cases
- information-only comments

Such comments were considered to be outside the scope of this process and will not be taken further within the ambit of the review. However, these comments are all noted by the Regulator and may be (and in some cases have been) the basis of further investigations by the Office.

² 'Interface' here refers to working relationships, rather than to technical issues

2.2 Service Provisioning

There were 5 comments in this category. They all related to delivery times and delivery targets for lines (i.e. order performance), including difficulties arising from lack of cable-pairs in some customer locations. These complaints arise partly because the predominant response (almost 99%) to the SwitchLink offering, was a demand for new lines rather than the anticipated orders for conversion of existing PSTN lines to SwitchLink.

The Regulator understands the difficulties this demand for new lines brings for the SPs and for TE and is aware that from time to time shortages of cable pairs will result in SwitchLink provisioning delays. This issue was discussed with TE as part of this Review process.

TE has undertaken to deploy alternative technical solutions, in particular “pair gain” systems, where there are existing lines capable of supporting these systems. See also comments in section 2.4 on quality of service.

TE has undertaken (in appropriate cases) to convert existing PSTN lines to SwitchLink pending availability of additional cable pairs. When these become available, the PSTN lines will be reprovided. There will be no additional charges to the SP when SwitchLink is provided in this way. This solution will work in those cases where the end-user has an adequate number of PSTN lines available.

Alternative solutions based on radio were also raised but the timeframes for these were such that radio would not provide the immediate solutions required in the context of this review.

An increased penalty rate of £20 per working day is being introduced, to apply in the event of service provisioning delays. This should have a positive effect with regard to improvements in provisioning. Refer to section 2.6.2.

2.2.1 Installation Performance

The Regulator, reflecting the concerns in the comments received, pointed out to TE that installation delays need to be reduced and that better information is needed by both end-user and the relevant SP on ongoing order status. TE is taking steps to improve the situation by:

- Training staff in respect of needs and penalties involved in the service;
- Improved analysis of performance and better management reporting;
- Deployment of “hit teams” to deal with hot-spot situations.

TE has also set up a software dedicated SwitchLink Management System. This system, within 24 hours:

- provides an order acknowledgement to the SP;
- warns of non-availability of cable pairs;
- provides a forecast date in cases where provision on demand is not possible;
- provides notification of work completion
- provides advice of end-user difficulties, where applicable.

2.3 Interfacing problems between Service Provider and Telecom Eireann

A total of 6 comments, from both sides, fell in the category where better working relationships between individual SPs and TE is considered to be the solution. Communication problems and/or misunderstandings seem to be the main culprits, though in view of the early competitive stage of this industry, such a situation is not unusual. Both sides seem to have difficulty in bridging the gap, though there is some evidence that the position is improving. It is important that the parties work together constructively to reach solutions.

The Regulator has reviewed the situation and there is now no serious general weakness in the system. However, in order to achieve progress on particular issues, a meeting was held with TE and helpful co-operation was received; Refer to section 2.6.

The proposed regular meetings between SPs and TE (see 2.6.7) should also help to ensure smoother working relationships in future.

2.4 Quality of Service Issues

Quality of Service was considered in its wider context in this review, rather than simply in terms of technical parameters. A total of four relevant comments was identified.

Two of these comments concerned perceived lack of urgency by TE in dealing with line faults reported by SPs. The Regulator has asked TE to review its arrangement for fault handling and in particular, cases of persistent or repeat faults.

Difficulties were reported in another case as a result of the deployment of pair gain systems by TE. TE has assured the Regulator that its pair gain systems:

- meet the full voice specification over the full 300-3400 Hz bandwidth;
- are properly set up and matched to line when deployed;
- are not deployed on cables which are outside of specification.

Another comment identified problems resulting from long pre-connection delays. TE was requested to investigate this case. However, the Regulator found no evidence that serious pre-connection delay is common.

2.5 Problems related to uni-directional nature of SwitchLink

Uni-directional access is at the heart of SwitchLink and therefore comments in this area were expected. In the event 2 comments were found to bear very directly on the system, one from TE and one from an SP. In addition, a number of comments which were identified as being more appropriate to other categories in this review, also related to the uni-directional nature of SwitchLink.

The TE comment referred to the almost total implementation of SwitchLink through the provision of new lines (i.e. rather than conversion of existing PSTN lines), which has caused many provisioning problems. Although the scale of this was unexpected, the Regulator notes that the basic reason is that most end-users still feel a need to retain their original PSTN lines, with the capability of these to carry all traffic.

The SP comment corresponds to that of TE, in that it points out that SwitchLink, being uni-directional, forces customers to buy additional lines.

The Regulator notes this comment and the disadvantages referred to. However, SwitchLink was introduced as a solution which met obligations imposed by the European Commission's Derogation Decision of 27/11/96, with the maximum flexibility legally possible. The costs were considered at the time of SwitchLink's introduction and, while contested by several SPs, they still represent a considerable improvement over the cost of the alternative leased lines.

2.6 Contract Issues in Relation to SwitchLink

A total of **12** comments were placed in this category, which generally required clarification from TE. Some of the main issues which were covered under the heading were:

- Possible support of SwitchLink by ISDN
- Penalty levels
- TE's 12 month term agreement
- Procedures and requirements for cancellation, termination, relocation and complaints
- Work outside office hours
- Better information on order status for new orders
- Unit billing for call origination
- Calling Line Identification (CLI)

The Regulator's aim was to explore any possibilities which might exist for simplifying or otherwise improving the service offered by SwitchLink in respect of any of these issue.

2.6.1 SwitchLink by ISDN

The feasibility of providing SwitchLink using a basic ISDN line for transport was discussed with TE. Some technical issues would have to be resolved including method of provision on digital (Alcatel) ISDN switches which do not support hotline, and also customer premises equipment interoperability issues. It was concluded that SwitchLink by ISDN, if provided, would be a new product offering and its provision was outside the scope of this review.

2.6.2 Penalty levels

It was pointed out to TE that the current penalty level of £24 for each 8 working days delay is too low and not acceptable. Furthermore, the current level has been reduced from £40.

The Regulator has examined the penalty level, taking into account loss of revenue, reduced efficiencies, and loss of credibility to SPs and has decided that:

- a daily penalty rate should apply;
- the penalty should be redeemable by SPs in the form of a direct refund up to the level of the installation charge, and by credit against rental and call charges for the individual line thereafter;
- there should be no cap on the penalty level;
- the daily penalty rate should be set at £20 per line.

***Note:** The Regulator will keep the operation of this procedure and its effect on timely SwitchLink provision under review and may take additional action at a later stage, if necessary.*

TE has accepted the introduction of an increased penalty rate of £20 per working day in the event of service provisioning delays.

2.6.3 Term agreement of 12 months

In response to the Regulators concern that SPs would be liable for charges for SwitchLink in the event of cessation of service after the expiry of the derogation, TE agreed to the principle of waiving such charges or providing refunds where applicable. See also 2.6.4.

2.6.4 Cancellation, termination and relocation

The Regulator has agreed to the introduction of Cessation charges by TE, in accordance with Annex 1, hereto. With the introduction of these charges TE will not enforce its 12 month term agreements (see 2.6.3). The charges will be dropped once an alternative regime is in place (i.e. after the market is liberalised), should SwitchLink continue in operation.

2.6.5 Complaints procedure

The Regulator, reflecting the concerns in the comments received, pointed out to TE that some SP complaints (mainly concerning installation) seem to become protracted before resolution.

TE has given an undertaking that it will roll out a three level escalation procedure. This procedure, which has already been trialed with one SP, allows for handling of repeated complaints to be escalated. This procedure will now be documented in the Service Level Agreement.

The SwitchLink complaints procedure can be summarised as follows:

- (i) SP complaints are initially made to the dedicated SwitchLink help desk at Tel: 701 6300.
- (ii) If further complaints are necessary, the 3-stage escalation mechanism can be invoked.

It should be noted however that SwitchLink fault reports should continue to be reported to the local TE repair centre in the normal way.

2.6.6 Work outside office hours

It was agreed with TE that in future, requests for installation outside of office hours should be accepted. It was also agreed in principle that a charge would be made by TE and that the rates would be consistent with the existing charges for maintenance carried out outside normal office hours.

2.6.7 Information on order status

TE will offer regular meetings to all SwitchLink SPs to improve working relationships. This will help to ensure that co-ordination of on-site work occurs. This offer will be included in the Service Level Agreement.

The Regulator pointed out that it is not satisfactory for TE to arrive without notice at the end-users premises to carry out installation work (*currently, this practice is normal for the first*

visit; appointments are made if further visits are necessary). TE agreed to reassess this practice.

2.6.8 Per-second billing

As announced in the Wholesale Price Review on 8 April, per-second billing is being introduced for all SwitchLink originated traffic. The main elements of the new arrangement are as follows:

Call charges will include a call set-up charge and a per-second traffic charge, in which start of charging occurs at the first answer signal from the SPs node.

In the case of calls originated by a SwitchLink line and delivered by an NNI, a single billing will apply for call charges based on the wholesale rates. This billing will also include calls originated by other means and delivered over the same NNI connection.

In the case of calls originated by SwitchLink lines and delivered through the SP node via DDI or PRA lines, a single billing will also apply based on the wholesale rates.

2.6.9 Calling line identification - Data Protection Issues

The Regulator is aware of market demands for CLI as a supplementary service, and has determined that this service must now be made available in the public switched telephone network, as well as to other service providers across NNI interconnects, subject to appropriate data control conditions. This supplementary service should also be made available on a non-discriminatory basis over SwitchLink lines.

The Regulator requires TE to complete the commercial product definition for CLI, including the production of promotional material to inform subscribers and the public, and to launch the service nationwide.

Calling Line Identification (CLI) raises important data protection issues. At the outset, it is necessary to distinguish between the presentation of the calling party's number to the party called, and the presentation and use of that information by telecommunications SPs.

TE has confirmed that it has the technical capability to provide CLI at all locations, with the exception of a small number of analogue exchanges in Dublin. Discussions have taken place between TE and the Data Protection Commissioner, in connection with the presentation of a calling party's number to the called party, and the Commissioner has agreed the basis on which such a service might be introduced by TE in compliance with the requirements of the Data Protection Act. The Commissioner awaits sight of TE's promotional material for customers in respect of the introduction of this service. Assessment by the Commissioner of such material is a prerequisite to the determination of whether or not this service will on its introduction comply with the requirements of the Data Protection Act.

The presentation and use of a calling party's number to other telecommunications providers, without disclosure of such information to the called party, requires a different assessment for compliance with the Data Protection Act. The Data Protection Commissioner has indicated to TE and to another SP that the essential ingredient in such a situation is that the primary SP, as the data controller who has obtained information from the subscriber, should secure an

undertaking from the secondary SP that the choices regarding CLI which have been indicated by the subscriber will be honoured.

2.7 Issues more appropriate to the Wholesale Price Review

Some comments fell more appropriately within the scope of the concurrently running Wholesale Price Review and have therefore been handled within that process. A total of 17 comments fell into that category.

They dealt with the following aspects of SwitchLink costs:

- Access and termination rates
- Line rentals
- Connection charges
- Charges for cancellations/cessation, transfer, reconfiguration and faults (incl. cost of repairs outside office hours)
- Unanswered call payments
- Monthly subscription fee of £350 (for call termination)
- Call termination; discount and minimum charge
- Leased line discount of 5%

2.7.1 Costs for SwitchLink

Following the conclusion of the Wholesale Price Review and also the present SwitchLink Operation Review (reported on herein), revisions have been made to the SwitchLink charges. The overall result is an improvement from the SP's point of view, as well as the removal of some anomalies and distortions. For reference, a simplified table of old and new charges is provided herein at Annex 1.

3. General

A general cause for concern based on the responses received is the inadequacy of present levels of co-ordination between the individual SPs and TE. Both sides are aware of the difficulties and the Regulator believes there has been some improvement as experience of interworking has developed. Nevertheless, this situation has not only had wasteful consequences for the companies concerned but it has indeed impacted on the level of service provided to end-user customers, in some cases.

The Regulator urges both the SPs and TE to keep their arrangements for coordination under continuous review and to introduce improvements where necessary.

4. Conclusions

In general the SwitchLink access service has been successfully introduced, notwithstanding some initial problems, in particular in the area of provisioning. It has offered SPs a mechanism which allows them to compete legally with TE even in the voice market, pending the end of Ireland's period of derogation from full liberalisation. Verification of correct SwitchLink operation by the SPs has been ensured by an Audit of Compliance process³ carried out on behalf of the Regulator, with the first such audit now successfully completed.

Co-operation between SPs and TE has been problematical at times, especially during the teething stages of SwitchLink introduction and this has been to the detriment of all concerned. The Regulator believes that a less confrontational situation is now emerging and wishes to strongly encourage this as being very much in the public interest.

The Director looks forward to the next period of SwitchLink operation benefitting from the experience gained to date as well as from improvements resulting from this review and the wholesale price review

This review has relied on responses from SPs and TE only. Future reviews of this kind will also give consideration to encouraging responses from end-user customers.

³ The Audit of Compliance is outside the scope of this present report.

Annex 1: Summary of New and Old SwitchLink Charges

Description	New Charges	Old Charges
Line Rental:	£12 ⁴	£20
Connection Charges:		
• New Lines	Waived	Waived
• Change PSTN → SwitchLink	Waived	Waived
Charges for line moves:		
• End-user moves within exchange area	£0	£0
• To new end-user	Not offered	Not offered
• Different node/Same Service Provider	£16/per line (max £64/site)	Not specified
• User change of Service Provider	£16/per line (max £64/site)	Not specified
Cancellation of Lines:		
• TE inability to meet 8-days	£0	Not specified
• Within 3 days of order	£40/line (max £160/order)	Not specified
• After 3 days; before delivery	£81.81	Not specified
Cessation Charges⁵:		
• Within 3 months of delivery	£60/per line	£0
• Between 3 & 6 months of delivery	£40/per line	£0
• Between 6 & 9 months of delivery	£20/per line	£0
• After 9 months ⁶	£0	£0
Penalties (delivery outside 8 working days):	£20 / Working day	£24 per 8 working days

Note: All above figures exclude VAT.

⁴ Agreed under the Wholesale Price Review.

⁵ These cessation charges will be refunded if the lines are converted to PSTN and remain in PSTN use for at least 3 months.

⁶ These charges will not be enforced post-liberalisation.