



DATA LINK USER SATISFACTION SURVEY

Summary of 2019 Survey Results

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DATA LINK USER SATISFACTION SURVEY

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Abstract			
This document provides a summary of the answers to the DPMF Data link user satisfaction survey conducted in February and March 2019.			
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DATA LINK USER SATISFACTION SURVEY

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Edition History

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1 Introduction

The Data link Performance Monitoring Function (DPMF) is tasked by the European Commission with monitoring the performance of data link in Europe. It regularly measures and publishes reports showing the technical performance but in early 2019 the DPMF conducted an online survey of data link user satisfaction with the objective of establishing a measure of general satisfaction with data link by the end users i.e. flight crew and controllers.

This document provides a summary of the results from that survey.

1.1 A description of the survey

The survey consisted of 12 questions intended to establish some basic information about the person responding (their job, organisation, familiarity with data link etc.) and their satisfaction with the service and also included an 'open' question (question 12) that allowed the respondent to add any comments, questions or concerns they wanted to share.

The survey was conducted entirely online and took approximately 5 minutes to complete. The invitations to participate to the survey were generated by sending email requests to various distribution lists used by the DPMF, as well as publicity by IATA and the EUROCONTROL external communications team (using social media etc.).

A single set of questions was used for both controllers and flight crew and 954 responses were received between 11th February 2019 and 26th March 2019.

1.1.1 The survey questions

The text of the survey questions are listed below:

- Q1: What is your current role?
- Q2: Which organisation do you work for?
- Q3: What organisation do you work for?
- Q4: How helpful is CPDLC in your work?
- Q5: Do you use CPDLC over FANS 1/A+ or the FANS 2/B+ (i.e. ATN over VDL Mode 2)?
- Q6: How long have you been using CPDLC operationally?
- Q7: Overall, how satisfied or dissatisfied are you with CPDLC in Europe?
- Q8: Over the past month can you identify up to 3 centres where you have experienced difficulties and up to 3 where you have had a good experience of using CPDLC ? Please use the ICAO identifiers for the centre (e.g. EDYY for Maastricht); as displayed on the map here.
- Q9: How do you consider the rate at which CPDLC terminates for no apparent reason? These are generated as the result of what is called a Provider Abort (PA) or a User Abort (UA) in the system specifications.



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- Q10: How often do you experience problems when transitioning from one centre to the next?
- Q11: How often do you receive the operational response from the controller or flight crew within an acceptable delay?
- Q12: Do you have any other comments, questions, or concerns?

Question 11 was poorly worded and seems to have caused some confusion so its results are not considered valid.

2 The Respondents

2.1 The role of the respondents

Nine hundred and fifty four responses were received; 53% from flight crew and 44% from controllers. The number of respondents from each category is shown below:

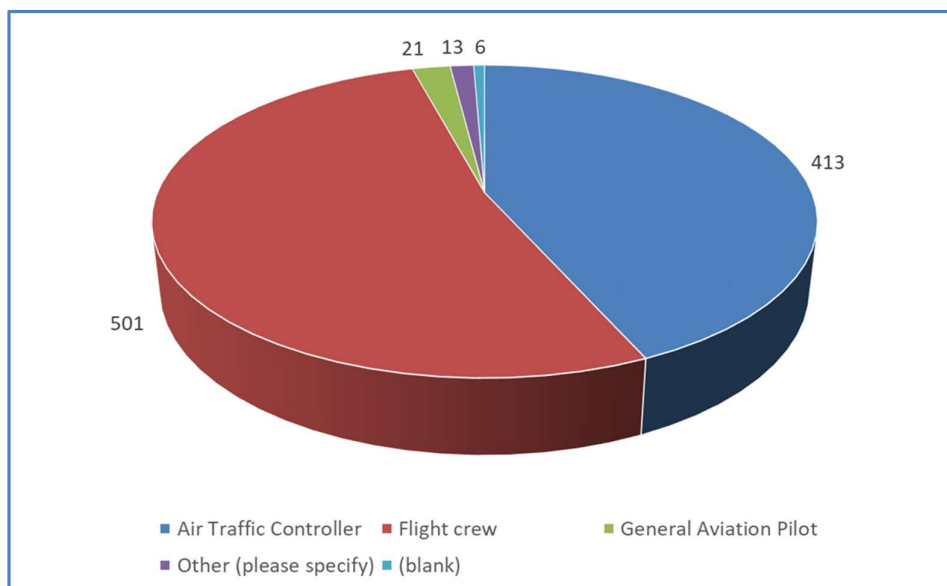


Figure 1: The role of the respondents

2.2 Aircraft Operators Responding

Although there was a reasonably good response from the flight crew community, overall the results are dominated by a few operators. The graph below shows the operators who provided 4 or more responses.



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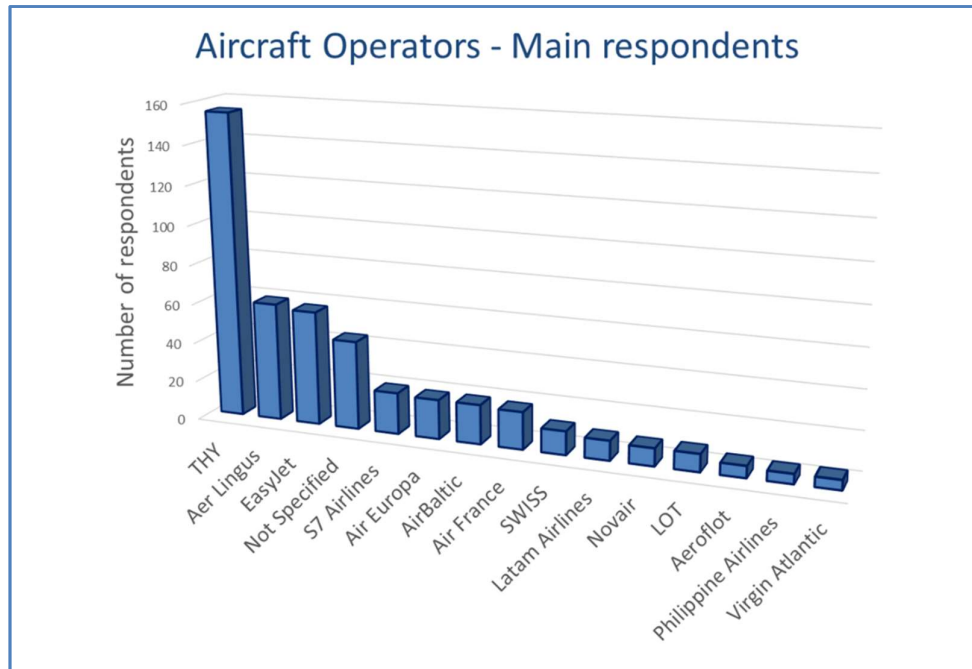


Figure 2: Aircraft Operator Main Respondents

2.3 ANSPs Responding

Similarly the responses from the air traffic controller community is dominated by a few ANSPs who provided a high number of respondents. The graph below shows the ANSPs with 4 or more respondents.

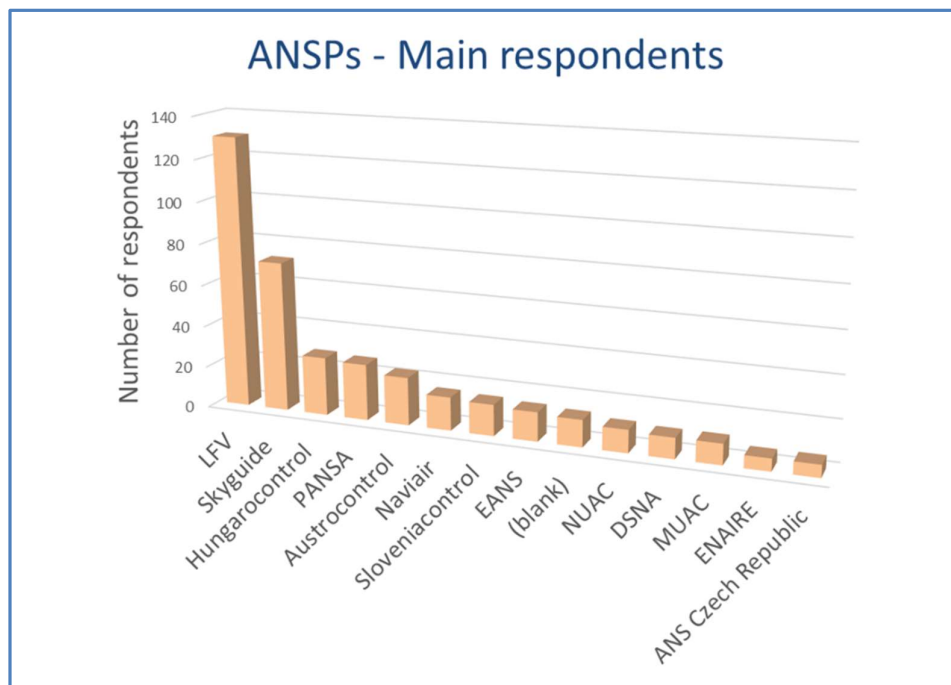


Figure 3: ANSP Main Respondents



2.4 The data link technology being used

Question 5 asked which technology the respondent was using: FANS1/A+ only, FANS2/B+ only, or FANS1/A and FAN2/B+. As shown below 48% of respondents answered 'I don't know', 26% reported using FANS2/B+ (i.e. using the ATN), 15% using FANS1/A+ and 11% using both FANS1/A+ and FANS2/B+.

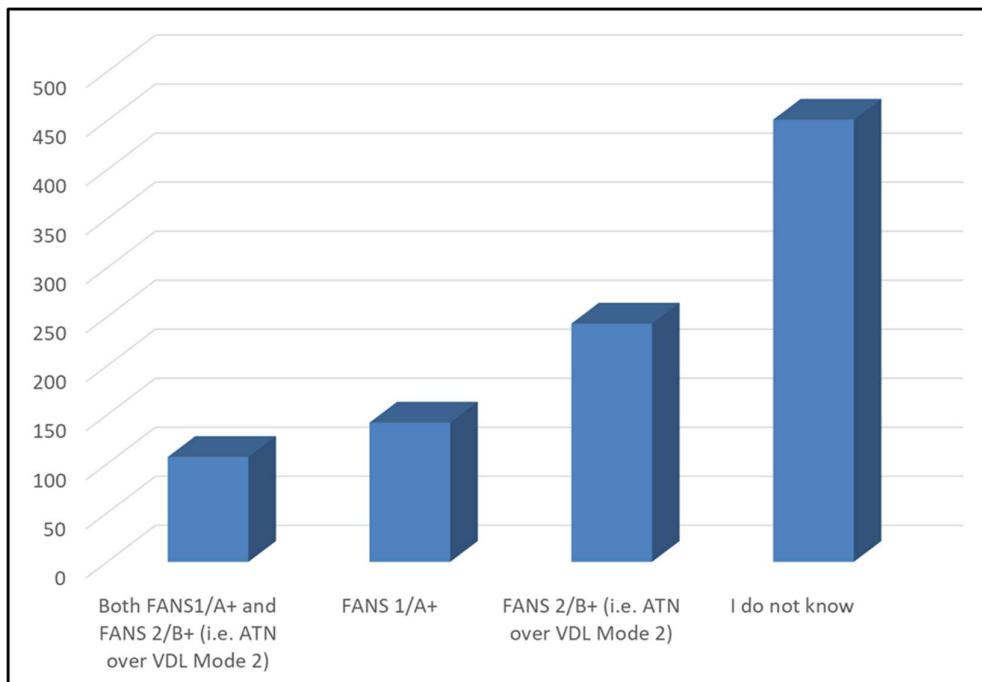


Figure 4: Data link Technology Used



3 Measures of General Satisfaction

3.1 Overall Satisfaction

Question 7 asked about the overall satisfaction with data link in Europe. Seventy eight percent of respondents were either very satisfied or somewhat satisfied, whilst only 1.5% were very dissatisfied. The figures were similar when looking at the different technologies used (FANs or ATN). The results per types of respondent is shown in the graph below

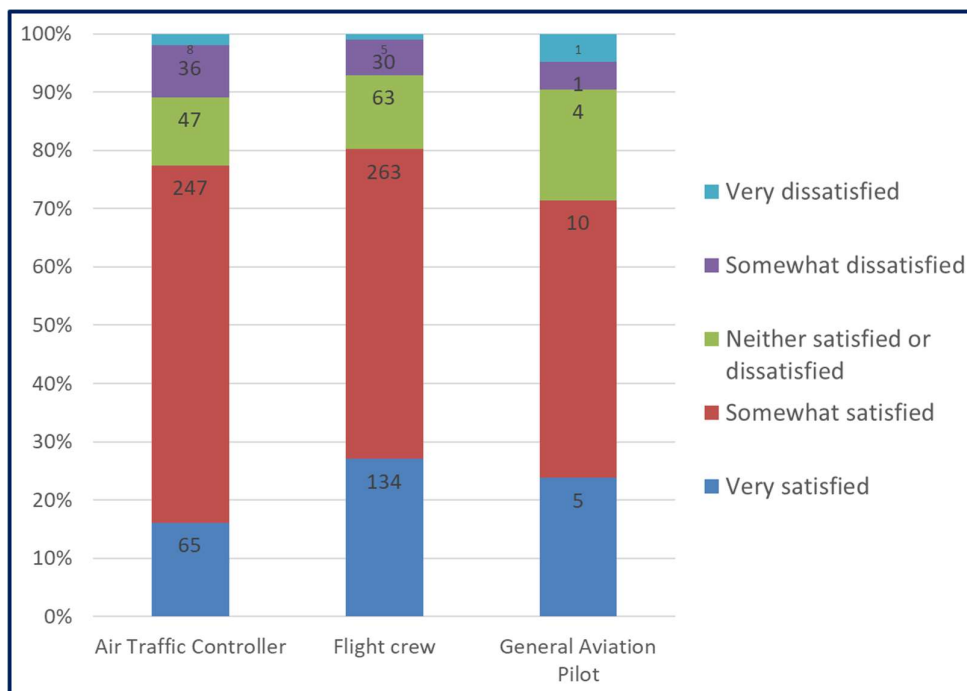


Figure 5: Overall Satisfaction

3.2 How helpful is CPDLC?

Question 4 asked about how helpful the respondent found CPDLC in their work. Overall 57.5% found it very helpful and 37% found it somewhat helpful. In general it seems that flight crew were more positive about it than the controllers as shown in the graph below.



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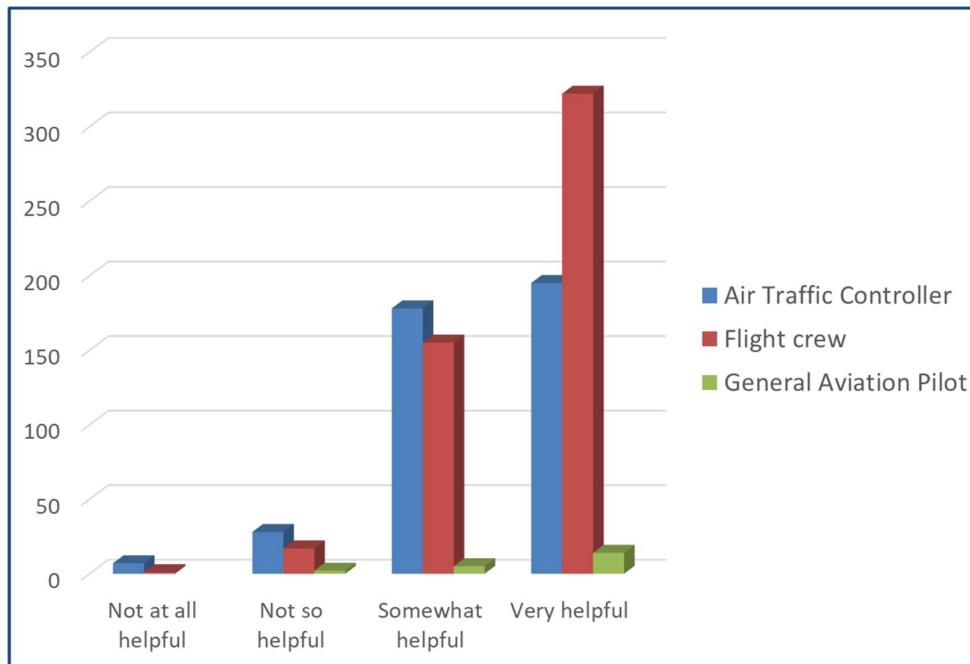


Figure 6: How helpful is CPDLC?

3.3 Centres where flight crew have good or bad experience recently

Question 8 asked the respondent to identify up to three centres where they had experienced good service and three centres where they had a poor experience over the past three months.

The graph below shows how many respondents indicated particular centres where they have recently had a good or poor experience.



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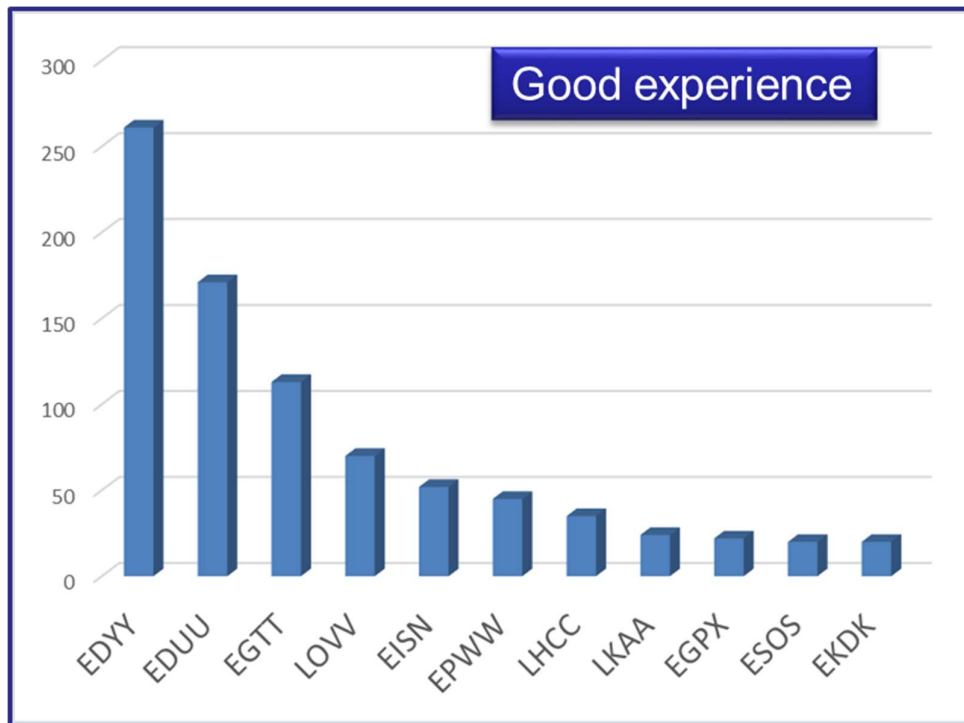


Figure 7: Flight crew reports of good experience

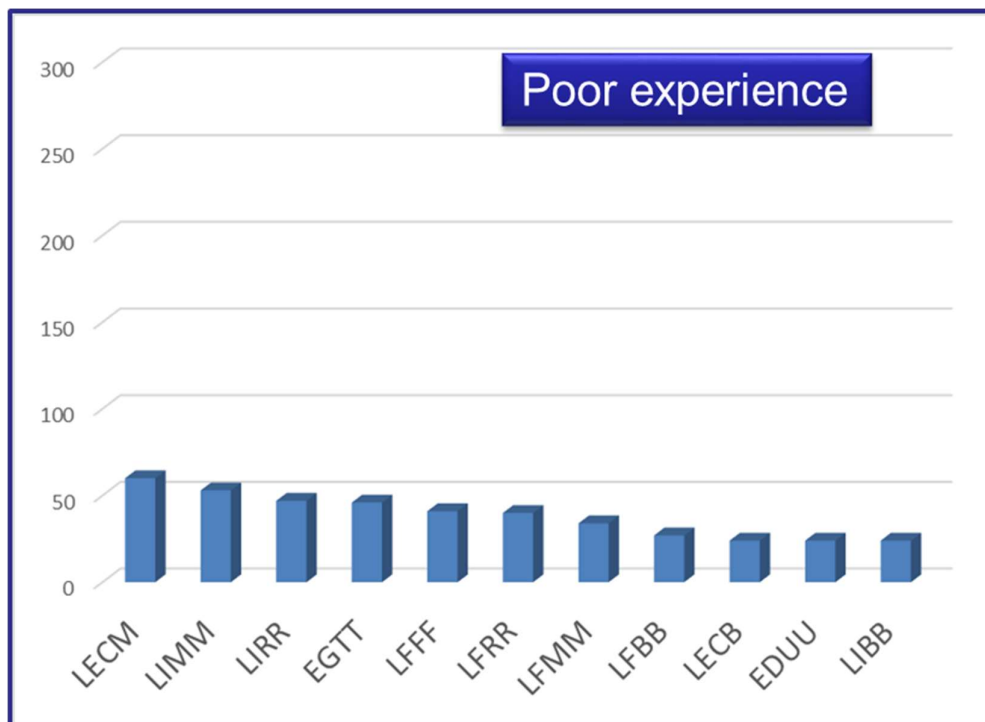


Figure 8: Flight crew reports of poor experience



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3.4 How often to transition problems occur?

Question 10 asks how often the respondent experienced problems when transitioning from one centre to another. This seems to be a fairly common occurrence with 58% of respondents saying they sometimes or usually experience problems as shown in the graph below.

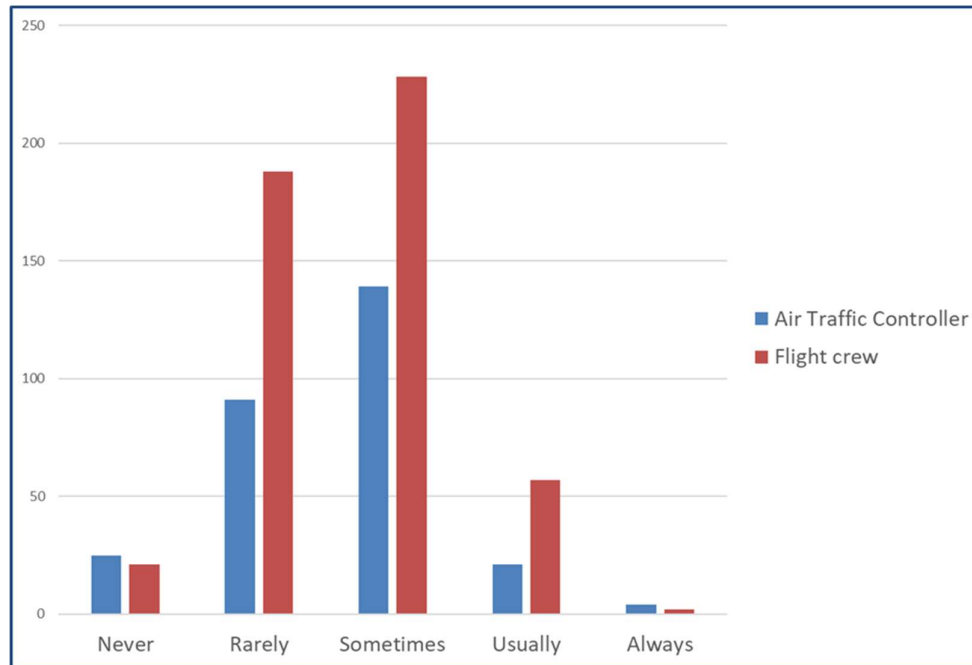


Figure 9: How often do transition problems occur?



4 How much of a problem are Provider Aborts?

The Provider Abort (PA) rate is something that the DPMF monitors regularly. The target rate is 1 PA per 100 hours of CPDLC usage but the current average is around 5 PAs per 100 hours. Question 9 asked how much of a problem PAs are. Twenty four percent of respondents think it needs urgent attention, with 4% considering that it makes the system unusable. Twenty four percent think the current PA rate is acceptable.

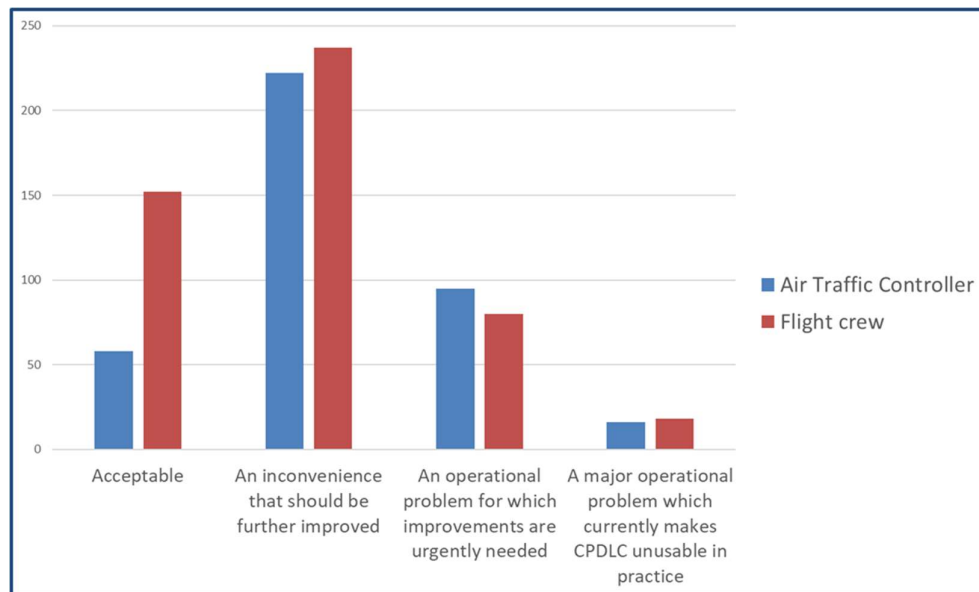


Figure 10: How much of a problem are Provider Aborts?



5 Analysis of the open comments

Question 12 asked if the respondent had any other comments, questions or concerns and allowed a free text answer. These responses are included in Annex A but an analysis of the comments shows there are some recurring themes in the responses from the controllers and flight crew.

5.1 Common themes in controllers responses

An analysis of the responses from controllers highlights six common themes as shown in the diagram below.

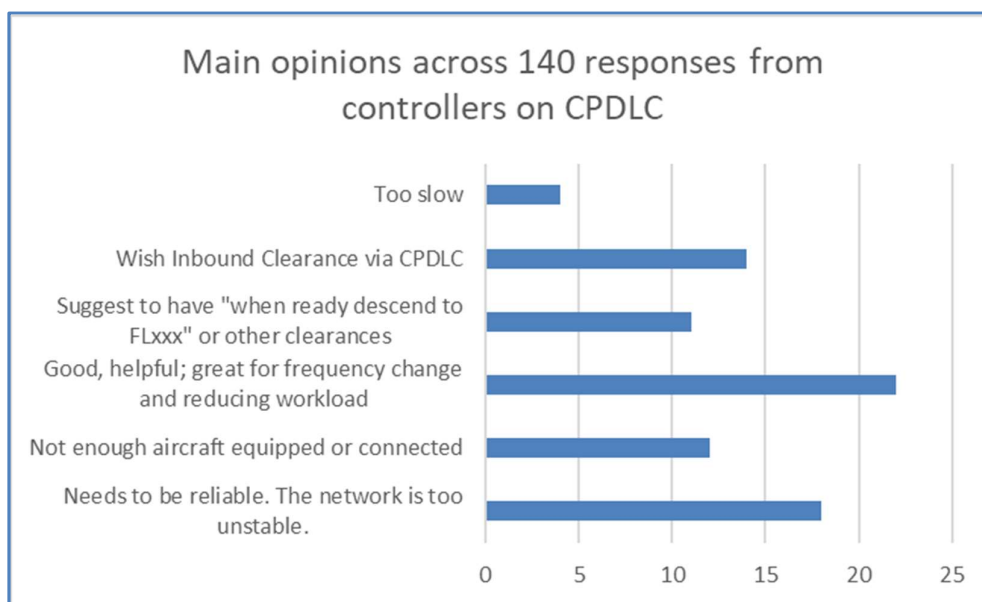


Figure 11: Open comment themes from controllers

- CPDLC is too slow.** There are 4 replies saying that CPDLC is too slow.
 Example: "CPDLC needs to be stable, reliable and quick to be supportive. At the current operational status of the system especially in the western part of LOVV it is very distracting and a pain to work with "
- Controllers would like inbound clearance via CPDLC.** There are 14 suggestions to have Inbound Clearance via CPDLC. Most of them come from LFV.
 Example : "In ATCC ESOS we would like to be able to send inbound clearance with CPDLC".
- Controllers would like "WHEN READY..."clearances.** There are 11 replies suggesting to have the possibility of clearance including "when ready"
 Example : " I would like to be able to send a message containing "when ready, descent to FLxxx" We use that phrase plenty of times everyday so the pilots can plan their descent"



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- **CPDLC is a good tool.** There are 22 replies saying that CPDLC is a good tool, helpful, very appreciated for frequency change primarily; it reduces the workload.

Example: "CPDLC is helpful for changing frequencies. But still not reliable enough as 50% of the time it doesn't reach the pilot. For level clearances multiple clicks are necessary, so not helpful for that."

- **There are not enough aircraft equipped or connected.** There are 12 replies on this point.

Example: "CPDLC should be used more, it would reduce the workload a lot"

- **Datalink needs to be more reliable.** There are 18 replies expressing this.

Example: "Response time is too long and unstable"

5.2 Common themes in flight crew responses

An analysis of the responses from flight crew highlights four common themes as shown in the diagram below.

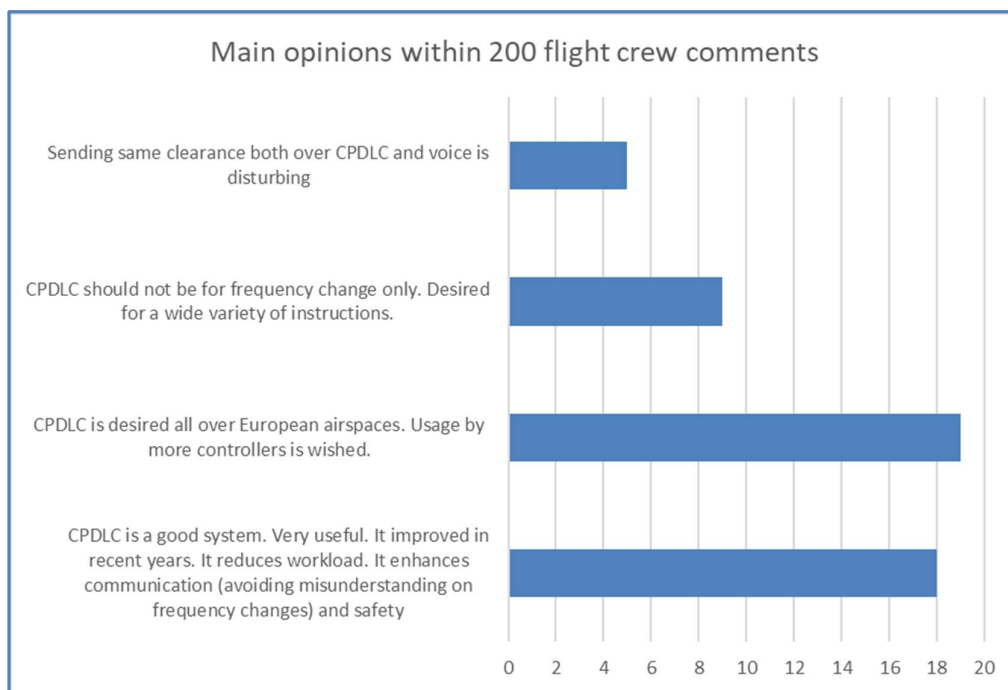


Figure 12: Open comment themes from flight crew

- **CPDLC is useful.** There are 18 declarations that CPDLC is useful, reducing workload and enhancing safety.



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Example: "I feel that CPDLC is a fantastic enhancement to communication and safety", "Great system from pilot prospect especially on busy days."

- **CPDLC usage should be expanded over all of Europe.** There are 19 responses saying that CPDLC usage should be expanded all over Europe, and that it should be used by all controllers.

Example: "Few CDPLC area effectively in use. EDYY, EGTT, EISN, EGPX are OK. LKAA accepts connections but doesn't really make use of it. No real experience with other areas but for most of them CPDLC not in usage. CPDLC should be used everywhere, coordination and automatic transfers should become a standard. If all the Europe zone would make an effective use of CPDLC, it would be great. Voice must remain the primary method of communication."

- **CPDLC should not be used only for frequency change.** There are 9 responses suggesting that CPDLC should not be used only for frequency change. Its usage is desired for a wide variety of instructions.

Example: "Full functionality needs to be more available instead of just frequency changes only like in France."

- **Sending same clearance both over CPDLC and voice is disturbing.** There are 4 responses stating that the use of CPLDC and voice for the same clearance is disturbing..

Example: The practice in Italy to send the same clearance both over CPDLC and voice is very distracting .



Annex 1 - Question 12 Responses

This annex contains the detailed answers to Question 12 “Do you have any other comments, questions, or concerns?” presented as two separate tables; one showing the responses from controllers and one showing the responses from flight crew.

A1.1 Comments from Controllers

Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	ACG	CPDLC ist very useful, both ATCO and Pilot side e.g. DCT, single click Transfer,... But, the Standard is too slow, the stability is too poor. AOs have to be forced to log on!
Controller	ANS Czech Republic	I was surprised few times when pilots asked me to give them clearance by voice because they somehow deleted message sent via CPDLC.
Controller	ANS Czech Republic	one of the greatest feature we have for voiceless communication
Controller	ANSP	too slow
Controller	ATCC ESMM	Would like to have more free text
Controller	Austrocontrol	A reliable and fast cpdlc-connection with all acft would simplify my daily work immensely!
Controller	Austrocontrol	As a controller: helpful for changing frequencies. But still not reliable enough as 50% of the time it doesn't reach the pilot. For level clearances multiple clicks are necessary, so not helpful for that.
Controller	Austrocontrol	cpdlc needs to be stable, reliable and quick to be supportive. at the current operational status of the system, especially in the western part of LOVV it is very distracting and a pain to work with.
Controller	Austrocontrol	Cpdlc should be used more, it would be reduce the workload a lot
Controller	Austrocontrol	Good idea, bad outcome
Controller	Austrocontrol	It's not understandable why everyone is using WhatsApp, but predefined messages via CPDLC don't work satisfying. Maybe you should change the provider company to a competent one
Controller	Austrocontrol	Not reliable at all
Controller	Austrocontrol	Respns time ist too long. and unstable



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	Austrocontrol	Very misleading when replying to a FL request. e.g. Pilot requests FL380 via CPDLC, but for the time only FL360 is available, it automatically sends the message "unable" when you clear it FL360, although it is only not possible at this specific moment
Controller	Austrocontrol	We need a more reliable technology!
Controller	DFS	More features, mandatory connection for Upper airspace
Controller	DFS	The improvement of the system is observed by me and well appreciated. There should be more possibilities using datalink than only the limited possibilities now. Thanks for all your efforts.
Controller	DSNA	Here in LFFF, we only have CPDLC micro check (for open mikes) + frequency handover. But only VVVVV few aircraft login to our "LFFF" address to allow CPDLC radio handover. :-(((However, it is a real gain of time / frequency for ATC ... to improve quickly !!!
Controller	DSNA	Not enough flights can use CPDLC in my area (LFFF)
Controller	DSNA	Not really using it for the moment but I see some good and bad sides to cpdlc
Controller	DSNA	Very few aircraft (approx. 1/20) are CPDLC connected when flying in LFFF sectors, with frequency change message available only.
Controller	DSNA	Very low functionality of cpdlc (only frequency transfer) for the moment
Controller	EANS	Connection quality is very low and many ac are unable to log on. Significant upgrades to the coverage and system needed asap. Many very random errors.
Controller	EANS	CPDLC in Tallinn FIR has coverage issues over the Eastern part of Estonia up to the boundary with Russia. Very often aircraft are unable to establish Notification. When they fly about 10 minutes into our airspace they are usually able to connect. This is frustrating for both the pilots and ATC. There are also occasional issues in Southern Estonia along the border with Latvia.
Controller	EANS	I love CPDLC. Good stuff. I just wish more companies would implement it, use it. In EETT the main customer using the technology often is Finnair and we have many, many more clients.
Controller	EANS	In Estonia, we sometimes have problems with CPDLC connectivity around the border of Russian Federation and on the south west corner of Estonian FIR when trying to hand traffic over to Latvia. The connection issues in these areas cause inconvenience, because a lot of our traffic volume is from east to west and west to east.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	EANS	Minor problems here and there, overall optimistic
Controller	EANS	There are problems in EETN eastern part and also across Latvian border. Trouble is with connecting and quality.
Controller	ENAIRE	ATN in GCCC is not usefull. Many messages missins: "request descent" "comply with STAR restrictions" "climb FLXXX, ¿good as final?" ...
Controller	Enaire	Few traffics connect
Controller	ENAIRE	Nowadays there are few planes equipped with CPLDC on board
Controller	ENAV	We Atcos in Italy don't have vertical speed or free text, which instead could be useful. We don't have inter-centre handover. Besides, only a small minority of traffics log in on cpdlc, so the "unusual" situation is handling cpdlc logged traffics.
Controller	Eurocontrol	It is mandatory to logon cpdlc with EDYY, but a lot of aircraft still need to be prompted on the frequency to do it, wasting a lot of my frequency time. Pilots should be made aware of this (it's been in the AIPs of BeNeLuxDe for over a year and it had previously been a Notam for a few months...).
Controller	Hungarocontrol	If more aircraft used them, it really would be a great tool. There's a significant amount of compatibility issues.
Controller	Hungarocontrol	The CPDLC range should be reach the eastern FIR border, because many times it's over befor that.
Controller	Hungarocontrol	Would be nice to have a faster standard for communication via HMI
Controller	Irish Aviation Authortiy	Slow updates to avionics can cause problems. The B787 has had issues accepting HF frequencies in VCI for a long time but nothing seems to get done about it.
Controller	LFV	*It would be good if we can have "when ready descend to FLxxx" as an option. *Great if we can give inbound clearance via CPDLC. *It would be very nice if we as an ATCO can send SIGMET via CPDLC, that will secure that pilots will have the right information and at the same time reduce the workload for ATCO.
Controller	LFV	1. Please give ATC the possiblity to add "when ready" before descend clearance i.e. "When ready descend to FL290". 2. Give pilots the possiblity to "Request descend" without stating to what level. 3. Make it possible to send inbound clearance from ATC to pilots via CPDLC.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	LFV	as a controller: if you can't give a clearance immediately so press "unable" instead of "stand by" !!! Otherwise, after two minutes, there is a risk that a pilot gets the "same signal" for a clearance or time out (?) after STANDBY !!!
Controller	LFV	Automatic log on should be implemented asap. We need to be able to give "when ready" clearances, that would greatly improve how often we can use CPDLC instead of voice
Controller	LFV	Better coverage in northern Sweden please
Controller	LFV	Biggest save is frequency change, we mostly use "When ready descend", a phrase we can't use yet in our system, when that comes we will use it more with cpdlc. Im very glad about using cpdlc! Great invention!
Controller	LFV	CPDLC can improve alot. It's helpful when you have alot of traffic on the frequency. You gain more RT time. One nice feature would be to send free text in CPDLC
Controller	LFV	CPDLC is not operational in certain areas of Sweden.
Controller	LFV	Develop so we can give "When ready descend" and inbound clearance.
Controller	LFV	Development would be appreciated. Possibility of giving more clearances.
Controller	LFV	Everyone should have CPDLC, extremely useful as a controller, especially with regards to change of frequencies. I don't know how many "say again" I have been spared since the introduction.
Controller	LFV	From ATC point of view it is sometime problematic at short AoR crossing where sometimes the a/c already is logged-on/connected to downstream before you have an a possibility to connect yourself.
Controller	LFV	Great benefits in changing frequencies. Good for level changes/DCT. Mitigates clashing callsigns-problems and number confusion. Small risk due to only one audio signal in cockpit, for all CPDLC messages (clearance, standby, reject, connect/disconnect). Could potentially lead to clearance busts.
Controller	LFV	I like CPDLC. The more we controllers use it, the better we will be on using and understanding it.
Controller	LFV	I want to be able to issue inbound clearance via CPDLC.
Controller	LFV	I work at approach, we don't use CPDLC (besides shutting it down for arrivals).
Controller	LFV	I work in ESSA TMA and I am not allowed to use CPDLC in any way except to log Aircrafts out.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	LFV	I would like to be able to give an inbound clearance via CPDLC
Controller	LFV	I would like to be able to send a message containing "when ready, descent to FL....". We use that phrase plenty om times everyday so the pilots can plan their decent and even more important if you assign them a certain speed.
Controller	LFV	Improve messagesending for "when ready", speed reduction/increase and descend/climb rate, freetext
Controller	LFV	In ATCC ESOS we would like to be able to send inbound clearence with CPDLC.
Controller	LFV	Inbound clearance would be nice to send by CPDLC in the future.
Controller	LFV	Inbound Clearence via CPDLC would very nice to have. It would cut down radio traffic significantly.
Controller	LFV	Increased stability should be a priority.
Controller	LFV	It will be better when more a/c got CPDLC
Controller	LFV	It would be great if CPDLC could handle free text messages.
Controller	LFV	It would be great if more companies/pilots would use it
Controller	LFV	It would be so good if you could send the inbound clearence via CPDLC and "when ready...".
Controller	LFV	It would be useful if more Aircrafts actually had it, and if it didn't stop working all of a sudden so often
Controller	LFV	More options!
Controller	LFV	Need more CPDLC and more options for it.
Controller	LFV	Pilot dct routing requests are useless and messes with the system
Controller	LFV	Please improve standards to make it possible to send STAR(Inbound Clearance)
Controller	LFV	Question 11. I want the flight crew to respond much earlier.
Controller	LFV	Should be one system, not different versions etc etc. One system, functioning if implemented in certain country without limitations at least above FL195. In Sweden as an example we have several areas where we know we will lose contact here and it it unable to connect right here but perhaps in 4 minutes it will work and so on. Not acceptable.
Controller	LFV	should include "when ready"-descent and inbound clearance



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	LFV	Sometimes I get "insufficient recourses" message. It sometimes feels like the network is peaking in capacity.
Controller	LFV	The limitations on types of messages that can be sent hampers the usability. In my opinion, the biggest improvement that can be made is the possibility to issue inbound clearances via CPDLC.
Controller	LFV	To many CPDLC FAIL, but really appreciable when it works!
Controller	LFV	We need auto-logon in ESMM NOW!!
Controller	LFV	We need more functions such as inbound clearance and speed instructions for CPDLC to be really usfull / ESOS
Controller	LFV	When using CPDLC the pilots sometimes are not so focused on the freq., I have to make the call more than once. Might be a problem when very busy.
Controller	LFV	Would be even better if more pilots used it.
Controller	LFV	Would be good to have some more functionalities. Like the ability to send "Speed", "Inbound clearance", "Rate of climb/descent" and so on...
Controller	LFV	Would be helpful if you could send inbound clearance via CPDLC
Controller	LFV	Would like to be able to send text mess. like "Cross abeam XXX FIXXX or below" and inbound clearance.
Controller	LFV	Would like to be able to send inbound clearance and when ready on a descendclearance
Controller	LFV/NUAC	I would like to send descend message with "When ready".
Controller	MUAC	CPDLC is a fantastic tool for ATC (when it works). After 16 years of operations, we are just now starting to feel the benefits. We need higher rates of equippage and reliability. The network is currently a weak link. In addition, the current message set does not always meet ATCOs needs, eg. No possible use of ROGER to acknowledge acceptance of a request.
Controller	MUAC	Fans has to get much quicker! Atcos and flightcrews should always see the xact same message.
Controller	MUAC	There should be more attention and push to strive for the AO's deadline of 5th FEB 2020. And better cooperation Europe wide to streamline and improve the usage of CPDLC
Controller	MUAC	Very helpful, please, keep improving!



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	NATS	I wish more operators would use CPDLC where possible to allow more time for my decision making. Flight crew need educating to use it wherever possible as it really helps ATC to reduce frequency congestion
Controller	NATS	I would like to have a greater understanding of coverage blackspots and why they exist.
Controller	Naviar	CPDLC is especially of great use for change of frequency and/or transponder codes. And for direct routings for pilots who are not good at English
Controller	Naviar	In question 11, did you mean "unacceptable delay" or "acceptable delay" ?
Controller	Naviar	Quite an inconvenience that there are different systems J1, J2 J3 and not all pilots or ATCO's know that. Some try to log on in vein.
Controller	Naviar	The main problem is the connection, we have multiple issues with lost connections and reconnections. If/when the system would be improved and more stable then it would be a very good working tool.
Controller	Naviar	Too many errors causing the system to be unreliable. Mostly using CPDLC for FRQ changes.
Controller	NUAC	Functions as "When ready", inbound clearance and speed adjustments including max/min speed would be of great help.
Controller	NUAC	New messages: "When ready descend...." - Speedcontrol with CPDLC - Inbound clearance with CPDLC
Controller	PANSA	- Too many messages are lost somewhere between ATC and cockpit. - It's funny that ANSP has to pay more money to get more types of messages available to use. Providers duopol is very unhealthy. - It's difficult to build useful and convinient ATC user interface to utilise more advanced CPDLC instructions.
Controller	PANSA	CPDLC should me mandatory aircraft equipment within European airspace. From my observations, only 10-20% flights in our airspace is equipped and logged in. And it's definitely not enogh if we want to handle more and more traffic
Controller	PANSA	I hope one day all CPDLC versions will become one or all will be compatible with our system. Still I consider CPDLC as complementary tool not an ultimate and only way of communication.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	PANSA	Operational benefits are greater than I expected. I hope it will be further developed to gain some more operational benefits.
Controller	PANSA	System will only reduce workload when all users are equipped. Until then it isn't very helpful because of necessity to look who is or isn't.
Controller	PANSA	This is major help in dealing with heavy traffic. Reduces transmissions and chance of mistake. I wish more a/c had it.
Controller	Skyguide	Problem concerning RouteClearances which needs further improvement in order to allow for more capacity: E.g. Acft is cleared by ATC Routing OLBEN-LUTIX-BENOT The pilots receive " Benot" as the first point on their ACAS, and only on the next pages it shows "via OLBEN.... LUTIX" This generates clarification done by the pilots, which then results in higher frequency usage, which then results in ATCOS using CPDLC less for routing clearances.
Controller	Skyguide	- very useful thing. should be improved! - are the cpdlc lines safe? are the lines encrppedd? if not, they should be!!! - standards should be implemented, how to use textforms etc and how getting a readback of the text. - a very good thing, which should be developed further more!
Controller	Skyguide	a tool which works well 80% of the time has nothing to do in aviation environement
Controller	Skyguide	Aircraft Operator should be obliged to connect via CPDLC as much as possible, even with short flying time. It is so much easier to handle Air Traffic, if some messages can be sent via CPDLC!
Controller	Skyguide	As ATC, we really need more airplanes and airlines to be connected, to make our daily life much easier than a 70 year old radio system that is taking so much of our time.
Controller	Skyguide	At the beginning, CPDLC was no use. As more ACFT got equipped and flight crews more aware of it, it started to work fine.
Controller	Skyguide	CPDLC reliability has improved a lot over the past two years or so. However, there are still too many transmission errors (ERR) due to the network. Also, the adaption rate is still too low - we should strive for at least a 50%ish logon rate...



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	Skyguide	CPDLC starts being a great help for ATCO aiming at reducing RT workload (no need of readback via voice, no "say again"). It secures frequency and route instructions by avoiding misunderstanding (no spelling, no interpretation). CPDLC's reliability is however disappointing and random, and does not match with the level of quality required by our business.
Controller	Skyguide	everybody should use CPDLC
Controller	Skyguide	For FRQ change CPDLC is a good solution. For the rest it is not very helpful so far. However, way more disturbing: A routing clearance may be shown in a way that potentially leads to unwanted situations! Example: CLR by CPDLC (mouse entry) is DITON-ROMIR-LOKTA. In the cockpit it shows "LOKTA" and on a second line (not always visible at first glance) "via DITON-ROMIR". This is potentially very critical and might end up in some unwanted situations though properly cleared!...
Controller	Skyguide	Good work, keep it up. We need everybody connected to make a significant difference for capacity improvement.
Controller	Skyguide	I had the case where the given FL was acknowledged, but then they selected a wrong FL in the autopilot (2 Pilots!). There is no Close the loop by the system, so human error can still occur.
Controller	Skyguide	In our very dense airspace CPDLC is not really helpful but costed a lot of money. So the mandatory investment was too high in my opinion. And as a side note, CPDLC is very unsocial since I do a service as an air traffic controller and this I do with my voice.
Controller	Skyguide	it's a great thing to use. especially the frequency transver to a next center.
Controller	Skyguide	I've seen that route clearances with several route fixes appear as follows in cockpits e.g.: "cleared to LOKTA" then on a second line "via BERSU". This is from a human factor stand point quite questionable. The condition for a clearance should in my opinion allways stand in front of the clearance since it would be detrimental to "oversee" it.
Controller	Skyguide	Looking forward that the system becomes more reliable. To bring the "error" messages to a minimum
Controller	Skyguide	Most questions are pilot orientated. Not relevant for ATCO
Controller	Skyguide	Not enough a/c can log in with Geneva ACC with Cpdlc. I was expecting that more than 90% could log in but today we only have 10% where cpdlc is working. Very sad



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	Skyguide	Please redesign income message of CPDLC-multi-clearance on the flight deck
Controller	Skyguide	Route Clearances including several points should be displayed clearer in the cockpit. For example: The route ELMUR HOC LUL is displayed today as: Cleared to LUL via ELMUR HOC. I have had quite a few cases where pilots turned dct to LUL instead of going via ELMUR HOC to LUL. In order to avoid confusion it should be displayed as follows: Cleared ELMUR HOC LUL.
Controller	Skyguide	Route clearances with several points are not understood by the pilots very often, they just fly to the last point of the whole routeclearance
Controller	Skyguide	should be mandatory to log in if available
Controller	Skyguide	skyguide should further improve the handling of CPDLC (additional formats, get rid of barriers, link e-coordinaton with CPDLC)
Controller	Skyguide	Some questions seem to be for pilots only. CPDLC is great for FRQ changes. In Zurich FIR a lot of clearances are timecritical and therefore CPDLC is not adequate in those situations. But this doesn't mean that CPDLC is not a great tool to reduce ATCO workload. It truely is
Controller	Skyguide	Still too much error messages (GVA)
Controller	Skyguide	That more than one element is being sent should be considered as standard practice and therefore the display in the flight decks improved!
Controller	Skyguide	The recurrent problem we have in Geneva is when aircraft are approaching Paris or Reims airspace. We often have ERROR transmissions there.
Controller	Skyguide	This survey should be adapted to the role you selected at the beginning. asking an ATCO for which centers CPDLC is working goo/bad is not good constructed. As the ATCO point of view: CPDLC works about 70% of the time. Sometimes just stops working for no apparent reason.
Controller	Skyguide	Time-frame for sending, treating and returning the messages should be shorter (e.g. 20" instead of 40" per segment). Concept should be enhanced in a way, that a log-on to a system is possible without establishing radio-communication (as it is possible for the hand-off to the next frequency).
Controller	Skyguide	very convenient, good stuff
Controller	Sloveniacontrol	Aircraft should automatically log on and not that you have to ask to log on cpdlc. One standard should be used.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Controller	Sloveniacontrol	CPDLC should be free(or of reasonably accessible price) open, open source, unified, simple and unified, in fact it should possess all the qualities of voice comms in aviation. As it is, I feel it is exactly the opposite. Sorry...
Controller	Sloveniacontrol	I do not like, that there is no interoperability between different CPDLC providers and aircraft equipment providers.
Controller	Sloveniacontrol	It's 90s technology implemented decades to late. It's a relic, similiar to that other 90s "big thing": ISDN: What ISDN really ment for broadband internet? ISDN - It Stil Does Nothing. Frequency is less occupied, but it doesn't reduce controlers workload. A simple frq change takes more attention in general. So, turning it into a stand-up joke (with a hint of harsh reality): if CPDLC really works, does that mean people with hearing disabilities can now work in ATC and cockpits?
Controller	Sloveniacontrol	Pilots should log in automaticly at transfer. Should be done without voice check in
Controller		It works quite good but the service should be more reliable - after all this is for ATC purposes. In current state it is enough for secondary/additional means for communication but it will not be acceptable if we want to use CPDLC for time critical communication or for some more complex applications (like trajectory exchange).
Controller		Question 9 also for aircraft operators.
Controller 0.1 1.0	20/06/2019 01/07/2019	The use of CPDLC could be promoted more to aircraft operators [free text] [free text]



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A1.2 Comments from Flight Crew

Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	Aer Lingus	Acceptance of climb message failed to send once and controller didnt know we were climbing until we sent level off message. In general there are too many non critical message eg the confirmation message you are CPDLC identified after you have it displayed on the screen and have been changed over to the new centre using CPDLC. The confirm assigned route message and all those types of nonsense messages are leading to pilots just sending messages repeatedly with the possibility of missing an important message. Basically too many nonsense messages. We are professional pilots we will figure stuff out if it is wrong and dont need to be told the obvious.
Flight crew	Aer Lingus	Descent clearances are often issued ambiguously i.e. Descend FL200 not specifying descend now or when ready requiring voice confirmation.
Flight crew	Aer Lingus	Drop offs are somewhat distracting but have been improving recently. I have found some ambiguity between ATC units regarding descent clearances - London has in the past taken these to imply 'at pilots discretion' while other units expect descent promptly following pilot response.
Flight crew	Aer Lingus	EDYY EDUU are reliable. EGTT logs on reliably but only used 50% of time. Other europe FIRs don't appear to use it on a reliable basis.
Flight crew	Aer Lingus	EGTT - occasional non-use (could be workload / staffing dependent). EDYY - fantastic !
Flight crew	Aer Lingus	EGTT is not consistent using this service and could benefit from using it more by giving headings, direct to and climb/descent clearances by CPDLC.
Flight crew	Aer Lingus	First time using CPDLC and I find it to be an excellent resource
Flight crew	Aer Lingus	Flying into Shannon airport CPDLC can give out annoying and distracting amber disconnect warnings on approach despite having disconnected earlier in the descent.
Flight crew	Aer Lingus	For flight crew CPDLC instructions from ATC are more cumbersome operationally than voice instructions. SOPs require us to acknowledge, read, select response, send response, action the instruction, verify "received by ATC" and close the message. My bad experience above from EDUU involved a step descent. By the time each message was acted upon, a new message followed very shortly afterwards. It was very distracting during a dynamic phase of the flight. Voice instructions



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Role	Organisation	Do you have any other comments, questions, or concerns?
		would have been more appropriate.
Flight crew	Aer Lingus	Great idea. Keep developing and encouraging the use of CPDLC please.
Flight crew	Aer Lingus	Has potential to reduce situational awareness (not hearing clearances for other aircraft in proximity). Of very limited use on short busy sectors or time critical/complex wx scenarios. Continual blue flashing lights and/or alarms are particularly annoying on night flights. Very useful on long oceanic sectors and for potential comms failure avoidance. Would like to see system extended to T9 & T16 routes where it would be of most benefit.
Flight crew	Aer Lingus	I notice in the French and Spanish FIR's that sometimes (not that often) CPDLC changes FIR on the cockpit display but there is no message to indicate a change of frequency. When you query it you are handed over by voice but I sometimes get the impression that the air traffic controller thought we had been handed over by CPDLC and that is why there was no voice instructions from ATC to change frequency.
Flight crew	Aer Lingus	if we tell the controller to standby via CPDLC, then the controller should not try contact us via voice, ie standby mean the same as in the flightcrew are busy
Flight crew	Aer Lingus	It would be a great improvement to pilot controller communications if this system was further rolled out across Europe. Currently, the countries where the system would be of most benefit to flight safety are the regions that don't employ it.
Flight crew	Aer Lingus	Just the drop out issues, but generally a good system and would encourage delivery of additional clearances from ATC.
Flight crew	Aer Lingus	More widespread use, especially in the souther European sectors would be good, especially as the accents in some parts of the world can be difficult to understand
Flight crew	Aer Lingus	Needs to be streamlined better. Too many times it will fail, or ATC don't respond.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	Aer Lingus	Occasional conflicts with voice instructions (usually out of sequence frequency changes). Disheartening to logon and not have any use on some sectors. Great when used as intended, and also provides superb redundancy when used in conjunction with voice.
Flight crew	Aer Lingus	on the A320, it uses com 3. When I use CPDLC I see an increasing trend in failures of the COM3/ATC datalink. Sometimes recoverable, sometimes not. If not recoverable we can not get MET data easy, and not communicate with the company
Flight crew	Aer Lingus	Only minor bugs need fixing e.g. connections dropping out. More encouragement of controllers to use CPDLC for re-clearances to reduce talk time on frequency.
Flight crew	Aer Lingus	Other than the occasional disconnects, system working much better than it was initially
Flight crew	Aer Lingus	Please look at co-ordinating flight crew procedures with controller procedures. Sometimes the interaction between our company SOPs and the rate of messages arriving into the flight deck makes it feel that we are being bombarded. Whereas one voice message might contain two instructions, these are now spread over two data messages, each of which has to be handled separately on the flight deck. There is a risk of missing actioning a message. But having said that I feel that CPDLC is a fantastic enhancement to communications and safety.
Flight crew	Aer Lingus	Poor coverage still an issue with Datalink not available.
Flight crew	Aer Lingus	Radio Coverage over Southern Ireland is erratic for CPDLC but also Digital Atis etc
Flight crew	Aer Lingus	Regularly find that controllers do not terminate the connection at appropriate time during descent. Have had the disconnection occur (along with associated distracting chime) during the landing. As pilots it is hard to know when the system should be disconnected by ATC. I have seen "Barcelona App" as the active ATC at low level so reluctant to disconnect it myself - but never disconnected by atc. Regularly between Spain and France there is no auto transfer at the boundary - often have to manually disconnect and manually log back on. On occasion get a new active atc message prior to actually being transferred from previous sector. So talking (vhf) to one centre but the CPDLC is already with the next. Overall good system but need to iron out bugs like these.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	Aer Lingus	Some airspaces as Maastricht are very good at using CPDLC, which reduces the need for voice contact. Maastricht is by far the best sector in Europe. Other airspaces as London are not really using CPDLC, it seems like it is very much depending on the controller and it feels like 80% of the time the controller doesn't use the system at all. If the system is in use, it's usefulness is at times compromised by the parallel use of voice transmissions and CPDLC messages. That's surely against the Idea of CPDLC and causes a higher workload than not using it at all. The controller might not realize it, but sending 2 CPDLC messages in short succession and calling the flight crew and the radio shortly after is just a big mess, which leads to flight crews not using CLDPC in these sectors in the first place.
Flight crew	Aer Lingus	Some centres use CPDLC more actively than others. When an aircraft is in a busy descent, numerous/frequent CPDLC messages can be challenging for flight crew to manage properly while also trying to monitor the flight path of the aircraft/TCAS etc. A stepped descent delivered by CPDLC is not a good idea. In cases such as this, a VHF call is better for the flight crew.
Flight crew	Aer Lingus	Sometimes does not disconnect automatically during descent and can be distracting on short final or during landing rollout if it does disconnect
Flight crew	Aer Lingus	The use of CPDLC is not evenly spread. It would appear like the UK ATC centres actively don't use it while Shannon and Maastricht are super users.
Flight crew	Aer Lingus	There appears to be a momentary loss of CPDLC with EGTT in vicinity of DOLAS. Amber text on DCDU, but auto reconnects after a few mins.
Flight crew	Aer Lingus	Very good system cures down on problems with accents, gives another level of redundancy and mitigates strongly against loss of comms from miss elections or missed handover. Mixed use by controllers the UK on busy DUB LHR sectors which does not encourage crew to log on.
Flight crew	Aer Lingus	When switching from one centre to another CPDLC sometimes disconnects, if the crew are preoccupied with another duty at this time it causes unnecessary distraction
Flight crew	Aer Lingus	while operational in EGTT there seems to be a marked reluctance on their part to use it. Thus I don't bother signing on



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Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	Aer Lingus	You get immediate log on with EGTT but they seem reluctant to rely on it completely with us and often just stick to voice instructions before handing over to EDYY or LFEE or LFRR.
Flight crew	Aeroflot	It's really good idea, I mean CPDLC , it's the future of civil aviation radio communications !
Flight crew	Air Charter Ltd / Jet Aviation	It seems that we cannot Log On to any Italian ATCs Miunich also seems to have problems with logging on.
Flight crew	Air Europa	ATN in Europe should be more useful. Not just for frequency changes.
Flight crew	Air Europa	Coverage problems must be solved asap. Some controllers are not as interested in CPDLC as my company.
Flight crew	Air Europa	CPDLC is great when it works. France uses the cpdlc only for frequency changes. Madrid most of the time does not work. Italy is implementing cpdlc now but not using it.
Flight crew	Air Europa	In fact CPDLC minimizes misunderstandings on frequency changes and frequency congestiona.
Flight crew	Air Europa	LFBB doesn't connect automatically most of the time unless logoff from previous data authority is done and logon again to the new one
Flight crew	Air Europa	Most of the time CPDLC is only used for frequency changes, some others not even for than.
Flight crew	Air Europa	No response of messages at lecb lecm, finishing when time gives up instead of giving a negative answer of a request.
Flight crew	Air Europa	Transfer from lecm to other centers is poor.
Flight crew	Air France	- The font on the CPDLC (A320) allows confusion between numbers 5 and 6.
Flight crew	Air France	CPDLC must improve in Europe compare to other World's Area.
Flight crew	Air France	CPDLC termination leaving FIR or passing into lower airspace is rarely executed automatically and produces unnecessary disconnect messages.
Flight crew	Air France	Currently control only uses CPDLC to swich frecuencies, no other messages are being used,so we keep using voice communications but with an expensive device on board being misused
Flight crew	Air France	Despite CPDLC, Maastricht frequencies remain very busy. It takes sometimes up to 5 minutes to call them without being blocked by another emission. This causes a major safety issue when flying through their sectors.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	Air France	Excellent system who should be used in all Europe for Cruise (upper airspace)... Have to be more developp in the world to still improve the safety of flights for passengers Africa, America(s), China, Russia
Flight crew	Air France	For more improvements about waypoint misunderstanding and less workload, could you increase the Number of 'DIR TO' waypoint CPDLC message.
Flight crew	Air France	Go cpdlc
Flight crew	Air France	Service is not the same across Europe, and pilot can not always know what service is where. France full service needed ! Many problems when leaving Italy
Flight crew	AirBaltic	Because we only use CPDLC en-route and not for departure clearances or loadsheets, it is more of a distraction for both pilots, compared to R/T. It is only used to ask us to fly direct-to or change frequency, and due to our SOPs both pilots must read the message, one must acknowledge on the screen then the other will act on it, and then sometimes one pilots will also have to report on R/T as well (as with changing frequency). This increases pilot workload a lot, and the only benefit I have seen is that frequencies are not mis-heard.
Flight crew	AirBaltic	CPDLC-good improvement for aviation in general, well done!
Flight crew	AirBaltic	CPDLS itself interface is not friendly to use.
Flight crew	AirBaltic	it is somehow anoying that when you logon and change frequency, immediately a new message arises.it would be great if the voice confirmation is the only one needed.and only the messages arrives like direct or level changes. not a voice confirmation and directly thereafter a cdplc confirmation.
Flight crew	AirBaltic	Sometimes ATC does not use CPDLC even if aircraft logged on.
Flight crew	AirBaltic	Sometimes the controller duplicates the change of frequency of cpdlc
Flight crew	AirBaltic	The CPDLC is not used or rarely used by the Southern Europe Centers even in congested area. Sometimes the Flight Crew does the logon but Controllers do not use it even if the crew had declared CPDLC ACTIVE.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	AirBaltic	usage should be implemented all across Europe. At the moment only some centres use CPDLC while other even if they have the system they don't use it so it is a waste of time to try to log on and then see that the system is not used.
Flight crew	AirBaltic	We have double job communication: voice and DCPLC. One does not replace the other...
Flight crew	airline operator	must be all over the europe.
Flight crew	Alitalia	The EU FIR shall be equipped with both technology FANS 1/A e 2/B to be Full Operational for all the type of aircrafts under active ATC.
Flight crew	Catreus AOC Ltd	We initially had issues with Garmin, but a software update fixed this. We are now using the system more widely on Rockwell Collins systems and it seems quite good by comparison.
Flight crew	CND	I think the user friendliness has to improve.
Flight crew	Corendon dutch airlines	Lot of times ATC use voice while in positive CPDLC contact. Als no use of automatic transfer using CPDLC
Flight crew	EasyJet	All CODLC centres should be used all the time to max capability. If requests are not supported this should change. This is essential for a back up for lost comms, to avoid blocking, and reduce aural communication errors
Flight crew	EasyJet	Being based in Italy, I nearly always witness italian controllers issuing first the CPDLC message and immediately after repeating that same instruction via voice. It kind of defeats the point in my opinion. Also, in LIPP CPDLC in not used below FL300 for some reason.
Flight crew	EasyJet	Controllers issuing the same clearance over voice & CPDLC, creates double the workload for pilots - mainly the French, Spanish & Italian ATC centres.
Flight crew	EasyJet	Do not use format CLEARED DIRECT TO WAYPOINT VIA WAYPOINT. It's confusing!
Flight crew	EasyJet	EDYY / EDUU very good service and standard of implementation. Italy/Spain/France somewhat reluctant to use to full capability.



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Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	EasyJet	EDYY and EDUU use CPDLC more effectively than other centres in Europe by issuing a wide variety of instructions via this system (eg direct to a wpt, climb/descend instructions and squawk code changes), while all the other ATCCs only use it for frequency changes. Often, LECM does not transfer the CPDLC authority to LFRR when flying northbound, requiring the flight crew to do it manually (ie disconnect from Madrid and log on on Brest).
Flight crew	EasyJet	Great system from pilot prospect espically on busy days
Flight crew	EasyJet	Great system which needs full geographic integration
Flight crew	EasyJet	Great tool. Often drops. So far 99% are frequency changes. Rarely controllers send instructions. Most centers don't accept pilots sending requests (i.e. France) and in those that do, most of the time reply is by voice
Flight crew	EasyJet	Hand overs between centres needs to be improved. Some random frequencies in EGTT mid levels don't support cpdlc but you are always notified of this. I've made it all the way to London still connected to Spanish cpdlc as it wasn't handed over
Flight crew	EasyJet	Handover from one centre to the next the main problem. Some centres NEVER handover especially heading from east to west into EDUU.
Flight crew	EasyJet	Hangovers between different national units are often unsuccessful, requiring another logon. EDYY sometimes a little enthusiastic and give too many instructions, taking multiple pages of scrolling on the display. The threat here is that something important could be missed.
Flight crew	EasyJet	Have found "frequency monitoring" option very useful when unable to make initial voice contact on very busy frequencies (where supported). Full functionality needs to be more available instead of just frequency changes only like in France
Flight crew	EasyJet	I am awaiting the monitoring function eagerly
Flight crew	EasyJet	In Italy they first give you instructions by voice and then send you the same instructions via cpdlc. This useless, bothersome and increases workload
Flight crew	EasyJet	It's good, just wish everyone would use it. Reduces the chances of missed calls. What I would suggest and it's normally France, if we are not answering them on the radio and we are connected, instead of trying to continue to contact on the RT try using the CPDLC



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	EasyJet	it's most annoying to be connected, yet still have some controllers still only give voice instructions
Flight crew	EasyJet	Keep on developing, its a great system with future potential. Rhein, Maastricht, Swiss and London are up to speed however France and Italy are way behind.
Flight crew	EasyJet	LFRR have a habit of cutting it off until you request it again. Adds to workload. CPDLC greatly reduces our workload and reduces radio noise. Needs to be seamless.
Flight crew	EasyJet	More clearances via CPDLC... ie "Direct To..." "Climb/Descend" in other FIRs, rather than just frequency changes
Flight crew	EasyJet	More controllers need to use it more. It's very inconsistent at the moment and seems to be down to controller preference.
Flight crew	EasyJet	My biggest complaint is when you enter a new country, say in the climb, you check in and whilst you're still talking on the radio, the controller starts bombarding you with individual messages you have to reply to whilst you are talking to them. That seems redundant. EDYY are especially bad at this. They seem determined to make use of CPDLC if you're connected, so you first get "CLB to FL320" and then immediately get "Direct to XXXXX" and then "SAY REQUESTED FL___". The controller could clear you far more efficiently over voice comms, I assume that issuing these instructions on your systems is very easy. The actual ergonomics of the in cockpit DCDU (CPDLC Interface) is very tedious and it lags meaning that multiple messages are very frustrating to tear through.
Flight crew	EasyJet	Please make the italians use it :D
Flight crew	EasyJet	Seamless experience from EGTT-EDYY-EDUU-LKAA-LOVV-LHCC. Other areas need improving ASAP. Some centres send a CPDLC message then also contact by voice. Some don't hand over to the next sector so you have to log off and back on again. Maybe the EDYY controllers could go on holiday to show Spain and Italy how to use it!
Flight crew	EasyJet	Some centres are brilliant. Adding to above, LSAG, EKDK are generally very good. Handover works, response times are good. France are crap! They are inconsistent, they accept you but then continue to use voice even when very busy. I rarely bother there these days in fact apart from LFRR. We need to sort out the automatic termination or signal issues if pilots are going to use the CPDLC



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
		procedures every time.
Flight crew	EasyJet	Southern Europe need to get onboard
Flight crew	EasyJet	System is unusable or adds greater risk of confusion in LIBB and LIRR due to poor controller use. Multiples of the same instruction are standard, using voice and CPDLC at the same time. It makes the system a waste of time in Italian airspace. System not used except for frequency changes in LECM. Waste of capacity.
Flight crew	EasyJet	The implementation in Italy is not sufficient, we are under contact but CPDLC is rarely used. The message they use "CPDLC NOT IN USE" while in connection, and then "CPDLC NOW IN USE" is very confusing and adds unneeded clutter and too many messages
Flight crew	EasyJet	The main problem we face is the frequent disconnection of the link, or "CPDLC unavailable" messages, or the fact that upon transferring from one centre to another, the link is either lost or remains with the previous centre, forcing us to keep sending new notifications. This represents a disincentive for us to use CPDLC. The CPDLC experience is generally poor in Italy (the main country where I fly from), as the tendency is to give voice instructions and then replicate them on CPDLC. This generates a useless amount of notifications and noise in the flightdeck. Also, there are too many messages "CPDLC not in use", "CPDLC now in use" coming through. The best CPDLC experience is provided by EDYY, by far. Most centres only use CPDLC for frequency changes, and do not support pilots requests (e.g. level change request). It would be nice to see a more comprehensive implementation across Europe.
Flight crew	EasyJet	The practice in Italy to send the same clearance both over CPDLC and voice is very distracting.
Flight crew	EasyJet	The system became so much better over the last five years, carry on like that!



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Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	EasyJet	The use of CPDLC across Maastricht, Rhein and the UK is very good and greatly improves comms and leads to much quieter frequencies for occasions when voice comms maybe required. The operational use of CPDLC through France and Spain should be encouraged as these regions would benefit significantly from its increased use.
Flight crew	EasyJet	Too many minor changes. CPDLC is actually more hassle to use than R/T - so don't make us use it more than R/T (Climb FL340. Ack/Receive/Action. Climb FL350. Ack/Receive/Action. Heading 125. Ack/Receive/Action. New frequency 125.980. Ack/Receive....oh, not receive as that doesn't happen between EDYY and EDUU .../Action.) Please try and reduce the number of instructions, don't use it just because you can.
Flight crew	EasyJet	When transferring from EGPX to EGTT CPDLC doesn't seem to automatically connect. I have to manually log onto EGTT every time.
Flight crew	EasyJet	When transferring to a different region, particularly France, controllers acknowledge the transfer on cpdlc before we have checked in using voice. This means we get a cpdlc frequency change... then we are trying to set frequency on vhf box while cpdlc is ringing at us and is very distracting, most times out of instinct we accept cpdlc messages which mean we lose the frequency on screen which we are trying to set, then have to go back through messages to get frequency again. Also, why is there no option for controllers to log on to aircraft? In a loss of comms this would be an invaluable feature!!
Flight crew	EI	EGTT, when overflying LDN have noticeably reduced their use of sending commands via cpdlc. One can still log on but use via controllers has noticeably declined. EDYY world leaders, LECB have increased their use in recent months
Flight crew	EJ	Wonderful system spoilt by the re-login on comms boundaries, particularly southbound Brest to Madrid and between French sectors. Has to make operations easier, not on balance, the same.
Flight crew	General Dynamics	CPDLC is currently an under-utilized tool. Progress for advancement should be a high priority for all operators.
Flight crew	I am a pilot	CPDLC IS VERY COMFORTABLE
Flight crew	IJM	Why Link2000 in Europe? Most aircraft are ATN only from the manufacturer.



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	Kompass GmbH & Co. KG	CPDLC in southern European Countries is performing not good or not at all.
Flight crew	Latam Airlines	Have noticed simultaneous instructions from CPDLC and voice, specially during descent (LECB)
Flight crew	LOT	Most (90%) of the usage is to get oceanic clearance, the change frequency between sectors and very rarely "direct to..."
Flight crew	LOT	NO, Everything seems to go in a right direction.
Flight crew	Low cost airline	CPDLC must not only be implemented, but actually used by controllers.
Flight crew	MEA	We are unable to send free messages using CPDLC, only requests for a FL or a Direct can be made
Flight crew	Not Specified	A lot of arc messages when moving from one atc to another one Too many
Flight crew	Not Specified	As a pilot, active use is very important.
Flight crew	Not Specified	B737 software should be change We connect only memory station
Flight crew	Not Specified	Can you supply brochures for dummies please ;)
Flight crew	Not Specified	CPDLC is way behind of current available technology. Usually it increase pilot work load as well as head-down duration. Especially during bad weather its performance getting low too. The only improvement is text based messaging other than that it inherits drawbacks of VHF technology. I think this is not the right technology for text based messaging because of the 220 char limiting. The connection is not sustainable. User machine interface is bad too. I believe you will need more sustainable, scalable backbone transmitting technology instead of VHF based work around solution
Flight crew	Not Specified	CPDLC needs to be expanded in all airspace. This prevents noise pollution in the air traffic communication.
Flight crew	Not Specified	I HOPE CPDLC COVERAGE WILL BE SPREADED QUICKLY AND BE USED EFFECTIVELY
Flight crew	Not Specified	Make all controllers use it over Europe
Flight crew	Not Specified	My biggest gripe, is the inconsistent use of CPDLC along with limited implementation. For example in France, B1 only provides Frequency changes. Nothing else. It's a really shame!



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	Not Specified	On handover, its is a distraction to receive the second message confirming the new centre, whilst you are replying to the first message. Sometimes during high cockpit workload, one can receive consecutive messages giving instructions whilst trying to respond to the previous message for eg, contact 111.11, descend FL 340, turn right heading xxx. In quick succession, such messages cannot be dealt with safely in the cockpit as the pilot monitoring has to respond to cldlc, note down the clearance, monitor the action of the flying pilot even as the next message is arriving. Overall the system is very good, and offers crew an extra backup option in case of radio congestion, radio failure of miss selection. EGTT could make more use of the system
Flight crew	Not Specified	Only Eggt and eddy use CPDLC, you can log onto other centers but they rarely give you a clearance. I often don't bother logging on if I'm flying in any other center as there is no point
Flight crew	Not Specified	Operation of the system in most part of Europe should be improved.
Flight crew	Not Specified	Please insert DESCEND VIA and CLIMB VIA clearances
Flight crew	Not Specified	We USE CPDLC Inside NAT HLA airspace, but throughout Europe there are too many discrepancies between regions, we absolutely cannot rely on it, and we use mostly voice.
Flight crew	Novair	I normally disconnect CPDLC at top of descend due to high workload on the approach.
Flight crew	Novair	In some centers we connect But controllers seems to prefer normal voice communication over CPDLC
Flight crew	Novair	It should be a rule for ATC to disconnect CPDLC when the aircraft starts it's approach. To disturbing with CPDLC during approach.
Flight crew	Private Operator	Not installed yet but I was asked to complete the survey. This time next year the survey will be more applicable to us. Thanks though, it was insightful.
Flight crew	Qatar Airways	Few CDPLC area effectively in use. EDYY, EGTT, EISN, EGPX are OK. LKAA accepts connections but doesn't really make use of it. No real experience with other areas but for most of them CPDLC not in usage. CPDLC should be used everywhere, coordination and automatic transfers should become a standard. If all the Europe zone would make an effective use of CPDLC, it would be great. Voice must remain the primary method of communication.



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	S7 Airlines	CPDLC is a very good idea. I m happy, when its my luck to operate aircraft with CPDLC. Currently problems are: we need to speak with every sector one center by controller request, LIMM, LFMM often just omit our message about readiness with SPDLC, short Swiss has two centers(?).
Flight crew	S7 Airlines	It will be better to allow flight crew use free text via CPDLC. A few functions only for crew
Flight crew	S7 Airlines	LIMM!!!
Flight crew	S7 Airlines	Misunderstanding if it's written that CPDLS is available in specific region but doesn't work...
Flight crew	Scoot	Very useful in help reducing workload
Flight crew	SDM_Rossiya Airlines	We are only in the beginning of using CPDLC (FANS B+) as the routine means of communication.
Flight crew	SWISS	A lot of sectors (especially France, Spain, London Area) are not using it; This should be improved. Especially with bad voice quality in Spain it would be an improvement!
Flight crew	SWISS	CPDLC usage should be more encouraged by the respective centers and pilots shall be advised by voice to logon in order to set focus on it!
Flight crew	SWISS	CPDLC would be great, but with some unused airspace or motivation from certain ATC station it is often a bit disapointing to use CPDLC. But overall I use it on each flight if it is available in the respective region. Thanks for your effort to bring it to a usable level.
Flight crew	TCX	The main issue is the varying standards of FANS A / B when we operate eastbound with FANS A aircraft cant log on to many centers. We are looking to implement FANS C that would be helpful in using CPDLC more
Flight crew	THY	After first cpdlc contact with a new controller we got 2 new message, one is to confirm we contact with controller and the second is to confirm the name of the controller unit. I personally see this second message is unnecessary. The name of the controller may be given in the first message. Thanks for giving a chance to share my opinion. Best regards.
Flight crew	THY	All Country must have CPDLC in sort time
Flight crew	THY	All FIR Controllers should apply CPDLC
Flight crew	THY	Can you spread tjis procedure all around Europe
Flight crew	THY	Coverage must be improved and all voice comm have to cancelled accept Guard channel at last.



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	THY	CPDLC is not commonly used in European Airspace although there are instructions for logon. That should be improved.
Flight crew	THY	CPDLC is one of the most important improvement that makes pilot workload a lot less. I hope it will be common in airspaces all over the world. Most major problem I face with is that we cannot connect CPDLC to European network except London and Maastricht in A330 fleet although we can connect to European network from A320 fleet. I still don't know what the reason is for that.
Flight crew	THY	CPDLC should be provided all around the WORLD
Flight crew	THY	East Europe CPDLC must be improved
Flight crew	THY	Even if some control units mandate using CPDLC in their area, I don't receive any response when I notify them and can't use CPDLC. There are still some controllers who issue voice instructions, even if we are connected with CPDLC. Also, automatic transition is really nice over Ocean but it never works in Europe. Since most of the European countries are small, I have to spend lots of time to find out CPDLC codes and notifying them.
Flight crew	THY	Generally Needs to improve
Flight crew	THY	I expect to use it in all European countries including descent and climb phases.
Flight crew	THY	I usually fly far east region and use CPDLC in that area. Generally I don't have any idea about European area CPDLC services, sorry..
Flight crew	THY	In Europe, I don't know the reason but I can't use CPDLC (especially failed to connect). In other areas it is very helpful.
Flight crew	THY	In some cases for example we receive cpdlc msg during a transition from one center to another ; contact LOVV control on freq 133.55 Then also on the cpdlc screen "active atc LOVV" appears. In this case shall we still initiate a voice call or "active atc control" message on cpdlc is enough
Flight crew	THY	it should be main communication aid for aviation in the future
Flight crew	THY	It should be mandatory all over Europe asap.
Flight crew	THY	IT SHOULD BE START USING THE WHOLE EUROPEAN AIRSPACE
Flight crew	THY	It should be used by more countries and the usage become a standard. Switching CPDLC usage to legacy communication procedures and back again CPDLC may end up with a communication error.



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	THY	Keep up the good work!
Flight crew	THY	Looking forward to have more CPDLC coverage and options soon.
Flight crew	THY	Many / Often frequency change request comes in short time in EU Airspace via CPCLC.
Flight crew	THY	Most crew I flew with are unaware of the difference of CPDLC using ATN and FANS - conflicts and ambiguities in documentation from aircraft manufacturers and navigation service providers makes this worse
Flight crew	THY	Much problem of "next atc " function.
Flight crew	THY	Need to be used actively worldwide
Flight crew	THY	Need to use all airspaces as soon as possible
Flight crew	THY	Number of airspaces using CPDLC is not enough yet and coverage should be improved and widespread for the other countries and airspaces.
Flight crew	THY	On my aircraft type we only have FANS 1/A+ and most of the airspace are not FANS 1/A+ compatible. I can only use CPDLC over Maastricht, Scottish and London. I would be nice to see more FANS 1/A+ compatible airspace.
Flight crew	THY	Over Europe Airspace except EDYY and UK stations does not connect nor reply.
Flight crew	THY	Over the last month we had several times problems to log on with EDYY. Initially I thought it was a problem with OUR aircraft, but unfortunately that was not the case. I hope that EDYY (covering a relatively large area with lots of frequency changes) is addressing the problem and solving it.
Flight crew	THY	Re 8th question, poor exp are because of not being able to log on.
Flight crew	THY	Should be implemented asap.
Flight crew	THY	Some centers in European airspace are not eager to use CPDLC.
Flight crew	THY	Sometimes cpdlc exits in the charts, but I can not connect. The fact that some centers have Fans 1A and others have ATN is a problem.
Flight crew	THY	Sometimes, controllers are using voice contact which is not necessary even if CPDLC has been connected.
Flight crew	THY	That would be nice and even user friendly if the notification times of the different FIRs could be standardized or at least there was a common remaining notification time for each of them



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
Flight crew	THY	The other UE Countries should be in the system.
Flight crew	THY	UK, EDUU AND EDYY use CPDLC in very good way but other Europeans not.
Flight crew	THY	We are trying to connect via cpdlc but we can not be succeeded every time. Cpdlc should be improved in all europe. For my opinion even Turkey must have cpdlc to. It is the future. I hope we will just monitor the frequencies in the future. Sometimes radio telephony is so busy. We miss our callsign due congestion of rt.
Flight crew	THY	When will we use CPDLC efficiently in Europe airspace?
Flight crew	THY	You are on the right way , i wish you succes
Flight crew	Turkish Airlines	Some times controllers dont use cpdlc at all. We would be connected but they still give all of the commands via voice(descend,climb,direct etc.)
Flight crew	United Airlines	There needs to be one standard for CPDLC communications so that operators can appropriately equip their aircraft. With the confidence that it will not change in the next 5 years.
Flight crew	UPS airlines	I fly a U.S. registered B-767. although I do not understand the VDL2/ATN architecture very well, I don't understand why all ANSP's are not CPDLC equipped. London, Shannon, and Maastricht are the only ANSPs that consistently provide service. I'm not sure if this is an equipment compatibility problem or something else.
Flight crew	Virgin Atlantic	FANS Equipment not always logging onto Aircraft which is FANS 1 and 2 (787-9)
Flight crew	Virgin Atlantic	It's annoying to log on then get voice instructions
Flight crew	Virgin Atlantic	Sometimes it works with FANS selected, sometimes it doesn't, no way of knowing if it will work or not.
Flight crew	Virgin Atlantic	We constantly have problems with some of our 787s in Europe. The aircraft frequently will not give us the SEND prompt to log on unless we tick the FANS box for centres that do not support FANS so we are unable to logon.
Flight crew	VistaJet	Its the duture, bring it on
Flight crew		Unable log on with LOVV and EDUU on Saturday 16th March.
Flight crew		using cpdlc on the ground would be perfect especially on bad weather conditions (requesting push back ,start up time and taxi clearance)



DATA LINK USER SATISFACTION SURVEY

Role	Organisation	Do you have any other comments, questions, or concerns?
General Aviation Pilot	Not Specified	Not a perfect system though should be improved
General Aviation Pilot	THY	Improving CPDLC usage over Europe would help Aviation a lot..
General Aviation Pilot	THY	Very good service I would like to see this system at all over the world thanks
Other (please specify)	Aeroflot	My point of view CPDLC should be mandatory except flights with pilots how train or practice Radio com with European ATCO, without restriction. Because it's good experience after flights within Russian Federation FIR.
Other (please specify)	Airbus Cockpit Ops Test	Both Pilots and Controllers Training to be improved.
Other (please specify)	Bombardier	I would suggest a checklist or similar for new operators beginning to use the service and some type of communication for outages and system status. Controllers were receptive to our testing (contact on voice). FANS to ATN transistion did not occur as expected (only one facility capable and status was unknown)
Other (please specify)	Corporate Aviation	An auto CDA tunig function during the phase of CPDLC login would be usefull.
Other (please specify)	Irish Aviation Authortiy	The transfer from EISN to EGGX is not always completed before the Pilot late is raised, this is an operational issue for EISN.
		Just a comment. How do you ensure this survey is done by actual CPDLC users as the survey form is publically accessible by all internet users who may not be necessarily controller or pilot?