



7, 7A Category

Is it worth it?

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THE STANDARDS, SPECIFICATIONS AND WHAT WE HAVE OF IT

Studied in June 2006 specification 802.3an - that is 10GBASE-T impacted structural cabling. Subsequently approved in 2007, standard BS EN 50173-1 implements to many changes, including the standardization of the categories of 7.7 A (Class F, FA). This caused a lot of questions, is it worth investing in a cabling that supports applications, and whether it is currently the most future-proof solution.

NEW CATEGORIES - NEW PROBLEMS

Category 7A supports applications that

use the frequency upto 1000MHz. The intention of the creators is to handle protocol 40 GbE, 100 GbE in the future. Now one should consider whether such transmissions will not cause unusual noise. Well you say, the solutions are shielded, but what do you do for laptops. Normal laptop power supply is not equipped with grounding, hence charges moving along the shield will be reflected in the direction of distribution cabinets, causing further disruption. The next question are the connectors, as the standard introduces two new connectors for the above category GG45 and TERA, unfortunately they are not compatible with the most popular RJ45.

So far devices equipped with these connectors have not been released, so there is a need to use an adapter (GG45-RJ45, TERA-RJ45), but to which category they belong to ? The standardization organization TIA / EIA delayed the introduction of Category 7, 7A, because considers the solution as not future-proof, hence the majority of active

equipment manufacturers head-quartered in the U.S. do not release solutions of GG and TERA.

NEW CATEGORIES - A RETURN TO THE PAST?

The above-mentioned categories can be compared to Category 4 that exceeded the parameters of Category 3, as time it showed it was solution with no future entirely displaced by the Category 3 still used today.

IS IT WORTH IT?

And now the question of whether to invest in Category 7, knowing that category 6a supports 10GBASE-T over the whole channel length, from the active devices to the end user. This solution is much cheaper, and knowledge on future data encoding methods allows full support for VoIP services, video conferences, etc., without need to re-invest in cabling and active devices. Therefore, newer methods for solving the transmission at higher levels of ISO / OSI layers will lead to a decrease in bandwidth. The development of these solutions was due to only the desire to meet the demands of

applications 100GBase-T. Although the Class F and Fa provide such transmission, then it works correctly only for 5-10 meters.

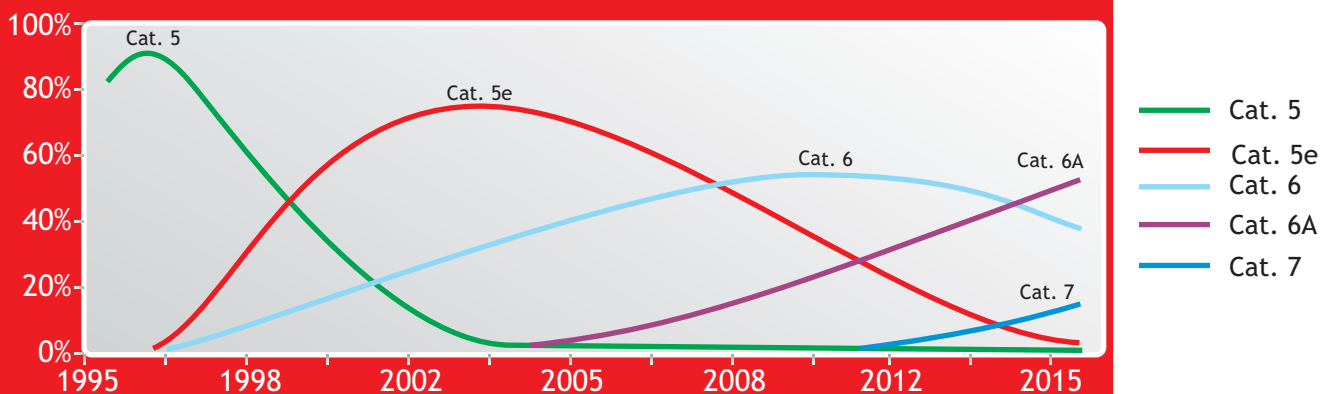
SUMMARY

In summary, the cabling of category 7, 7A significantly expanded the bandwidth, thus allowing for the use of ever more demanding applications, but a lot of confusion was introduced in the applicable connectors. Standardized plug in the 80's led to the unification of logical termination of wiring, thereby disseminating throughout the world with RJ45 connector. Just one thinks

what would be the cost of implementation of connectors GG/TERA, still bearing in mind that the cabling is unlikely to find its application in the market. Therefore, the best solution today seems to be cat. 6A, which fully supports 10GBase-T, and giving rise to new methods of coding has great intentions for the future.

„The pace of the equipment development and users requirements has exceeded engineers expectations who several years ago did not even dream about such solutions. Taking into consideration tendency of transition to higher category of structural cabling every 6 years in the following year reign category 6A.”

Sales drop diagram defined by categories



Author:
Marcin Oleszczuk
Structural Cabling System Product Manager