BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition by MPower Communications Corp. and Florida Digital Network, Inc. for Expedited Temporary and Permanent Relief Against BellSouth Telecommunications, Inc. For Alleged Anticompetitive Conduct Regarding Florida Digital Network Inc.'s Proposed Acquisition of Assets and Customer Base of MPower Communications Corp.	)	Docket No. 030301-TP Date: May 21, 2003

PREFILED DIRECT TESTIMONY OF

JOHN DRAGER

SUBMITTED BY:

FDN COMMUNICATIONS AND MPOWER COMMUNICATIONS

Filed July 18, 2003

Q. Please state your name and address.

A. My name is John Drager. I reside at 17 Meadowbrook Lane, Freehold, New Jersey 07728.

Q. Please describe your education and your work experience in the telecommunications sector.

A. I received a Bachelor of Science degree from the University of Maryland and a Master of Science degree from the Massachusetts Institute of Technology (MIT). Both degrees emphasized Systems Analysis and Operations Research. I hold two patents and have authored numerous technical articles and publications.

I have spent 39 years in various aspects of telecommunications research and development, with over twenty years in technical management. For the past four years I have served as a principal/senior consultant for Telcordia Technologies ("Telcordia"). As a principal/senior consultant for Telcordia, I led several Operations Support System-related ("OSS") projects, including defining the end-to-end testing plan in the Verizon Pennsylvania and Virginia regions, and defining the suite of business integration tests for both Verizon and SBC in order to enable the ordering and provisioning of xDSL and other next-generation services.

In 1999, I worked closely with the California Public Utility Commission to define OSS testing scenarios for ILECs seeking 271 authority. I participated in Arizona Corporation Commission Staff meetings when similar planning was being pursued to examine USWEST's compliance. During my tenure as a Senior Systems Architect for Telcordia, I developed service architectures to support provisioning and service assurance for new Internet Protocol ("IP") services, as well as the

enhancement of existing IP services, and also developed enhancements to USWEST's (now Qwest) Local Number Portability ("LNP") OSS architecture.

Prior to my work with Telcordia, I was employed with AT&T for 34 years, including positions with Bell Laboratories and AT&T's General Departments. I worked on a variety of telecommunications-related research and projects during my tenure at AT&T, including defining systems architecture and service order processes, for local service as well as other initiatives.

Q. Have you previously testified in a regulatory proceeding before a state utility commission, the FCC or a hearing officer?

A. No. With the California PUC's 271 proceeding I worked with its staff, leading the joint ILEC/CLEC team to define a test plan to assess PacBell's compliance with the FCC's 14-point checklist.

Q. What is the purpose of your testimony in this proceeding?

A. I will address the Telcordia white paper dealing with IAC/EC codes and the technical aspects of changing carrier records, if necessary, to reflect a new ACNA.

Q. Can you briefly address the Telcordia Technologies white paper authored by Lois Modrell that speaks to the use of IAC/EC codes?

A. The white paper sets forth an industry proposal concerning the assignment and use of codes that represent a telecom service provider's name. The white paper is attached to the testimony as Exhibit __ (JD-1). IAC stands for "Interexchange Access Customer;" EC stands for "Exchange Carrier." In the instant matter we are concerned only with IAC codes -- Mpower has been assigned "NVE," and FDN has been assigned "FDW." As detailed in the white paper, Telcordia is assigned the

responsibility for establishing and maintaining these codes in a national database. Telcordia's Common Language Technical Advisory group is funded by the members of the American National Standards Institute ("ANSI") T1 group to perform this service on behalf of the industry. Notably, the white paper does not mandate or discuss where or how IAC codes are to be used, except at a high level, *e.g.*, ordering, circuit provisioning, billing, and bill verification, and that the IAC code is used to populate the ACNA field. The paper acknowledges that when a company places a local service order, its IAC (ACNA) may be checked against the Telcordia database.

The focus of the white paper is Telcordia's changing carrier names or codes when there is a change in a carrier's corporate status. The white paper states that Telcordia can change the name associated with an IAC (ACNA) when, for example, a company acquires all of the assets of another company. The white paper does not recommend a specific end result where less than the entire bundle of a company's assets is purchased. Under a partial asset sale scenario, Telcordia will not change its database, and the acquiring company may negotiate with the ILEC to change the code values in the ILEC's database(s).

It is important to bear in mind that Telcordia is not an arm of government with enforcement power, nor is Telcordia's work mandated by the FCC or any PUC. Telcordia is supported by industry participants in the ANSI. ANSI standards are defined by consensus and have the effect of being recommendations rather than requirements. While standards often provide an umbrella under which participants operate, even adherence to a standard does not guarantee interworking between partners. For this reason, most participants engage in integration testing before

embarking on full service. In the case at bar, I believe Bellsouth and FDN could agree to continue to use both the FDN and Mpower IACs (ACNAs), if such use were to prove technically feasible and such use would not affect the operations of other telecom service providers.

Q. In your opinion, how, if at all, would FDN's exclusive use of the Mpower ACNA within BellSouth's nine-state region adversely impact BellSouth's ordering, provisioning and/or billing systems?

A. I do not believe that any of BellSouth's systems or processes would be adversely affected by FDN's exclusive use of Mpower's ACNA within BellSouth's operating region. Currently, FDN operates only in Florida and Georgia. Mpower neither operates anywhere within the BellSouth region, nor, to the best of my knowledge, has Mpower any plans to operate within BellSouth's region. Under these circumstances, changing the IAC code is in a certain sense cosmetic. BellSouth's LSR edits would be unchanged. A valid IAC code in the ACNA field would be provided: either NVE or FDW. Telcordia's database would not be changed. BellSouth's provisioning systems would require no change, nor would its billing or service assurance systems. Mpower would continue to operate in other ILEC regions with no change.

Q. Would FDN/Mpower customers be affected by FDN's use of the Mpower ACNA?

A. No. The operation would be transparent to them.

Q. To the extent that the Commission prohibits FDN's exclusive use of Mpower's ACNA in BellSouth's nine-state region, please explain how the record changes could be performed.

A. There are basically two ways to effect the changes necessary for BellSouth's records to reflect FDN's, rather than the Mpower's, ACNA. One way is to use existing LSR/ASR procedures to perform a "record only" change in which records would be changed individually, record by record. From a systems perspective, the "record only" method is a clumsy, "brute force" approach to changing data elements. This is true in an electronic, as well as a manual, environment. With an electronic "record only" change, there is obviously no need for physical work by ILEC craft. But it seems to me that this would be considerable, needless electronic processing for very little value -- analogous to changing the line record for each subscriber on a line-by-line basis when an area code split occurs. A manual "record only" change would be the worst possible choice for effecting such changes as this method is time consuming and labor intensive and therefore even more costly.

The better method of performing such changes would be to perform a software/database update. By contrast, a software/database update could be completed as a project over the span of a few weeks at significantly less expense.

Q. Tell me more about the software/database update approach. What steps would need to be taken to perform such an update?

A. (1) A review of the service architecture would be performed, with a complete list of data elements to be updated. My understanding is that the ACNA is the primary code that is being addressed in this matter. Bellsouth should verify that no other data elements are involved, *i.e.,* CCNA, CIC, OCN, or other data element not specified.

(2) All instances of the ACNA occurrence should be identified. From my experience in the industry, here are candidate parts of a service architecture where service order data are processed or stored:

i) Gateway to trading partner: (the equivalent of a service order entry ("SOE") system) This is where edits are performed to assure that syntactic errors are not made. It is also where invalid codes are screened and rejected. (*E.g.,* an invalid ACNA).

ii) Service Order Processing Control System: This system accepts an input from the upstream SOE system, or gateway system, and checks for required, expected data. If the data is complete, processing continues, else a rejection (error in service order input) is returned to the SOE, or a Request for Manual Assistance ("RMA") is generated to enlist manual support to further process the order.

iii) Network inventory systems are queried, and updated. Typically a facility system, such as FACS, is used. The ACNA, as part of the service request, may be inventoried in this system, for instance to identify meet-point information.

iv) If appropriate, numbering inventory is queried, and updated. Some companies manage this resource with along with network switching resources, such as is done in Telcordia's SWITCH ™ System.

v) Network inventory is queried and updated. Network switching system resources are allocated; etc. and recent change information is prepared to

implement any needed network rearrangement. For a change in ACNA, nothing should occur here.

vi) If appropriate, as for a design service, a Trunk Record System could be queried and updated *e.g.,* TIRKS.

vii) A network service database system should be updated, to support service assurance and trouble management. It is likely that the ACNA would be used here to enable craft to identify CLEC service providers.

To complete the service flow, completion information should be returned, probably through the SOE to Bellsouth's Billing and Customer Record systems.

viii) Customer Record Systems, in turn would cause updating of such ancillary management systems as Directory White Pages or Directory Yellow Pages. Next, the Line Information Data Base (LIDB), which is used for credit card, collect and third party billing should be reviewed to determine whether the ACNA resides there. The E911 database should not be affected; it is populated as a result of the new connect LSR, but we are not dealing with new connects, or changes here.

ix) The ACNA and other trading partner information should reside in billing and customer record systems to facilitate billing, as appropriate.

To summarize: the functional systems indicated above have potential for both screening and storing service order data. No system contains or screens all data, but each should be reviewed for its role in the process.

(3) The Facilities, Network Service and Billing systems have databases that would likely contain ACNA information. The SOE would have an administrative table that would screen for invalid codes at the front end of the process. Since we are not talking about any use of invalid code, it might not be changed; nevertheless a review of the flow would verify this.

(4) Next, a short script should be executed, in each system that was identified above. Although I am not a C++ programmer, the analog is to Search (system and perhaps data field) for string [NVE] and replace it with [FDW]. Globally. UNIX® commands GREP do this, as does Microsoft® Word's edit command: "Find and Replace All."

(5) As with all automated scripts, a review should be performed to ascertain that no extraneous or erroneous substitutions were made. In this case, since the strings are not likely to occur in other contexts, this search should be simple.

(6) A similar review should be performed on administrative tables if the architecture review indicated the ACNA were in any of these tables. In this case no script is needed. The system administrator has the ability to update admin tables.

(7) A suite of functional and regression test cases should be executed to verify that:

a) The intended changes were made successfully

b) There were no other effects on the system architecture.

Q. Is there is precedent for such work?

A. Yes. ILECs typically upgrade the software in their architecture with a major annual release upgrade and periodic "dot" releases during the year. These prepared

upgrades are usually performed over a weekend, to minimize any customer effects. It should be pointed out that we are not talking about network upgrades, here, but rather the support systems, so that "customer effects" would be the inability, for example, to process a change in service during that weekend. Service itself is not affected. For major upgrades, the service architecture is scheduled to be unavailable at 6 PM Friday evening, for example, and back on line by Sunday midnight. Then even when problems occur, service orders can again be accepted at beginning of business on a Monday.

There is also precedent for using procedures to update databases, the most common one being the establishment of a new NPA, and consequent NPA split. Such activities do affect the network of course, so the effect of NPA split updating is far more extensive than the database changes cited above.

Q. Can you speak to the cost of effecting such changes in this manner?

A. From my experience, I can comment on the relative effort and skill level needed to accomplish database changes such as this one. For the analysis of the architecture and identification of data changes to be made, would probably take an experienced architect a few of days: say 3-5 staff days. I myself have held more complex architecture reviews that took a day to prepare, and a half-day to walk through. This architect would need input from system subject matter experts, perhaps 6-8 hours per system. If my assessment of the overall system impact is correct that would translate to 8-12 subject matter experts; so perhaps a total of 10-15 staff days would be needed to identify areas of impact. This effort requires 2nd level management expertise. When this review is complete, it will be possible to develop a reasonably accurate

estimate of overall effort to implement. Based on my experience, the following are likely minimum tasks that would be required: An additional day per system would be required to define the software procedure, and plan for its execution. Execution could take as little as 1 hour per system, but one should plan for 1-2 days to account for software coding errors, and other system environmental effects. So again, another 5 to 10 staff hours would be required, with skill level of 1st level management. Definition of the integration test suite should take 2-5 staff days to define and review (1st level management). Software updating could probably be done during normal business hours, if the CLEC agrees, else a single weekend day should be ample. This effort would require between 5-10 staff days to complete (5-10 people for one day). The execution of the integration test suite would probably take another 5-10 staff days. From start to finish, the work could conceivably be completed within a calendar month. The total staff effort, contingent on the architectural review, could be 30-60 staff days.

Q. Does this conclude your direct testimony?

A. Yes.

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PREFILED DIRECT EXHIBIT JD-1

FILED WITH TESTIMONY OF JOHN DRAGER

SUBMITTED BY:

FDN COMMUNICATIONS AND MPOWER COMMUNICATIONS

Filed July 18, 2003

Telcordia Technologies

Performance from Experience

WHITE PAPER
IAC / EC CODES

A. **Introduction**
B. **Assignment of new codes**
C. **Required documentation**
D. **Name Changes**
E. **Mergers, acquisitions, buyouts, etc**
F. **Consolidated codes**
G. **Purchase of Assets**
H. **Use of codes**
I. **Z codes**
J. **Invalid IAC codes (ZZZ, CUS, Codes not in D/B)**

A. Introduction

The IAC and EC codes represent a company name and one code per company name is assigned. They identify Incumbent Local Exchange Carriers, Competitive Local Exchange Carriers, Interexchange Carriers, Resellers, Wireless Services Providers, Enhanced Service Providers, Telecommunications Billing and/or Processing Companies, Competitive Access Providers, Regional Holding Companies and any other type of company that is part of the telecommunications industry.

Separate codes are not assigned for different functions of a company. If a company falls into more than one of the above categories, the rule is as stated: The code represents a company name and one code per company name is assigned.

IAC formerly stood for Interexchange Access Customer. As changes have occurred in the telecommunications industry, the words "Interexchange" and "Access" became confusing to users of these codes. The COMMON LANGUAGE Technical Advisory Group recognized this dilemma and made the decision to refer to these codes as IAC codes.

An IAC is a telecommunications or information provider who may be classified as any of the functional entities listed above.

The code is not owned by the company to whom it is assigned. The code is part of the national database that serves as a repository for all codes assigned. The code is non-transferrable and cannot be part of a legal agreement to be sold or changed. When changes are needed, contact Telcordia and provide legal documentation from the state to substantiate the request.

An Exchange Carrier (EC) is a telecommunications entity that provides dial tone and local exchange switching of telecommunications services and has at least one wire center. Resellers of local exchange service are considered to be Exchange Carriers for coding purposes even though they are not the network provider. The codes are required for these companies to do business with the companies from whom they buy (or lease) numbers, dial tone, facilities, etc.

IAC codes and Exchange Carrier Name codes are assigned to these companies by Telcordia as the maintenance agent for ANSI T1.251. The attempt is made to make the codes mnemonic when such a code is available and not already assigned.

The IAC code is made up of three alphabetic characters.

The EC code is made up of four alphabetic characters. There are some two-character codes that are standard. These codes belonged to the former Bell System companies and at divestiture of the Bell System the judge allowed the companies to keep those codes to prevent having to change every record in every database. No other two-character codes were ever assigned and none ever will be.

These codes are used by the following types of organizations: Network Distribution, Switching Operations, Financial/Comptrollers and Regulatory/ External Affairs. They are particularly applicable to the following operations: Ordering, Circuit Provisioning, Billing and Bill Verification.

Two important uses of these codes are interfacing between companies and achieving flow-through. These codes serve as a trigger to get an order moving through the process in most companies.

When a company places an order with a provider, the IAC code (or ACNA/CCNA) or the EC code (or CC) and the company name on the order are verified against the Telcordia national database. If there is a discrepancy, the provider will refer the company to Telcordia to follow procedures to update the database.

Codes not in the national database are invalid.

B. Assignment of new codes

One code per company is assigned. Separate codes are not assigned for different functions of a company. If a company functions as more than one of the kinds of entities listed above, ONE CODE IS ASSIGNED to the company name, not individual codes to the functions. If it is necessary to define a function of a company, it is done in other ways, e.g., with the use of Field Identifiers on a Service Order.

(A given company may be assigned one IAC code as well as one EC code. The requirement for which code is needed is determined by the companies with whom the company does business, i.e., some companies require a three-character code for their processes and some companies require a four-character code.)

C. Required documentation

Documentation required to substantiate the request for a code or change to a code is legal documentation from the state; generally the office of the Secretary of State.

Per ANSI Standard T1.251, the IAC Code identifies a company. As the maintenance agent for the ANSI Standard, Telcordia upholds that definition. To that end, legal documentation is required showing a legal company name to be input into the database. This assures that the information going in is as correct as possible and that all users of the database can be confident about the information

Generally the legal document will be called Articles of Incorporation. However, not all companies are incorporated and not all states use the same name for the document. Here is a partial list of some document names that are acceptable as legal documentation:

Amended Certificate of Convenience and Necessity
Articles of Amendment
Articles of Amendment to Articles of Incorporation
Articles of Conversion
Articles of Incorporation
Articles of Merger
Articles of Merger, Consolidation or Exchange
Articles of Organization
Articles of Organization Limited Liability Co
Certificate of Amendment to Certificate of Incorporation
Certificate of Assumed Name
Certificate of Assumed or Trade Name
Certificate of Convenience and Necessity
Certificate of Existence
Certificate of Existence with Status in Good Standing
Certificate of Formation
Certificate of Good Standing
Certificate of Incorporation
Certificate of Merger
Certificate of Public Convenience and Necessity
Certification of Fictitious Business Name
Certified Fictitious Business Name Statement
Registration of Fictitious Name
Restated Articles of Incorporation with Amendments

Forms S-1 or 10K filed with Securities and Exchange Commission will very often be helpful in identifying subsidiaries.

D. Name Changes

To effect a name change for a particular IAC or EC code, Telcordia must be provided with legal documentation from a state government showing that the company name has **changed from what is shown in the database to what the client desires to have shown**. Documentation that does not specifically state a name change is not acceptable for a change to a company name in the national database.

Company name changes are requested when:

---a company changes its name
---a company purchases (or otherwise acquires) another company and the name of the "old" company changes to that of the purchasing company.

There may not be a direct, one-step link from the database name to what is desired because interim name changes may not have been provided to Telcordia. In this case, legal documentation that shows the links from the database name to what is desired is acceptable. For example:
Database Name = Company A / Desired Name = Company D
Documentation that depicts Company A to Company B to Company C to Company D is acceptable to change the name from Company A to Company D.

In some cases, for a variety of reasons, legal documentation of a name change is not available. Some of these reasons are:
---the company name did not actually change
---the "new" company bought assets, not the whole company
---the purchase occurred, but for business reasons, the name of the company will not be changed
---documentation cannot be found.

In these cases the company name associated with the company name in the database for the code will not be changed. That code and its name will remain as is.

To do business (account information, provisioning, billing, etc) with a provider, the company which made the purchase will contact the provider and negotiate for changes in account information for the code (the one where the name cannot be changed) to the purchasing company's own code. This negotiation will include, but not be limited to, the purchasing company showing the provider that the purchase was made, a list of the billable items that are now part of the purchasing company and the code that they are now a part of. The provider will then effect the changes in their systems.

The negotiation with the provider is NOT to change the name associated with the code that cannot be changed, but to change the code on the appropriate billable items to the purchasing company's code. Only Telcordia can make a name change for a code after review of the supporting legal state documentation.

The code that cannot be changed will not be used on any records that are identified as the purchasing company and it stays in the national database with its original meaning.

The reason for this is that legal state documentation supporting a name change has not been provided.

The difference in the requirements for the Telcordia national database and doing business with a provider goes back to the definition of the code. The code represents the legal company name and legal documentation from a state is required to substantiate it. The provider needs to know that a purchase of another company (total or partial) occurred and what billing items need to now be associated with the purchasing company.

Example :
Database before change:
ABC Alpha Beta Cellular.

With legal documentation of a name change, the database will show:
ABC New Company Name (Prev Alpha Beta Cellular).

Without legal documentation of a name change, the database will show:
ABC Alpha Beta Cellular (same as it was to start with).

It is not a problem to have an item in the database for a company that "no longer exists". If it truly no longer exists, that code will never be used. If part of the company still exists under that name, the code will validly be used by that company. The standard does not allow for database deletions, because if deleted, codes would be available for assignment and if some instances of the "old" code still exist in some database somewhere, incorrect billing could occur.

If a company purchases a company that does not have a code assigned to it, obviously there is nothing to change and the purchased company becomes part of the purchasing company using its IAC code.

If a code has been used invalidly, i.e., someone made it up, there is also nothing to change. The purchased company becomes part of the purchasing company using its code.

For an acquired company that does not have a code, a new code for that company will not be assigned for the purpose of changing it to the purchasing company. That would be a waste of a code and is not necessary. The purchased company becomes part of the purchasing company using its code.

Abbreviation/Acronym list:
ACNA = Access Customer Name Abbreviation
ANSI = American National Standards Institute
CCNA = Customer Carrier Name Abbreviation
EC = Exchange Carrier
IAC = (Interexchange Access Customer)
Prev = Previously

E. Mergers, acquisitions, buyouts, etc

When mergers, acquisitions or buyouts occur, the Telcordia COMMON LANGUAGE® Products Business Unit General Codes Chairperson should be informed so that the code(s) will reflect the way the "new" company is doing business. Telcordia works with each company to determine the best way for the change in structure to be represented, i.e., name change on existing code, referencing several existing codes to now use one overall code, etc.

To effect a name change for a particular IAC or EC code, Telcordia must be provided with legal documentation from a state government **showing that the company name has changed from what is shown in the database to what the client desires to have shown**. Documentation that does not specifically state a name change is not acceptable for a change to a company name in the national database.

F. Consolidated Codes

Codes are consolidated when a company purchases, merges with or otherwise acquires another company and the "new" company desires to do business with their trading partners under one IAC (ACNA) code. This decision is a business policy decision on the part of the "new" company and it is up to them how they choose to do business. When the decision is made to use one code, documentation is provided to Telcordia and the reference to the code that is to be used is shown in the database. Obviously, the "new" company will communicate to their trading partners what they have decided to do, how they will be doing business and the code they will use.

Example:
In the database **before the transaction**:
AVN Aviation Telecommunications Company
OHC Optical Horizons Company

Aviation buys Optical and chooses to use only the AVN code in their future business.
In the database **after the transaction** and after providing documentation to Telcordia:
AVN Aviation Telecommunications Company
OHC Use IAC Code AVN
(The "Other Previous Names" field in the database will show Optical Horizons Company on the OHC record.)

This means that OHC **is no longer** a valid IAC code.

G. Purchase of Assets

Generally, when one company purchases the assets of another company, a name change does not occur. The purchasing company is not acquiring the company, only its assets. In many cases, the original company name still exists and that company may remain in business. In addition, more than one company could buy portions of the assets of a particular company. These are more reasons to support the requirement of legal documentation to substantiate a company name change.

H. Use of codes

The IAC and EC codes **represent a company name**. (The IAC code is used to populate the ACNA field and is frequently referred to as the ACNA code.)

They do not represent
---general partnership,
---partial or total asset ownership or
---other financial involvement.

Separate codes are not assigned to a company for the purpose of internal tracking of different business items.

They also do not represent
---tax areas
---pricing plans
---tariffs
---functions within the company.

None of these examples are appropriate uses of the codes. In all of these cases there are other appropriate ways within the a company's processes to specify these kinds of scenarios, e.g., service order, LSR/ASR (Local Service Request/Access Service Request), account information, billing, etc.

I. Z codes

Codes that begin with the letter Z are for local assignment and use and are invalid IAC codes except for 1 real one in the database (ZPC). A company may have internal reasons for wanting to track various items through their processes and these codes can be the vehicle. There may also be reason during a trial or test of a new system or service to use these codes. They could also be used locally for other functions. Each company assigns their own Z codes if they have a need. They keep track of the meaning of the codes within their company. **THESE CODES ARE NOT TO BE USED TO INTERFACE WITH OTHER COMPANIES.**

26 codes, ZTA through ZTZ, all with the meaning "Locally assigned for internal testing purposes-Invalid IAC code" are in the national database for local company use. Assigning these values helps to streamline a company's processes.

J. Invalid IAC codes (ZZZ, CUS, Codes not in D/B)

ZZZ and CUS are not IAC Codes or ACNAs, but defaults for a required field in ordering and other processes. For example, they would be used for a customer who orders using the ASR / LSR process but who would never be assigned an IAC code. **Therefore, ZZZ and CUS should never appear in the EC / IAC field in CLONES.**

Note: Both ZZZ and CUS are in the national database showing that they are invalid. They carry the same definition:
CUS: Default Value for Casual Customer. Not a Valid IAC Code
ZZZ: Default Value for Casual Customer. Not a Valid IAC Code

Codes not in the national database are also invalid.

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