

Cabeamento Estruturado



Leandro Ramos

www.professormatos.com

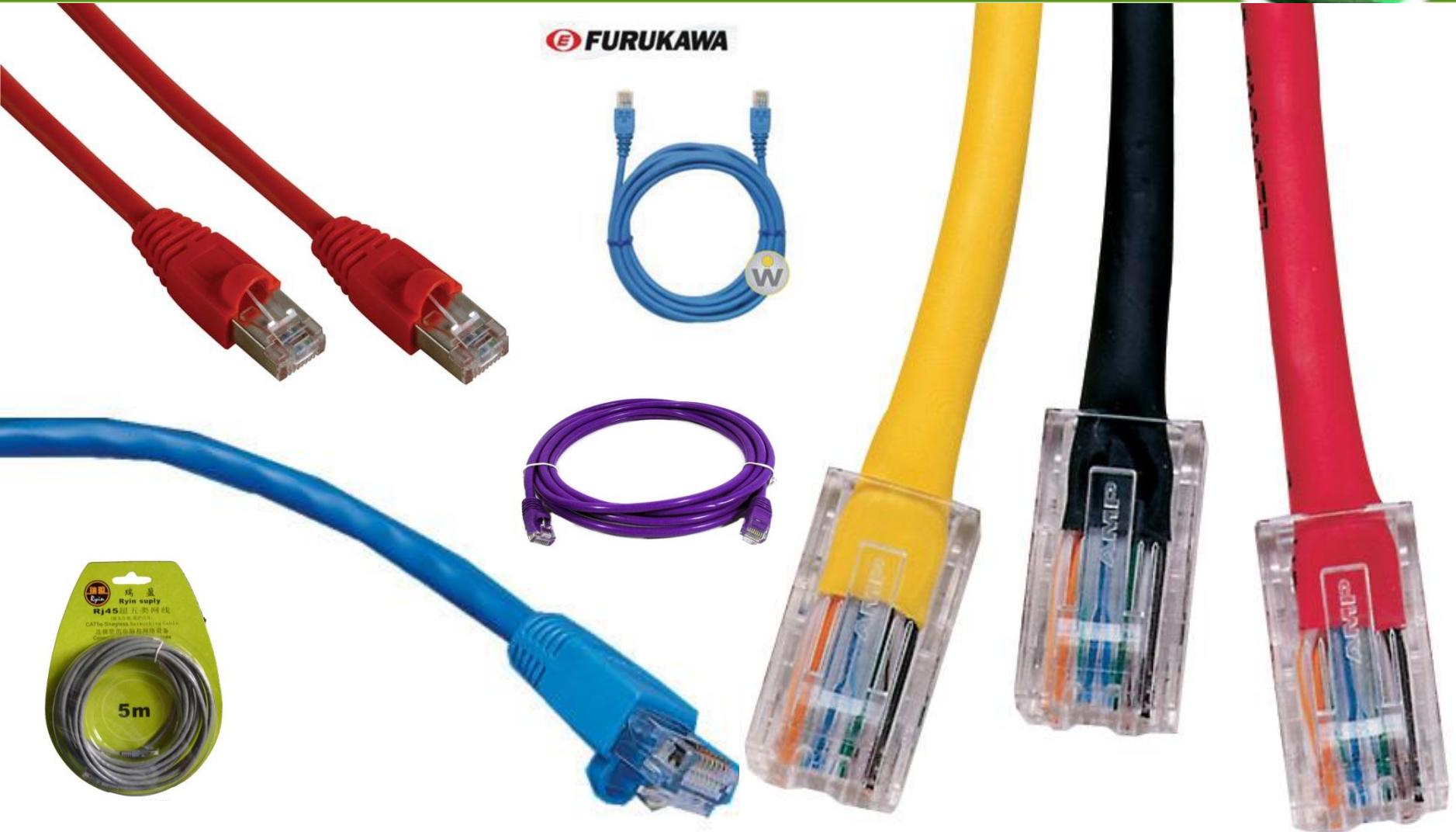
Não faça isto!



Cabo UTP – Placa Ethernet



Cabo UTP Fabricado



Cabo UTP com 4 pares



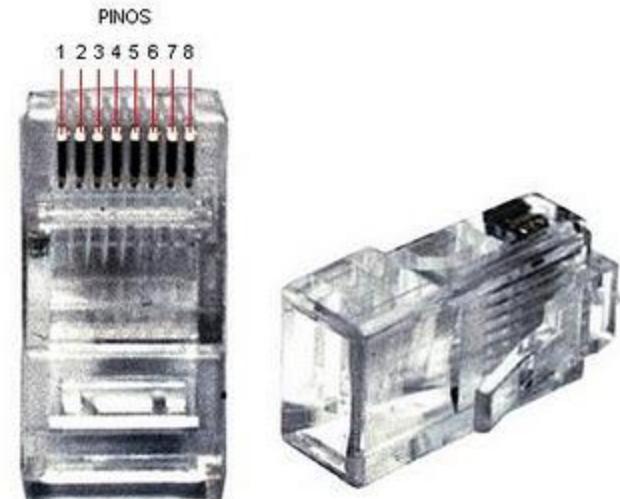
Fabricantes de Cabo



Nexans



Conector RJ-45



Conector RJ-45

CM ou CMX → Flamabilidade



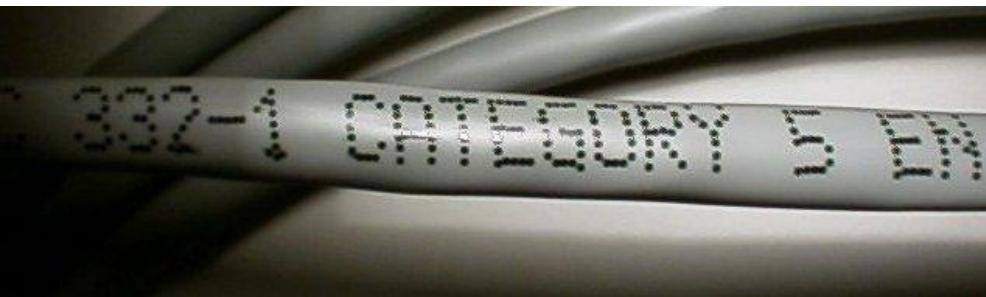
- Os cabos possuem classificações que determinam o grau de sua proteção com relação à **propagação de chama** (flamabilidade). Essa classificação é muito importante, pois está diretamente relacionada a segurança dos usuários, instalações e terceiros. As mais comuns no país são as classificações **CM** e **CMX**. Os cabos com capa de PVC **CMX apresentam custo relativamente menor que o cabo CM**, porém é indicado somente para aplicações restritas como em locais protegidos por dutos metálicos, com baixa densidade de cabos ou terminações onde a parte exposta seja inferior a 3 metros.



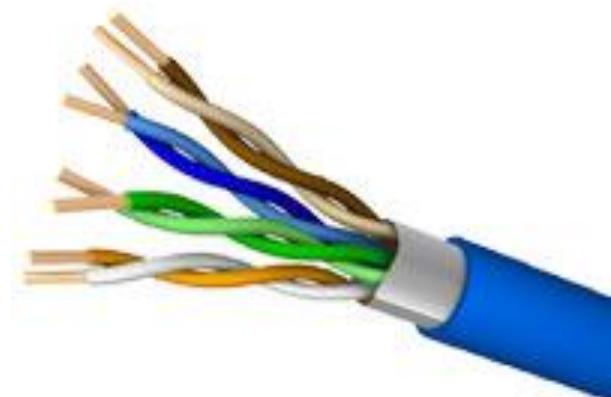
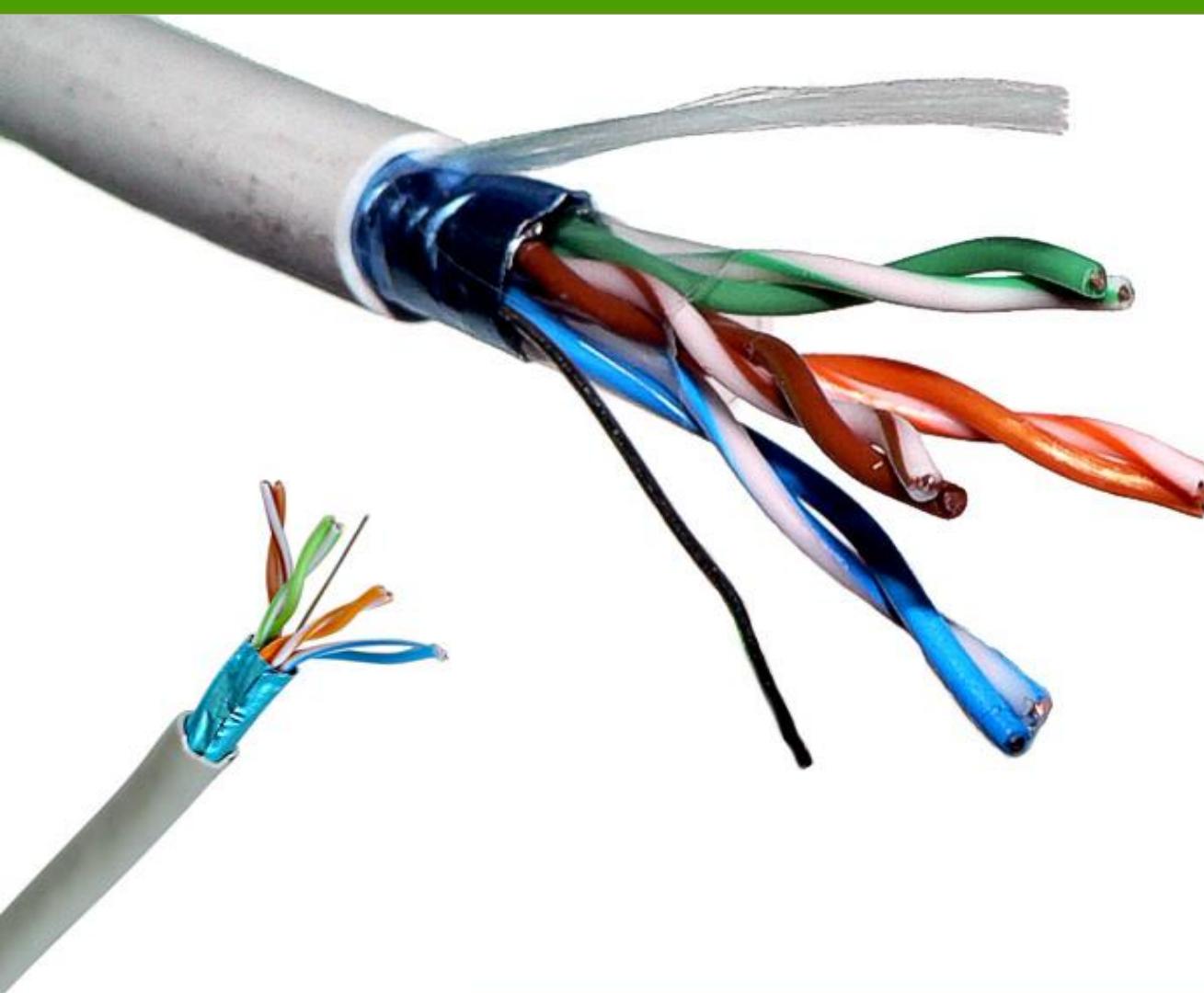
Categoria



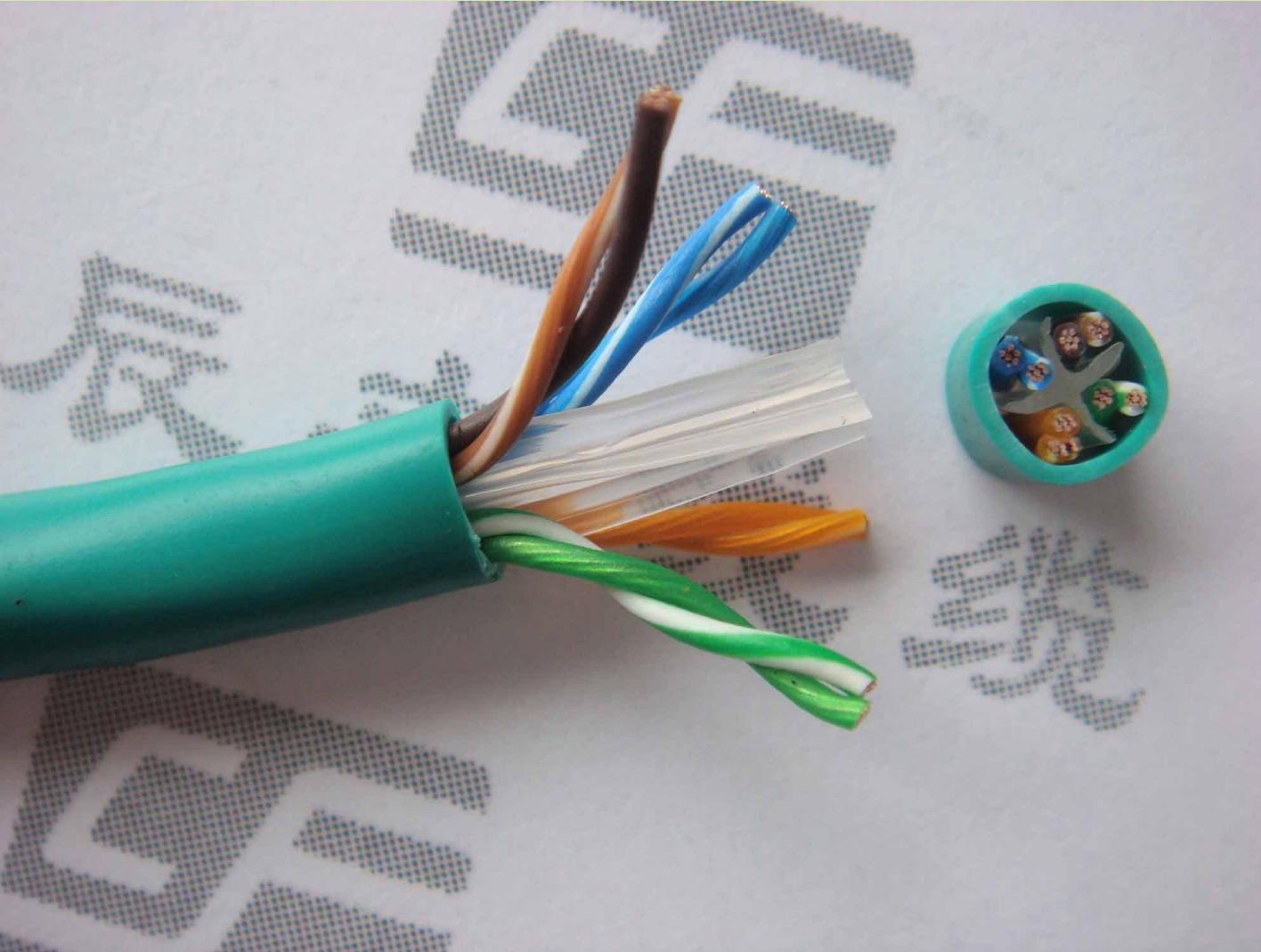
- **Cat 3** – Telefonia (10Mbps)
- **Cat 5** – Dados (até 100 Mbps)
- **Cat 5e** – Dados (até 1000 Mbps / 1 Gbps)
ENHANCED (Melhorado)
- **Cat 6** – (400 MHz) → Supera os 1000 Mbps
- **Cat6e** – (625 MHz/ 500 MHz) → 10 Gigabit Ethernet (10GBASE-T)
- **Draft Cat 7** – Rascunho do Novo Padrão (600-700 MHz) 1.2 GHz em pares com conector Siemon - Blindado



Cabo FTP ou STP



Cabo CAT6



Cabo Cat7



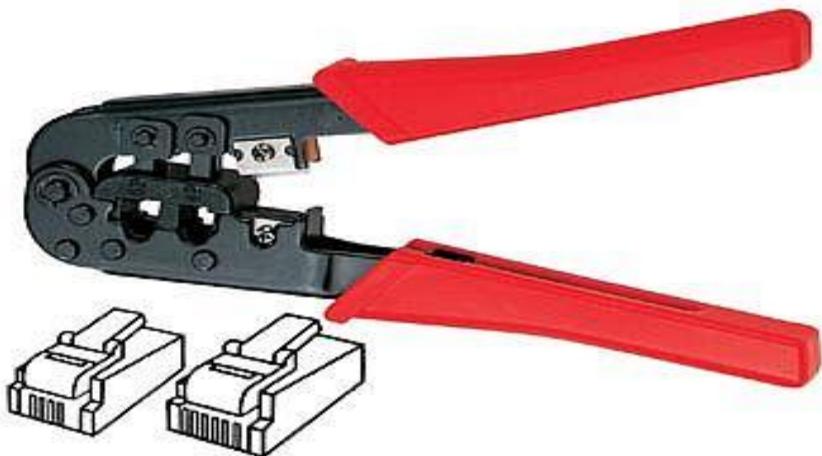
Comprimento Maximo do Cabo



- Cat5e → 100 Metros
- Cat6 UTP → 100 Metros para Gigabit Ethernet
- Cat6 UTP → 37 Metros para 10 Gbps
- Blindado Cat6 e Cat7 → 100 metros



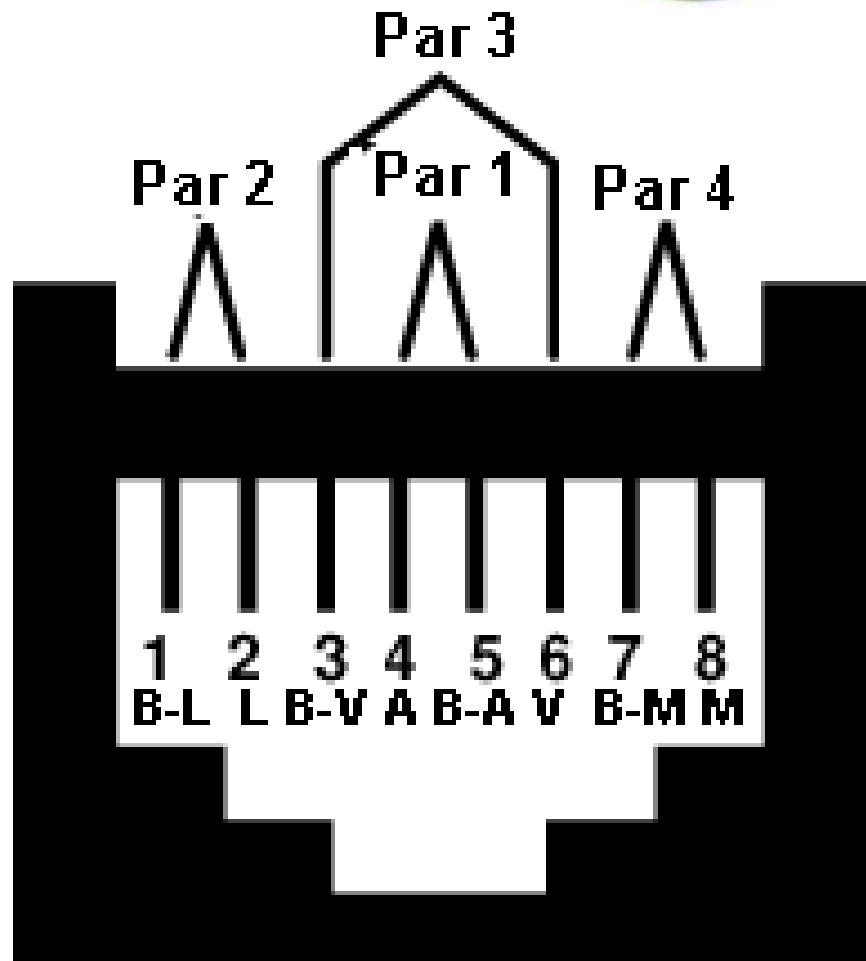
Ferramentas para crimpar RJ-45



Função dos PARES

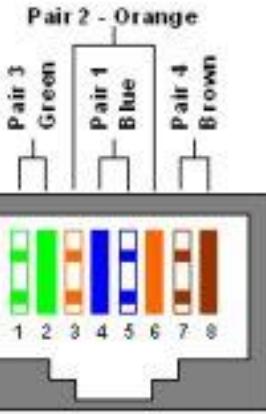


- 1-2 → TX
- 3-6 → RX
- 4-5 → VOZ
- 7-8 → Aterramento / Sincronismo

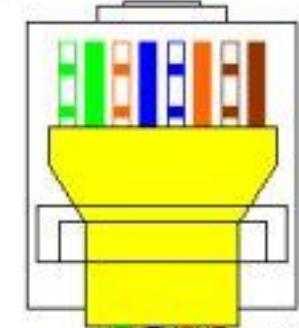


T568B

Cabo Paralelo Micro x SW



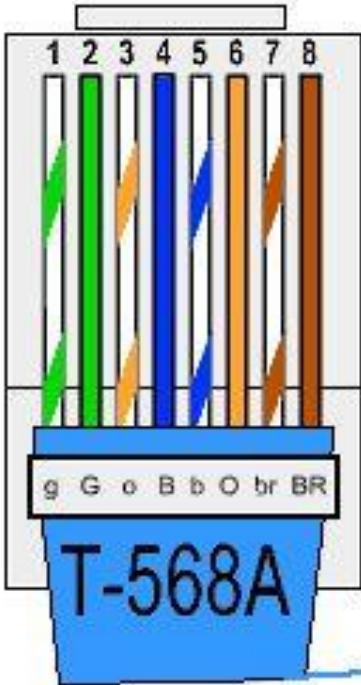
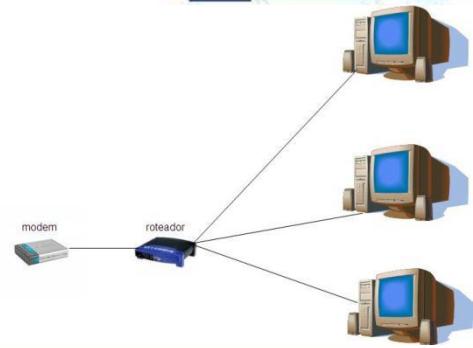
RJ-45 Jack



RJ-45 Plug

ANSI/TIA/EIA 568A
Network Interface

- | | |
|----|--------------|
| 8. | Brown |
| 7. | Brown-White |
| 6. | Orange |
| 5. | Blue-White |
| 4. | Blue |
| 3. | Orange-White |
| 2. | Green |
| 1. | Green-White |

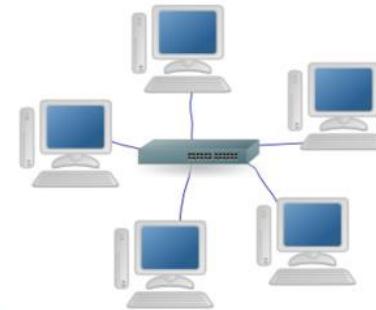
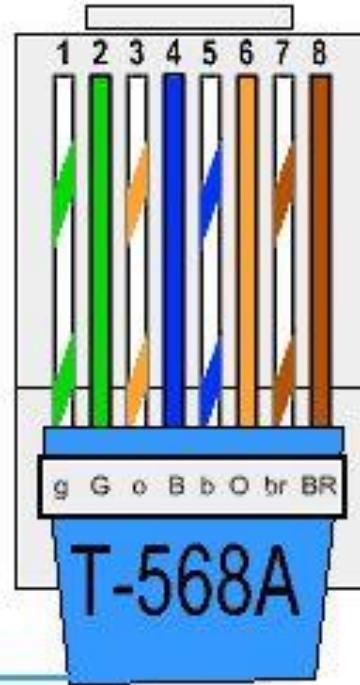


RJ-45 Plug

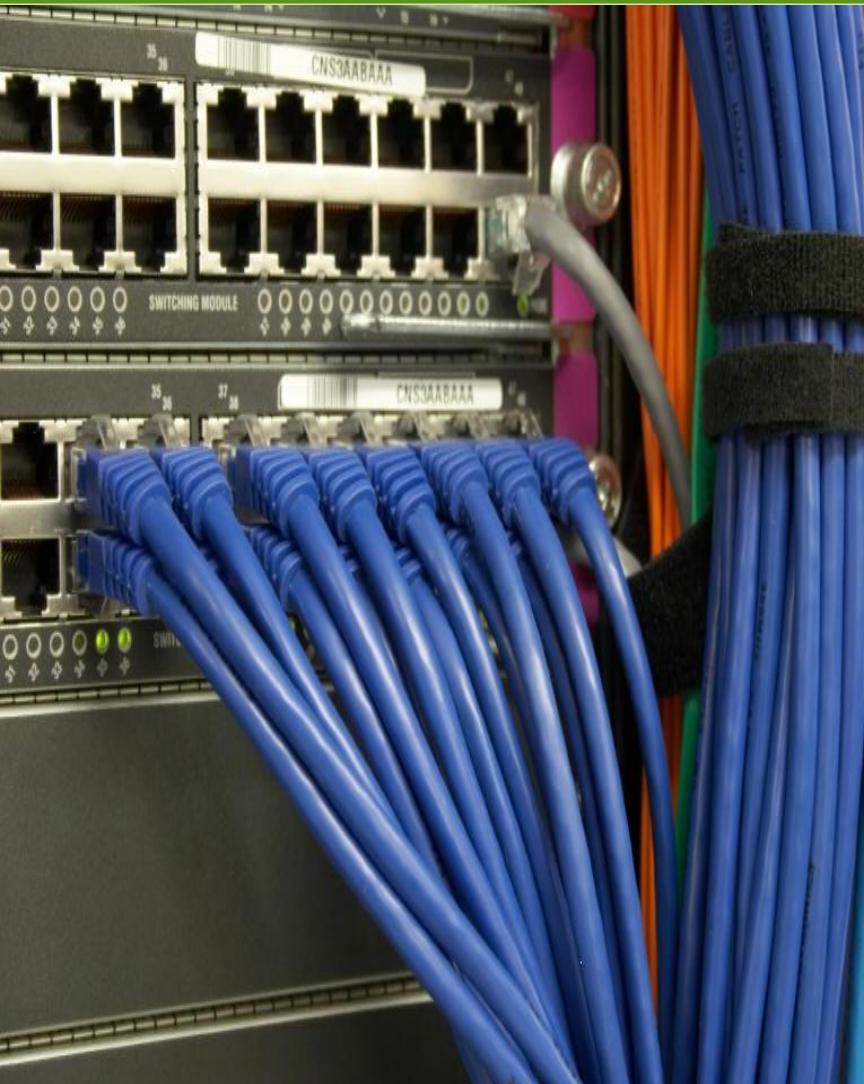
Pin 1



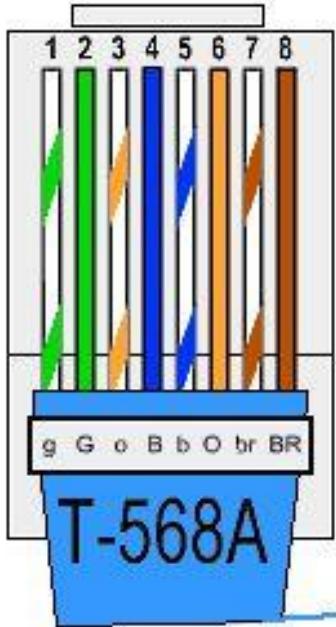
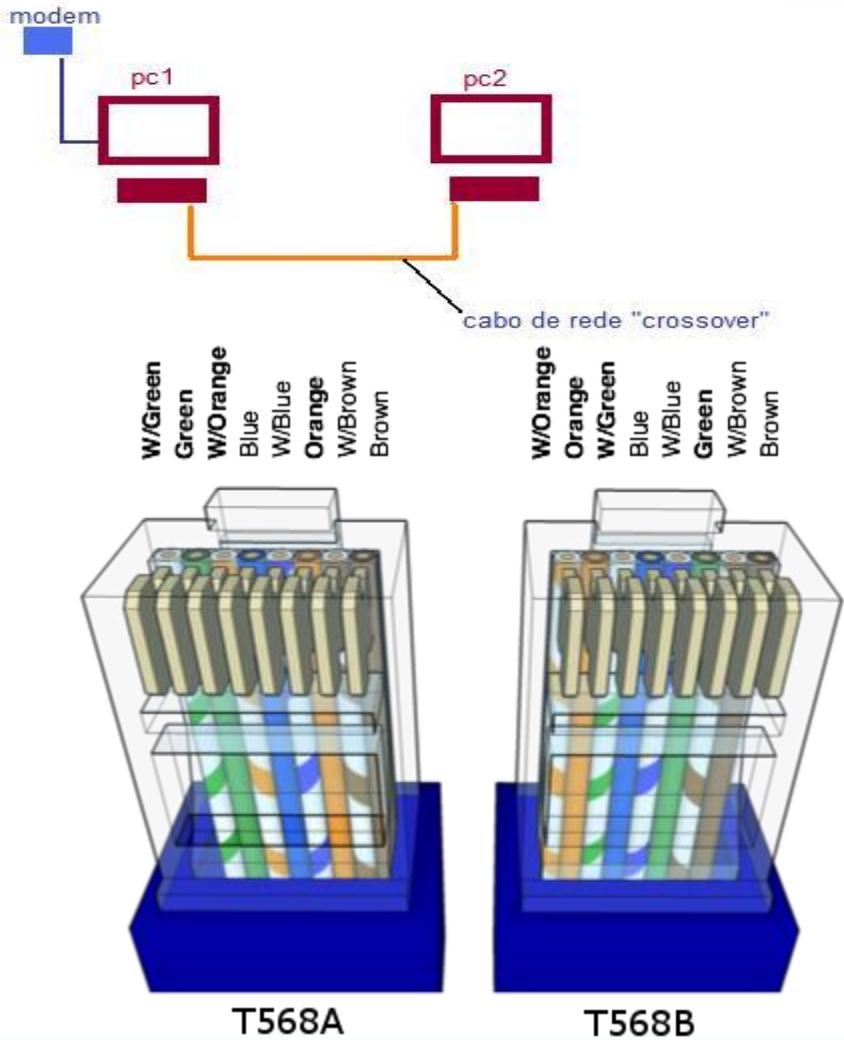
Clip is pointed
away from you.



Cabos ligados no SWITCH



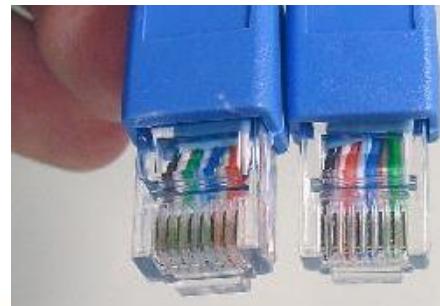
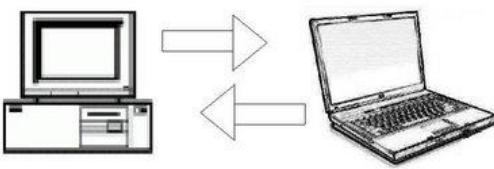
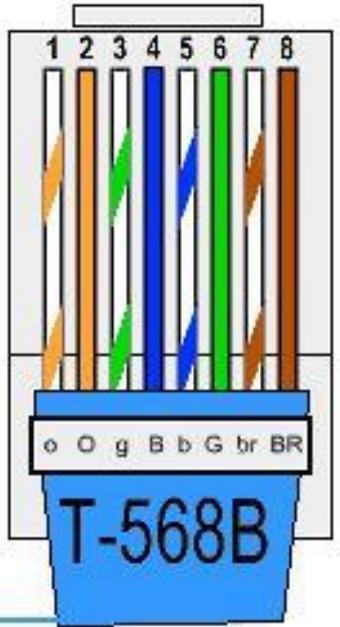
Cabo Crossover Micro X Micro



RJ-45 Plug
Pin 1



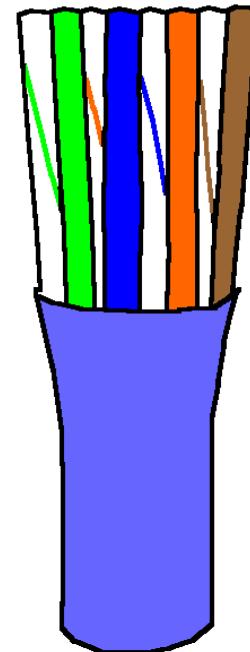
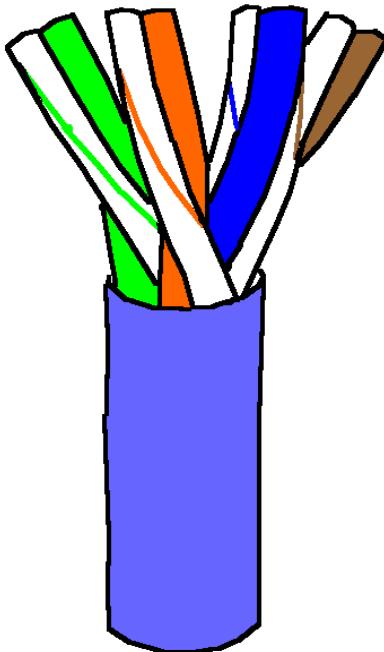
Clip is pointed away from you.



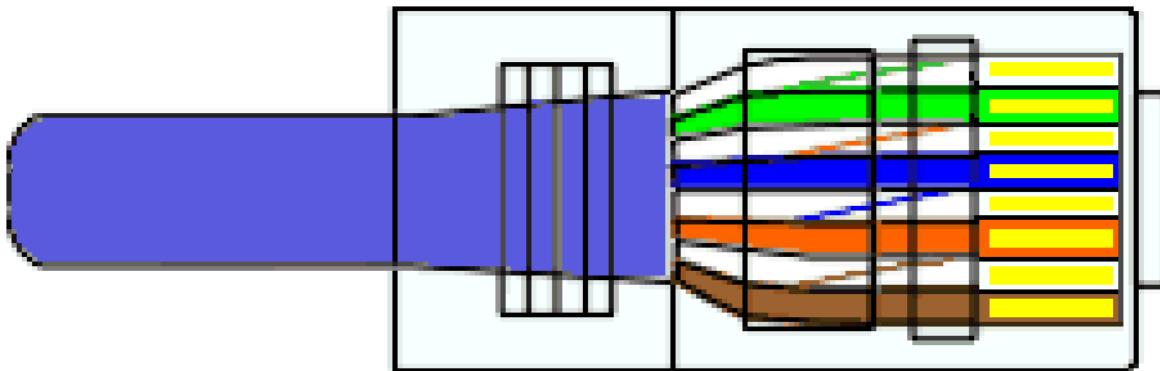
Decapar o cabo



Colocando os fios na ordem

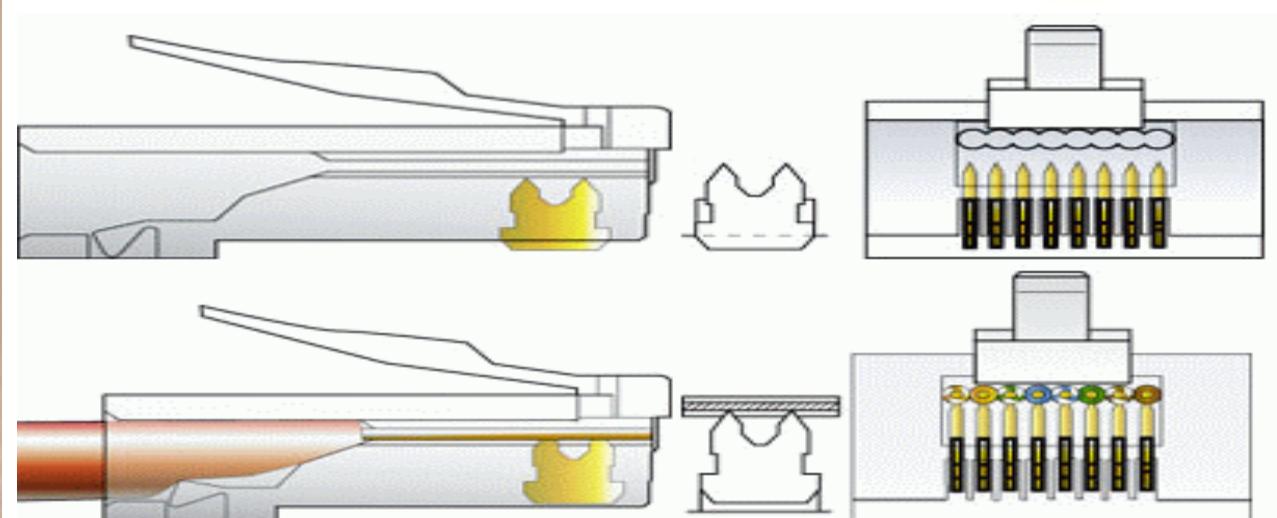
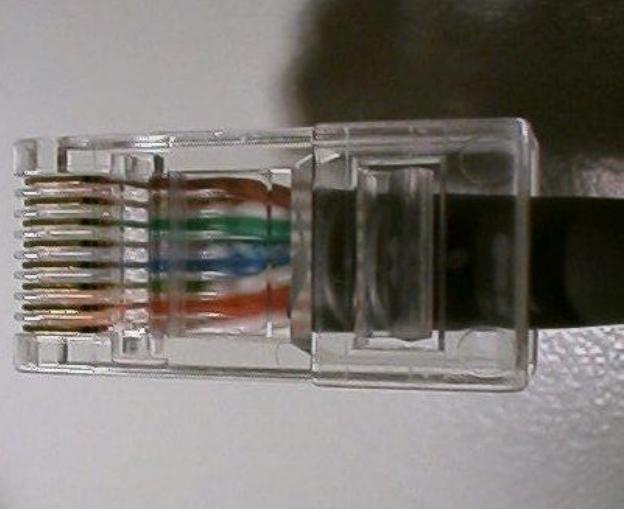
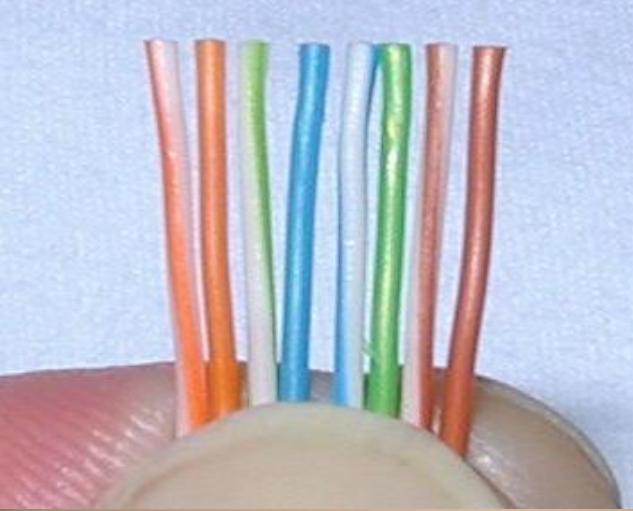


Inserindo o conector

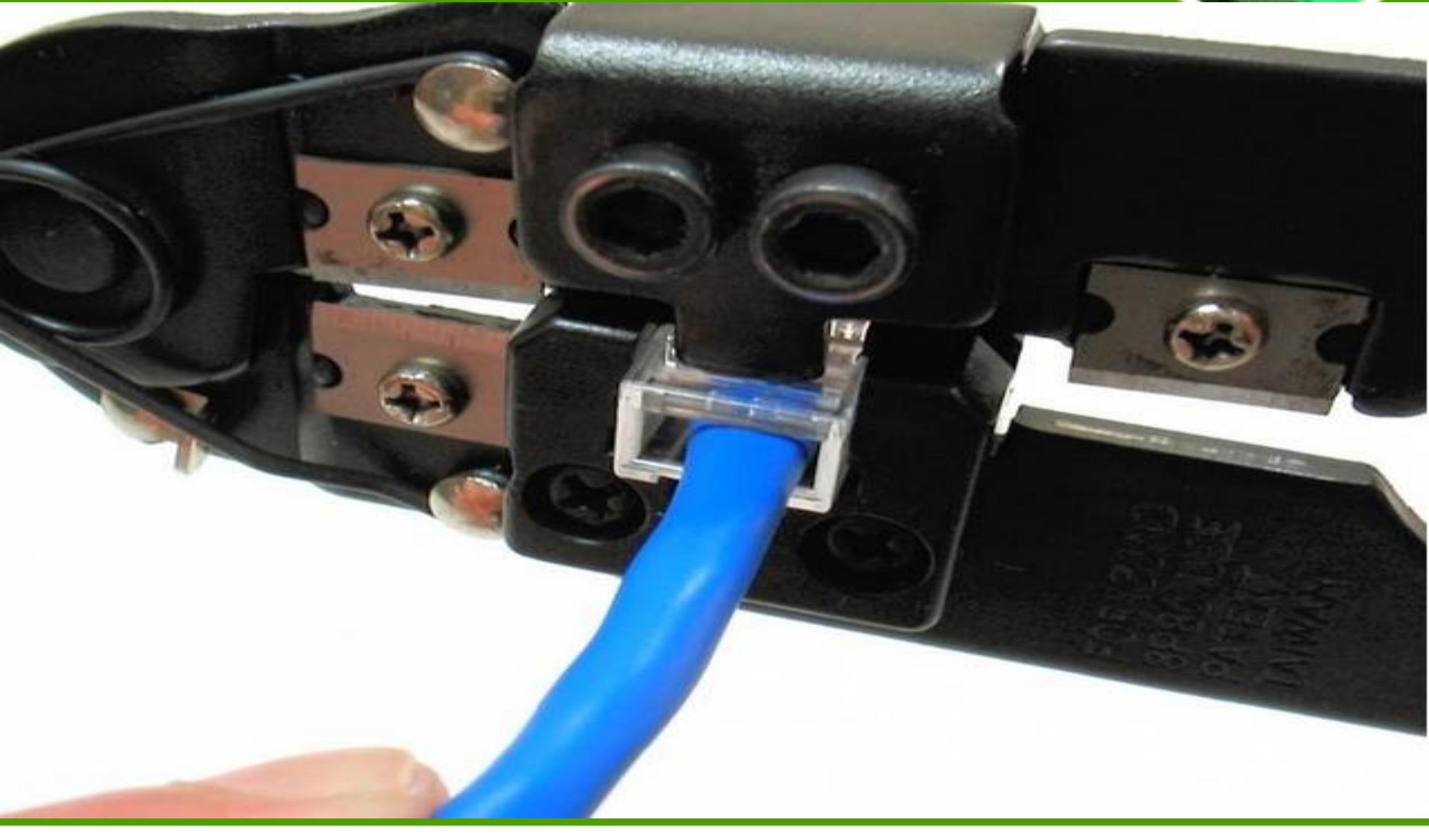


Branco/Verde
Verde
Branco/Laranja
Azul
Branco/Azul
Laranja
Branco/Marrom
Marrom

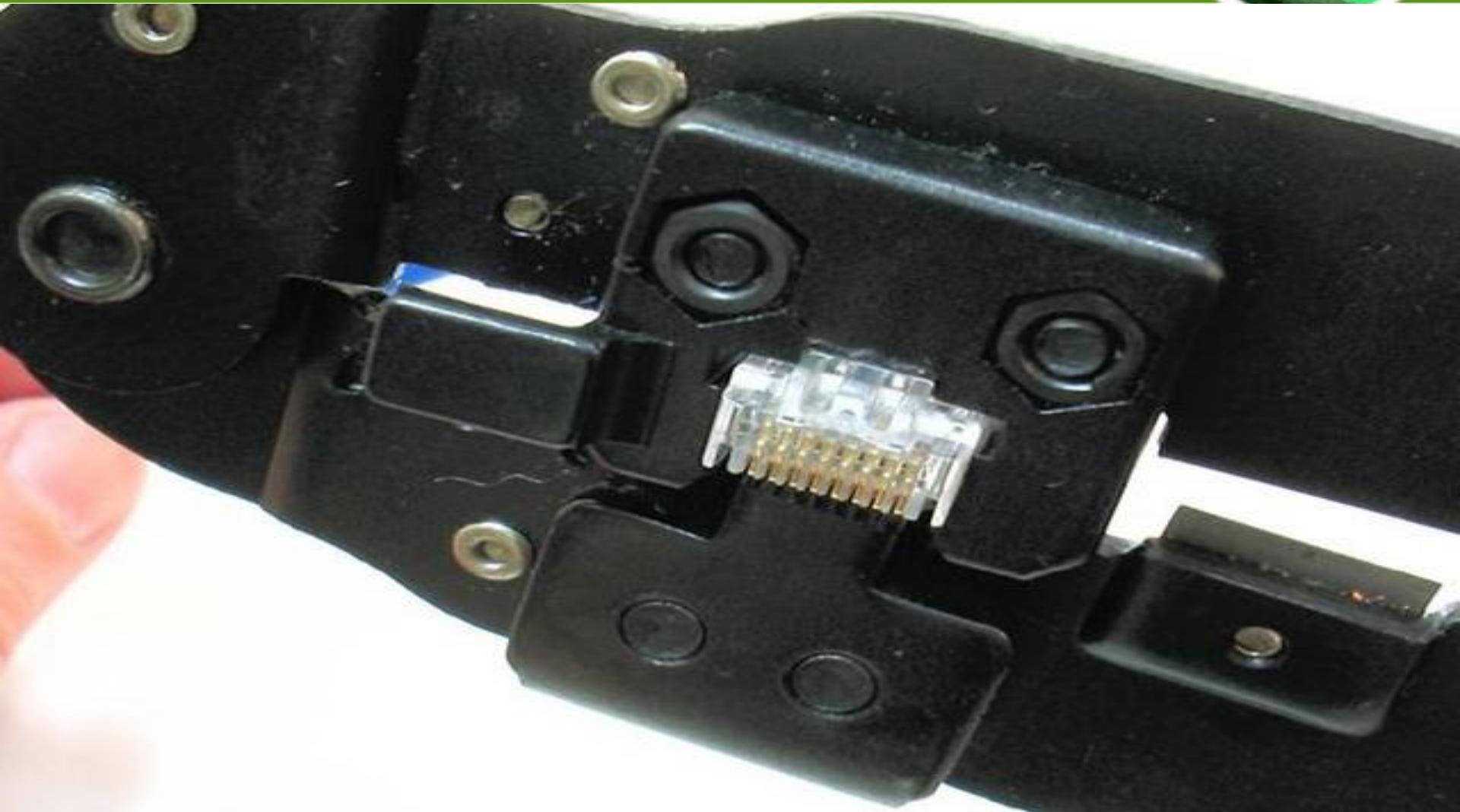
Montagem do Cabo



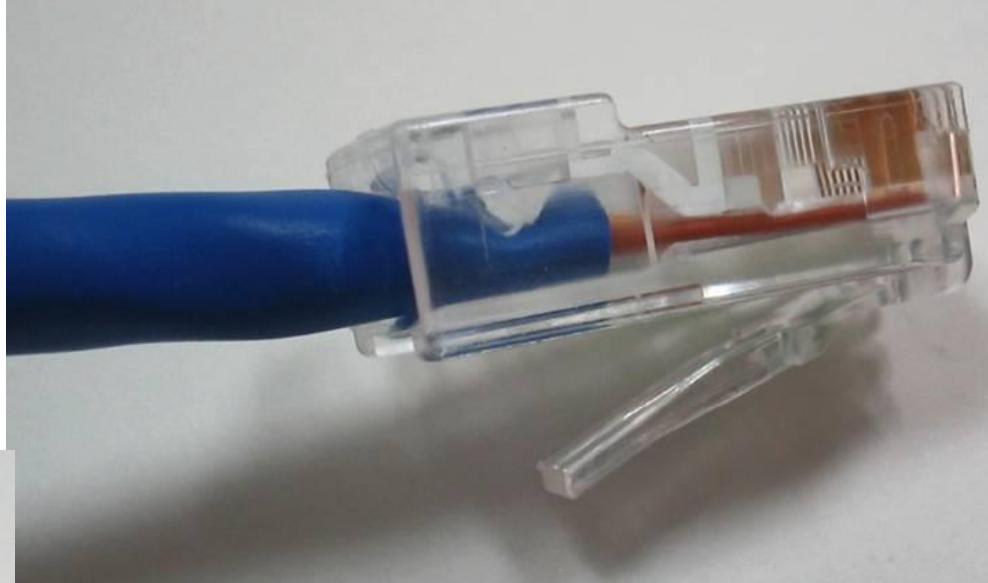
Montagem do Cabo



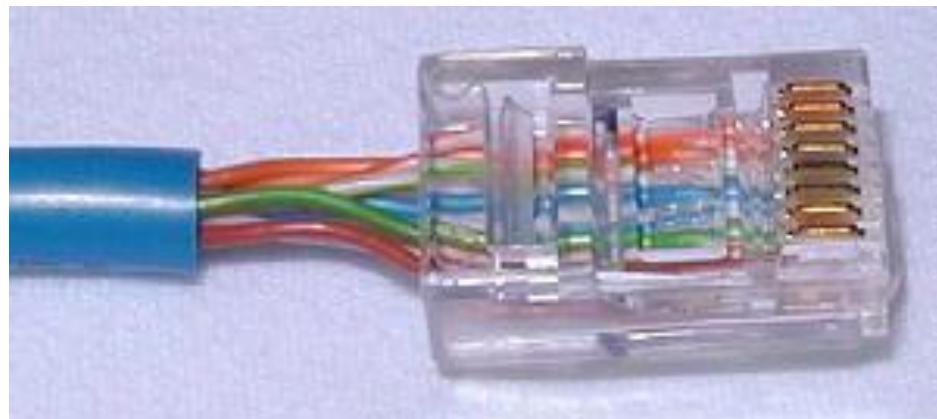
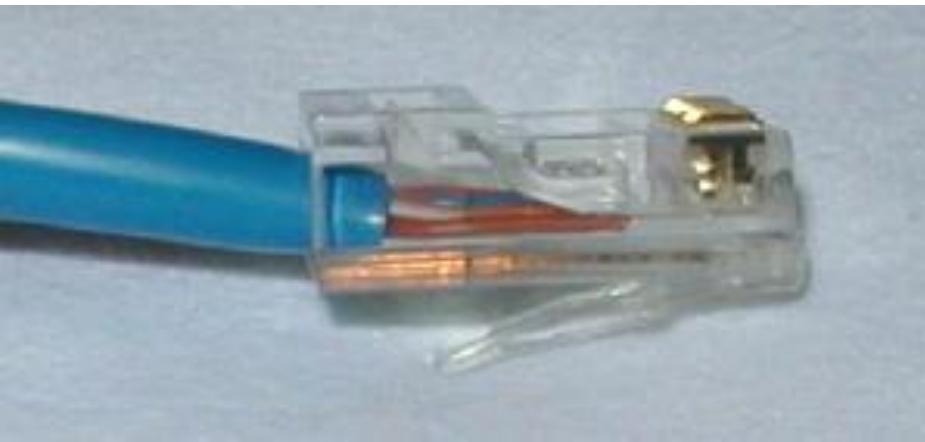
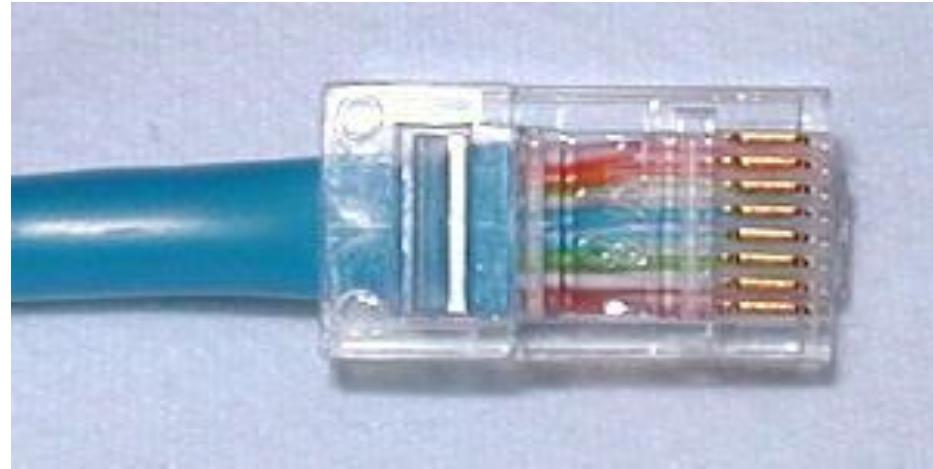
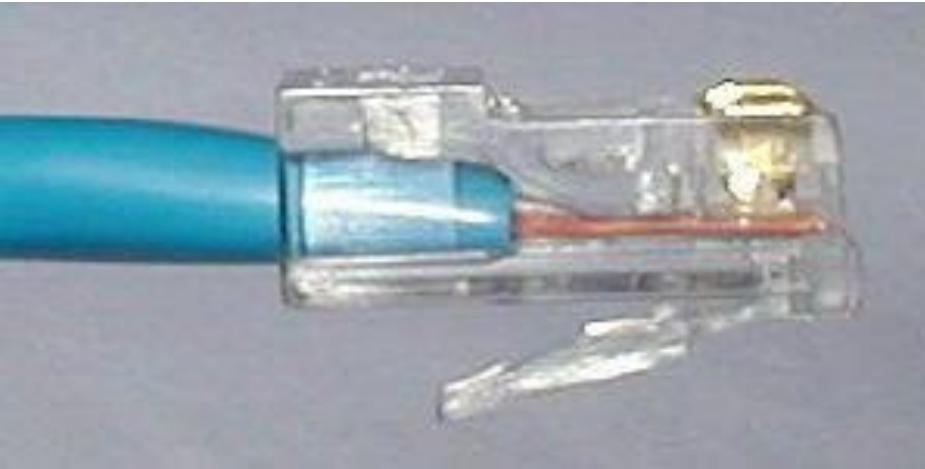
Montagem do Cabo



Cabo Pronto



Certo X Errado



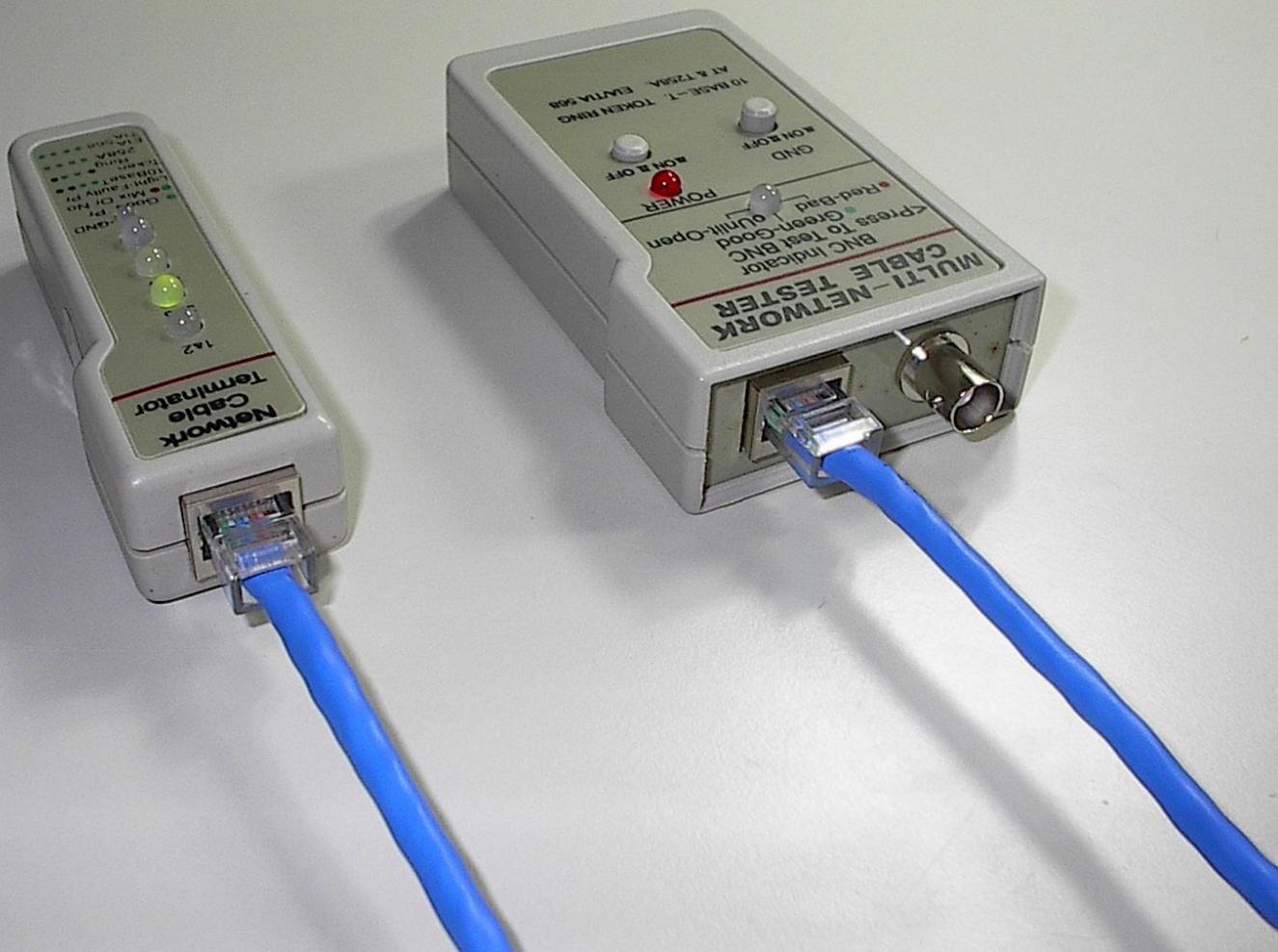
Melhorando o conector



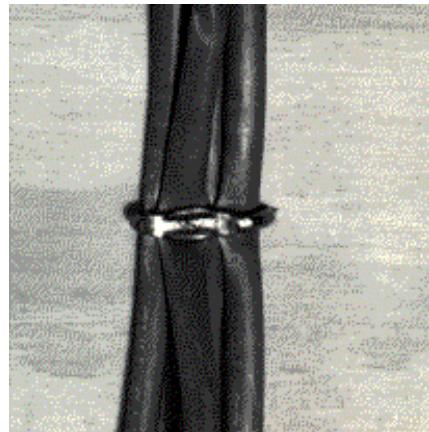
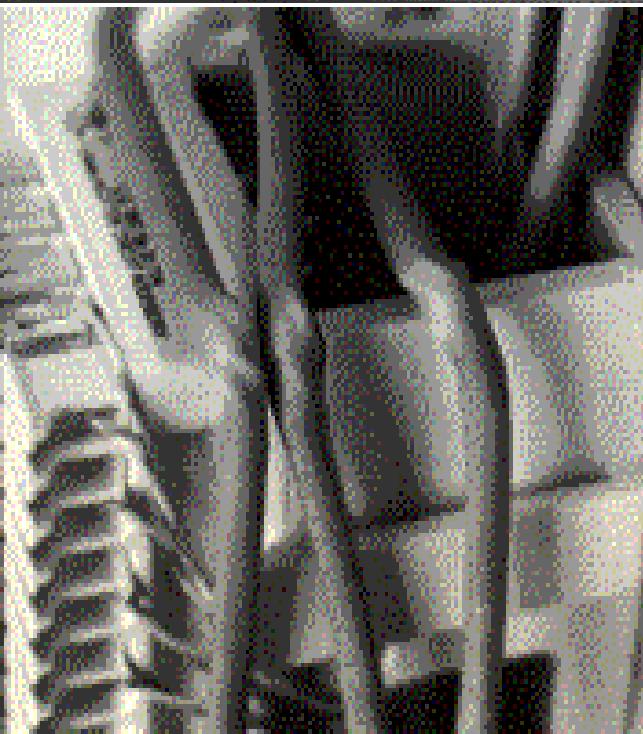
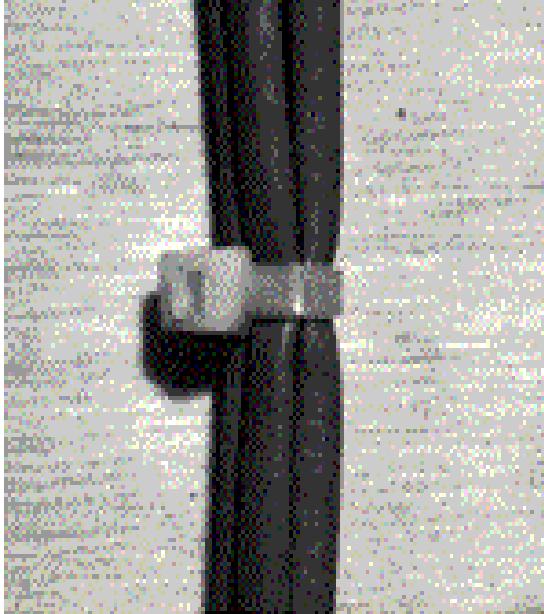
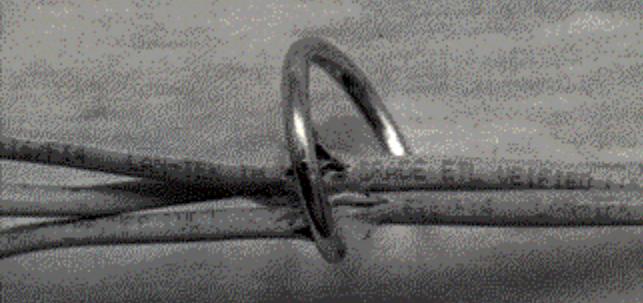
Testador de cabos



Teste o cabo



Não Faça Isso !!!



Tomadas na parede (Jack RJ-45)



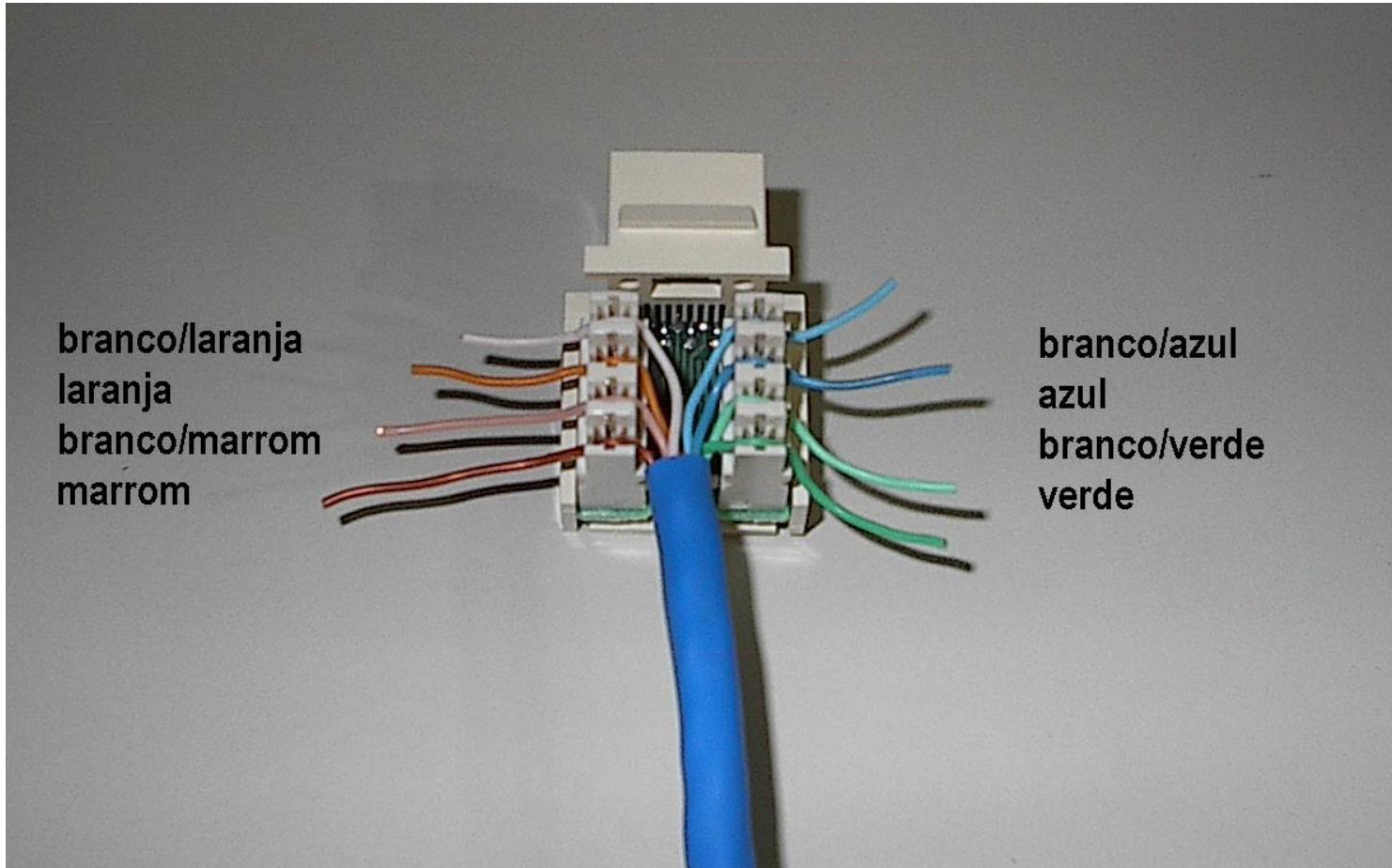
FURUKAWA



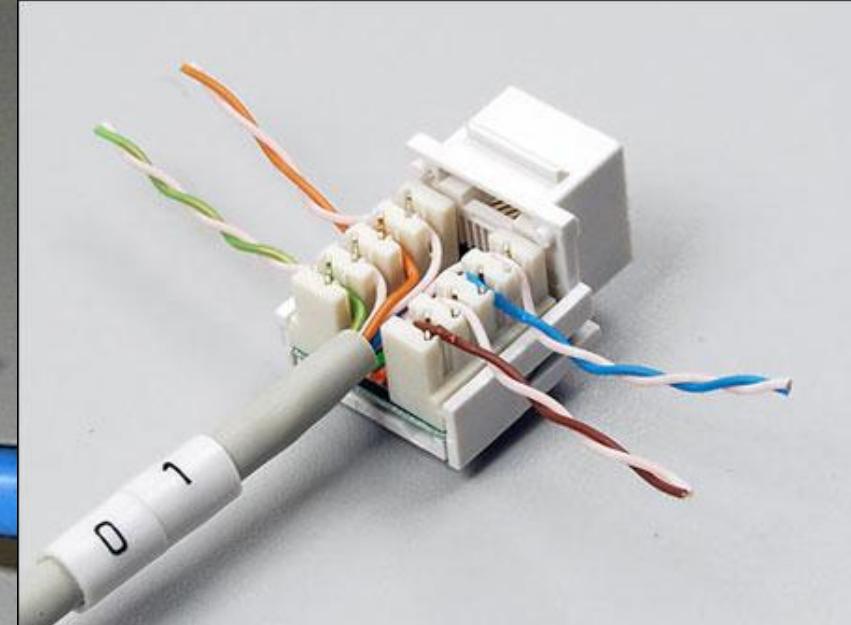
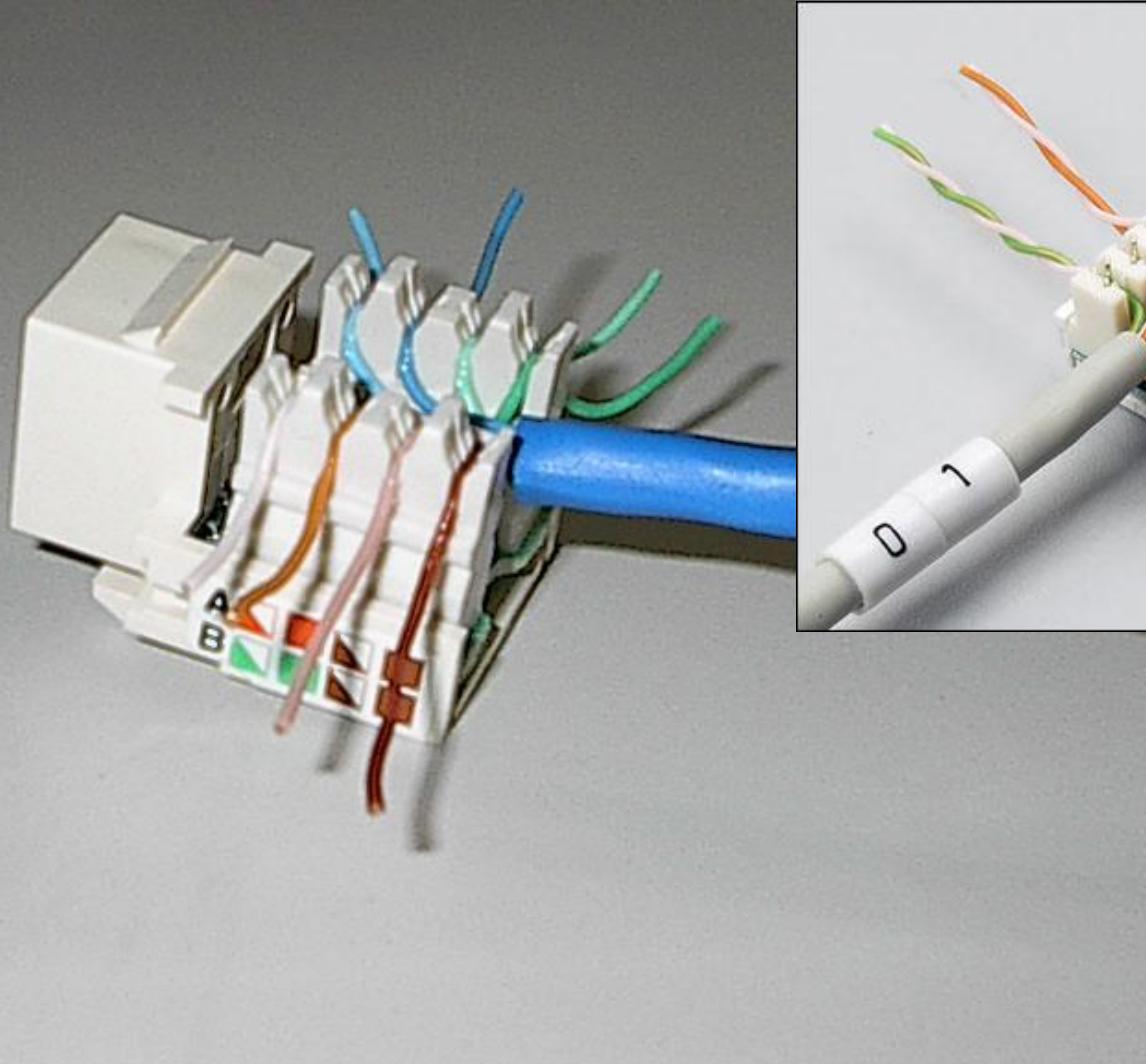
Push Down – IDC 110



Posicionar os fios



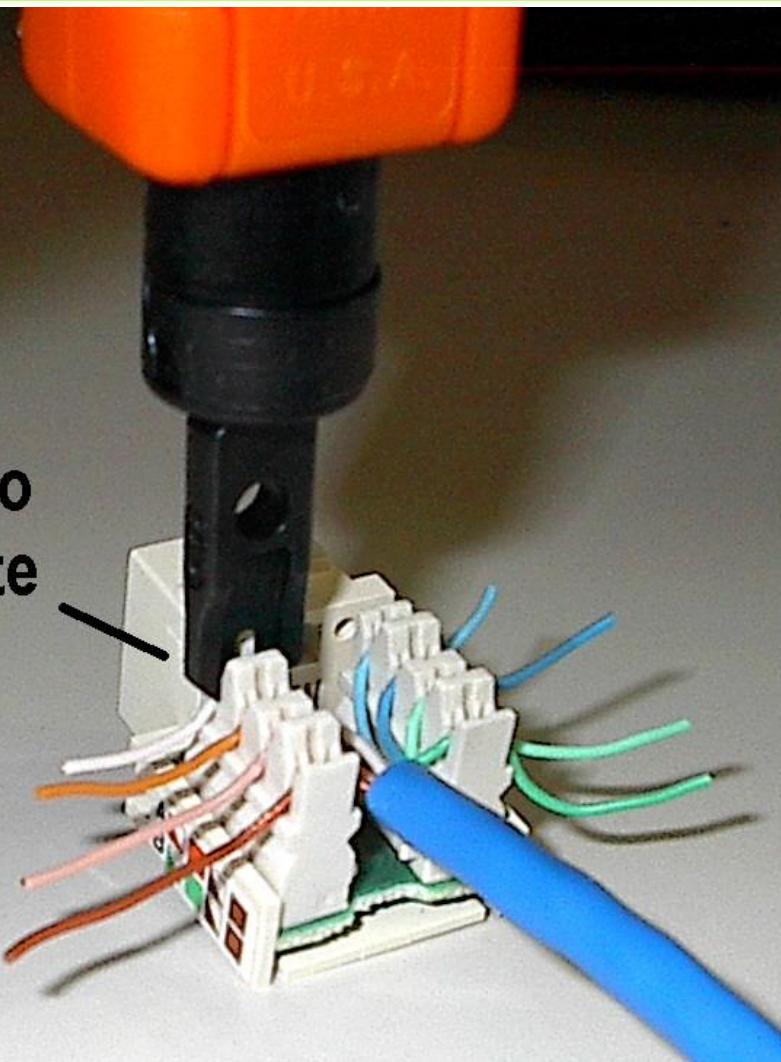
Encaixar cada fio nas fendas



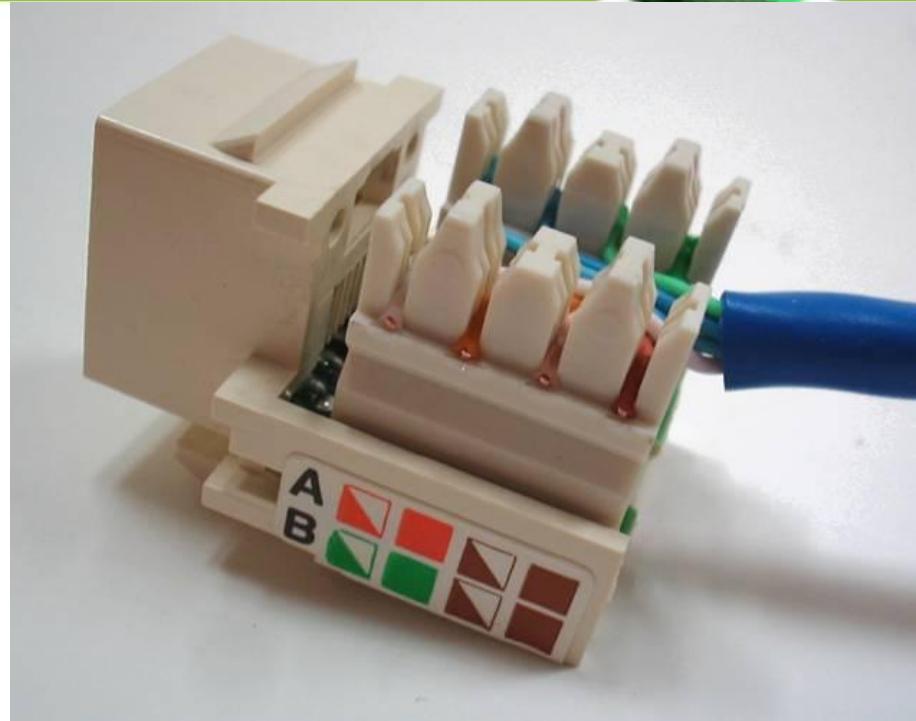
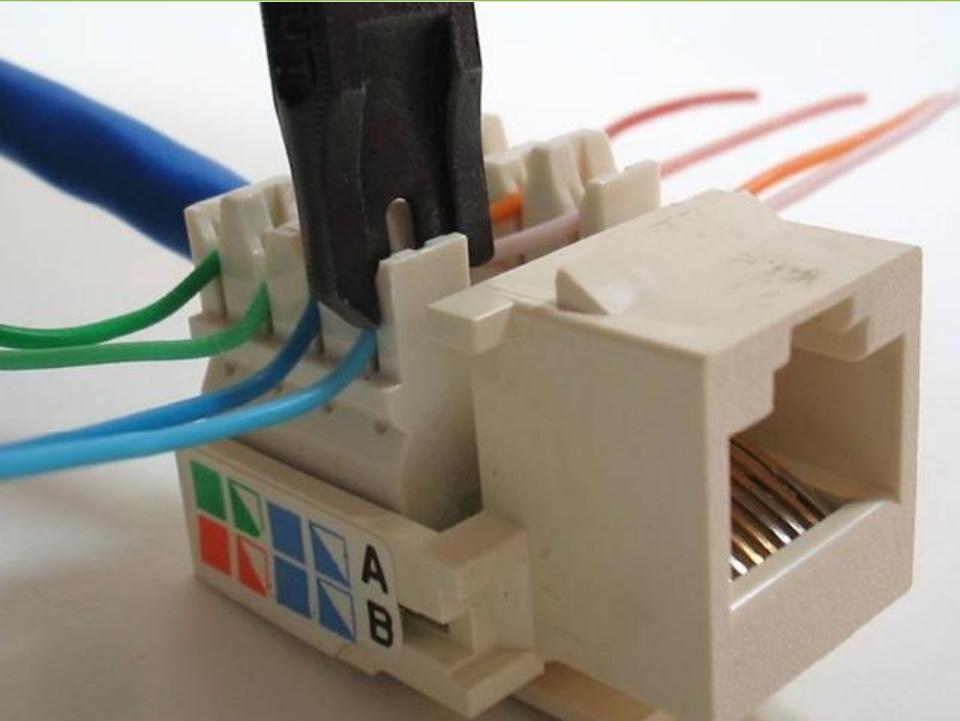
Fixar os fios



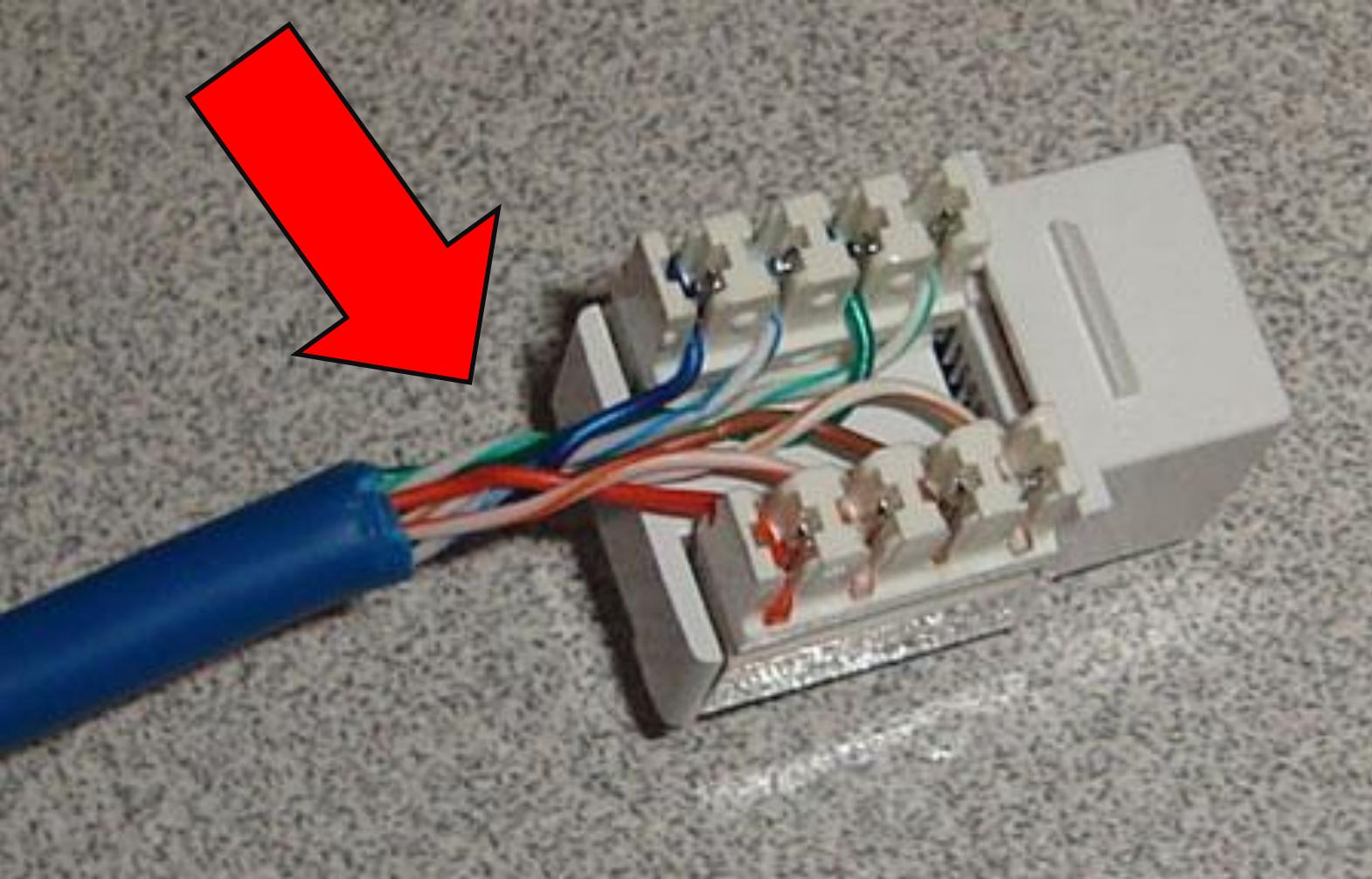
Posição
de corte



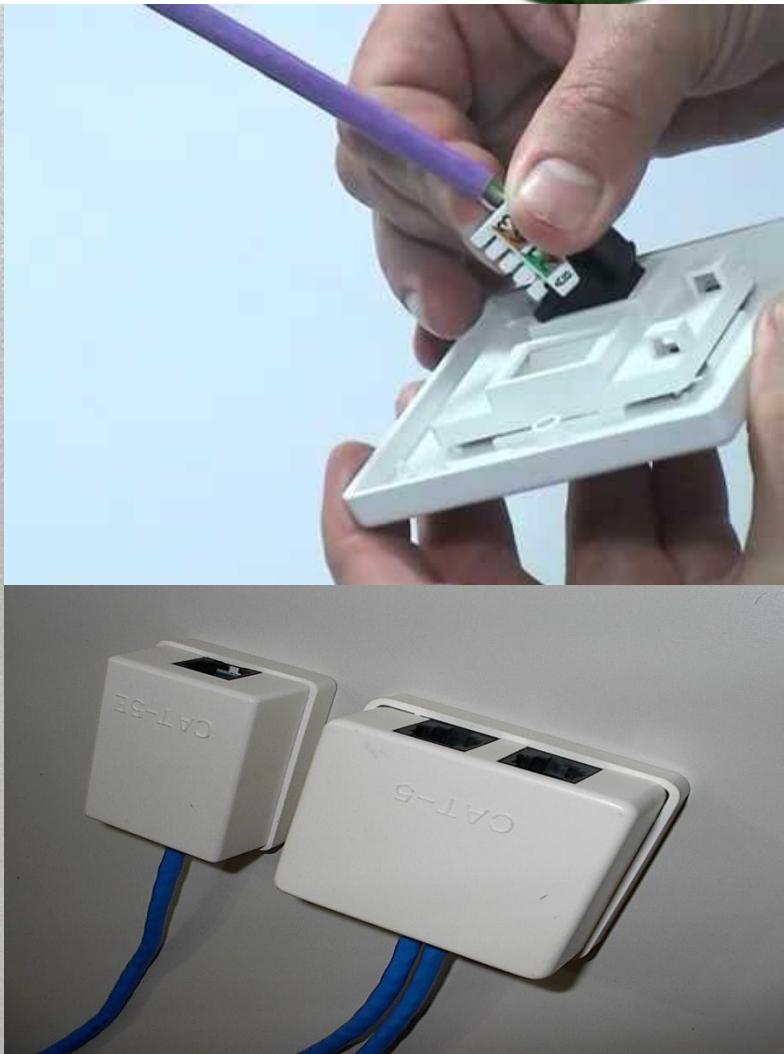
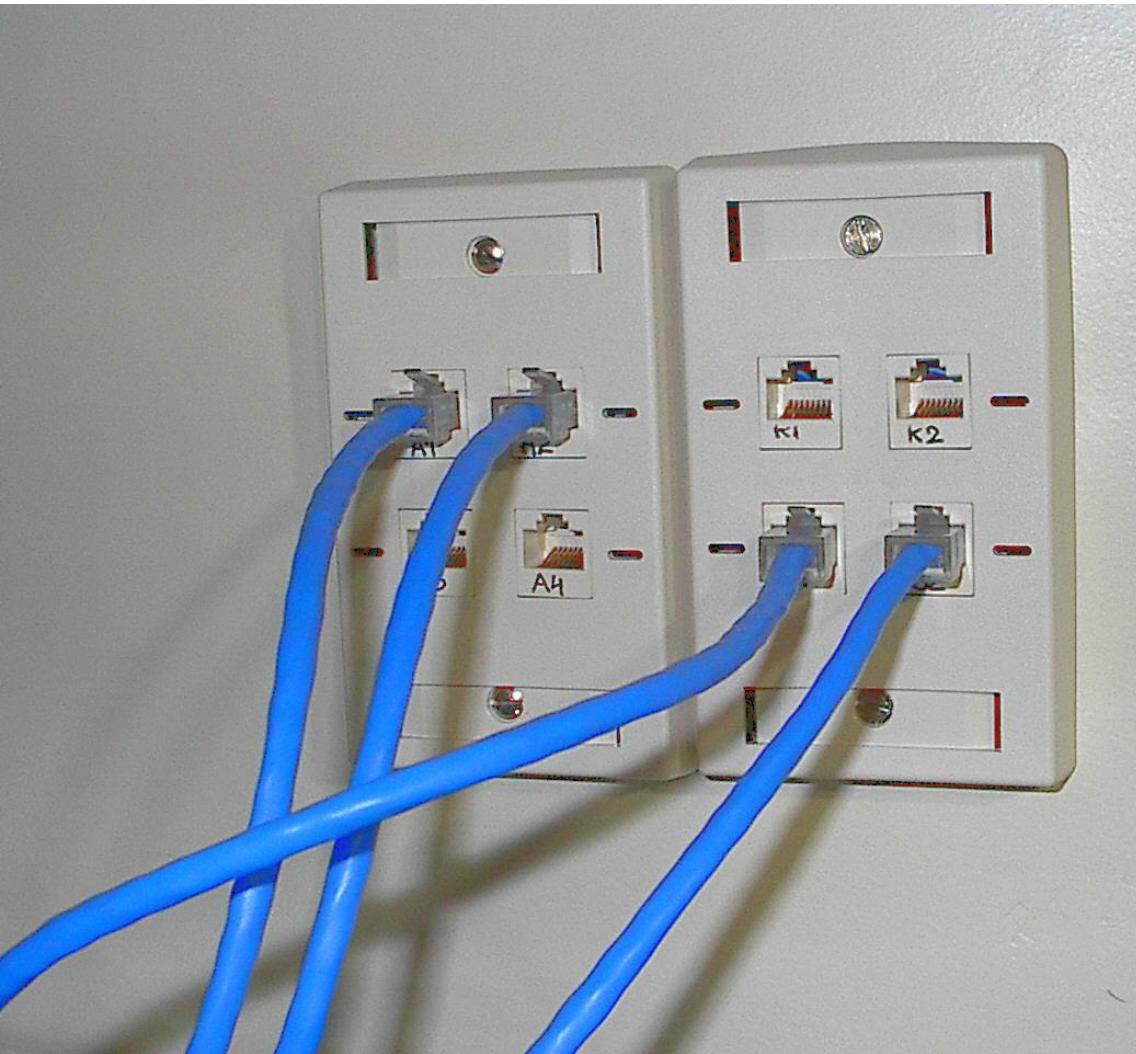
Certo



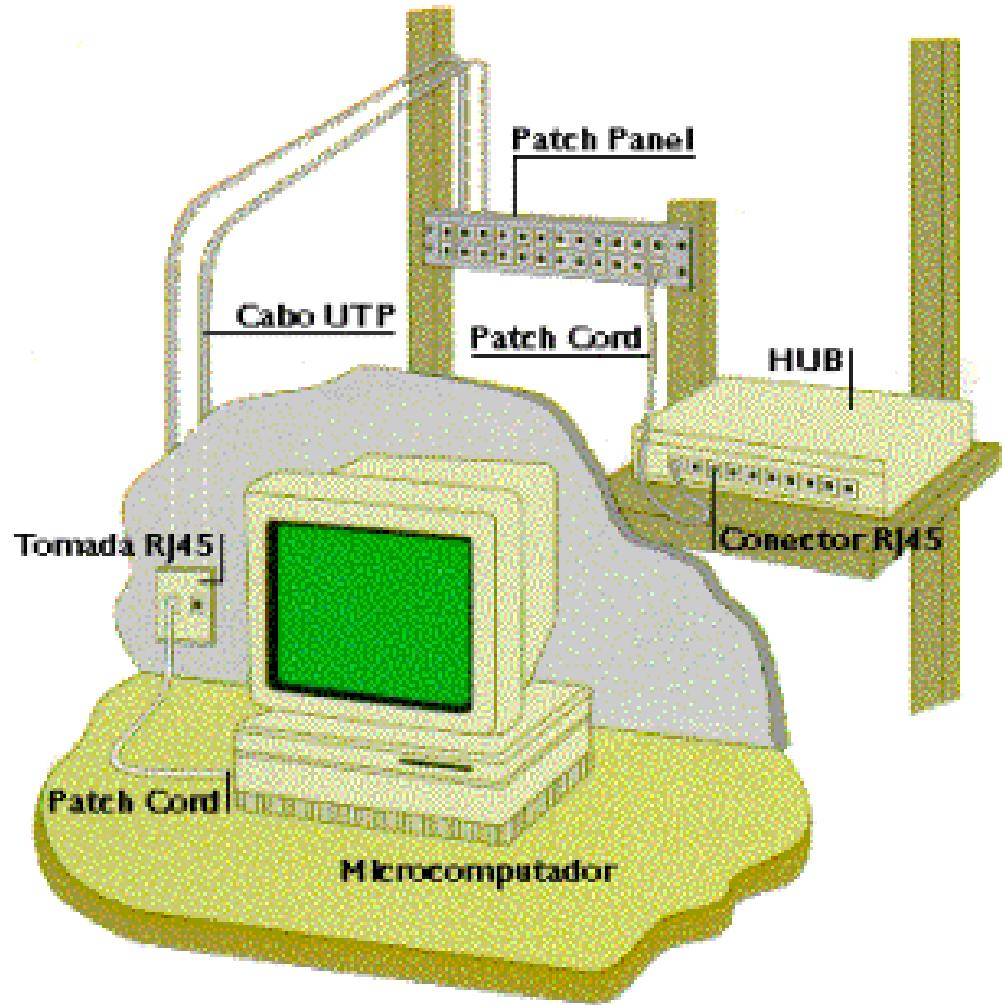
Errado



Acabamento



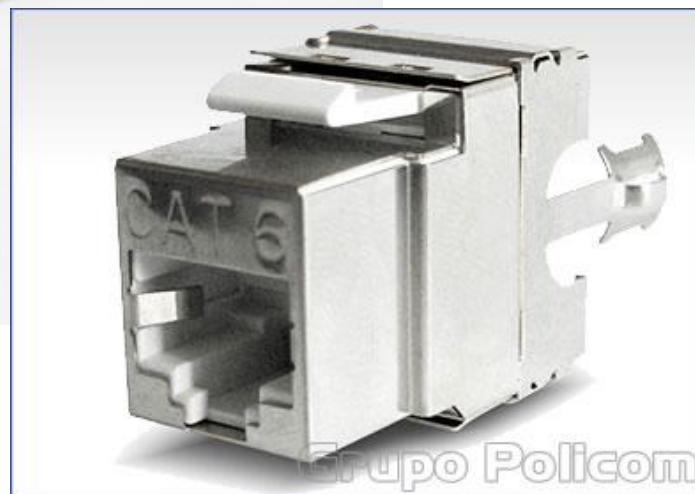
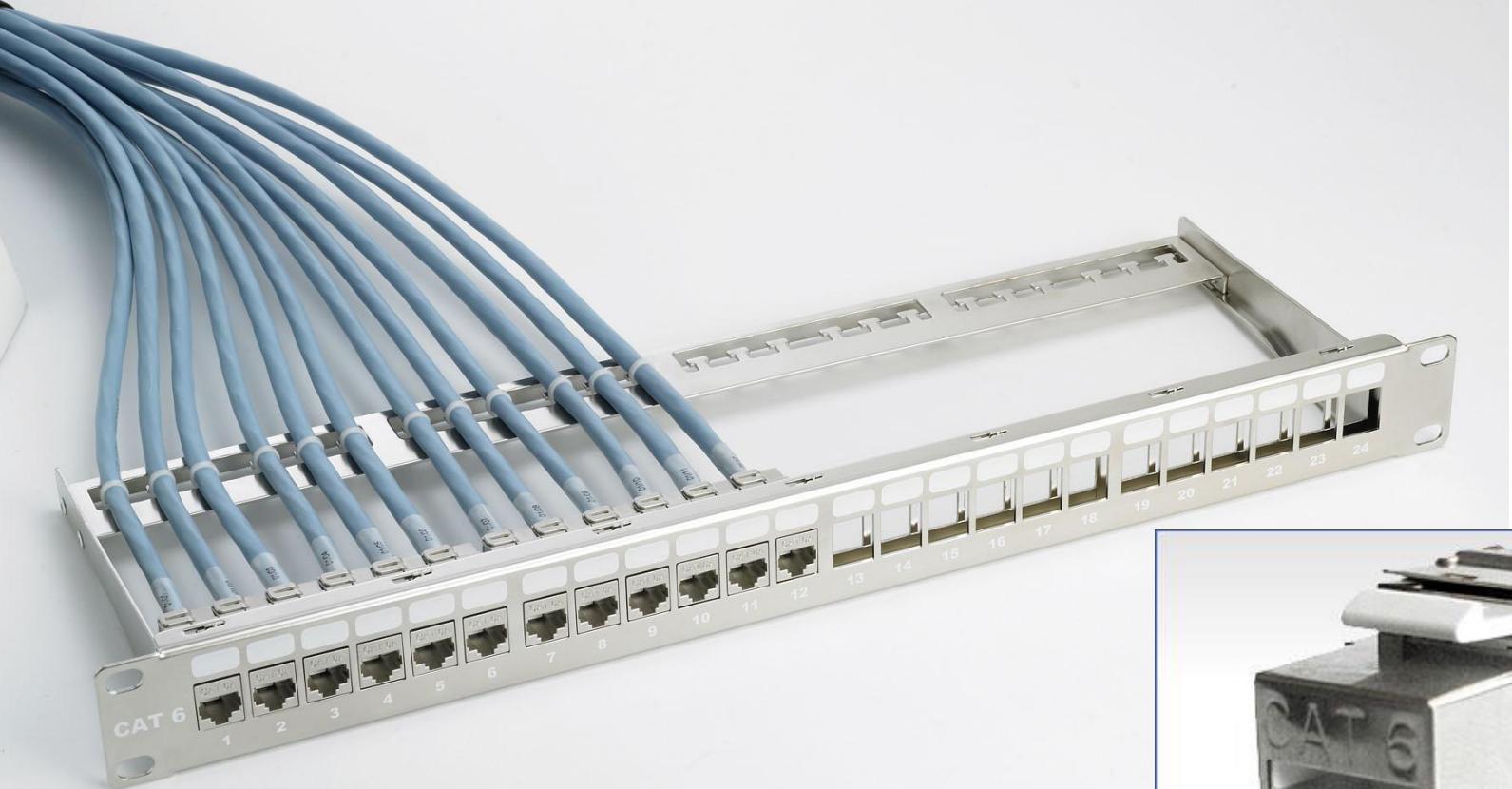
Cabeamento Estruturado



PATCH PANEL

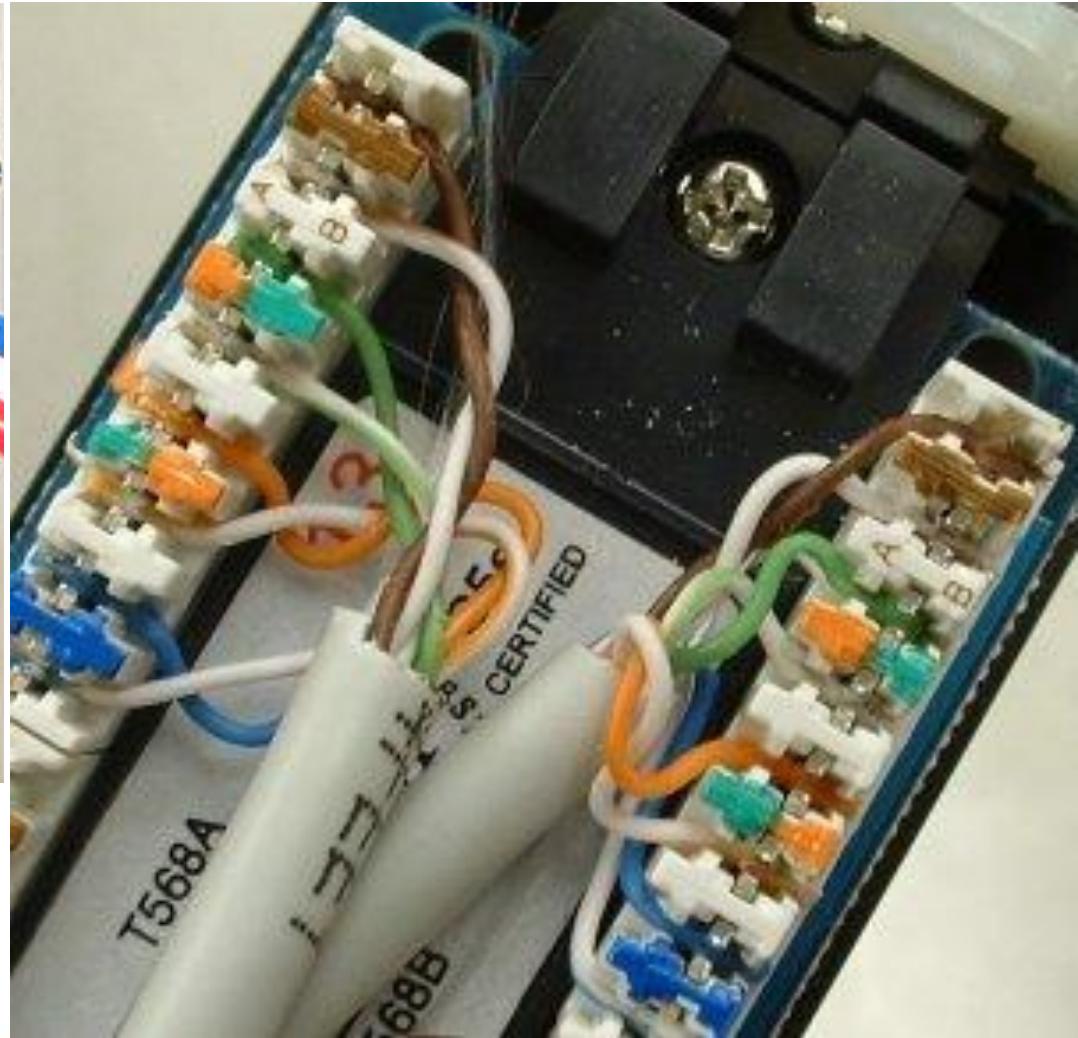
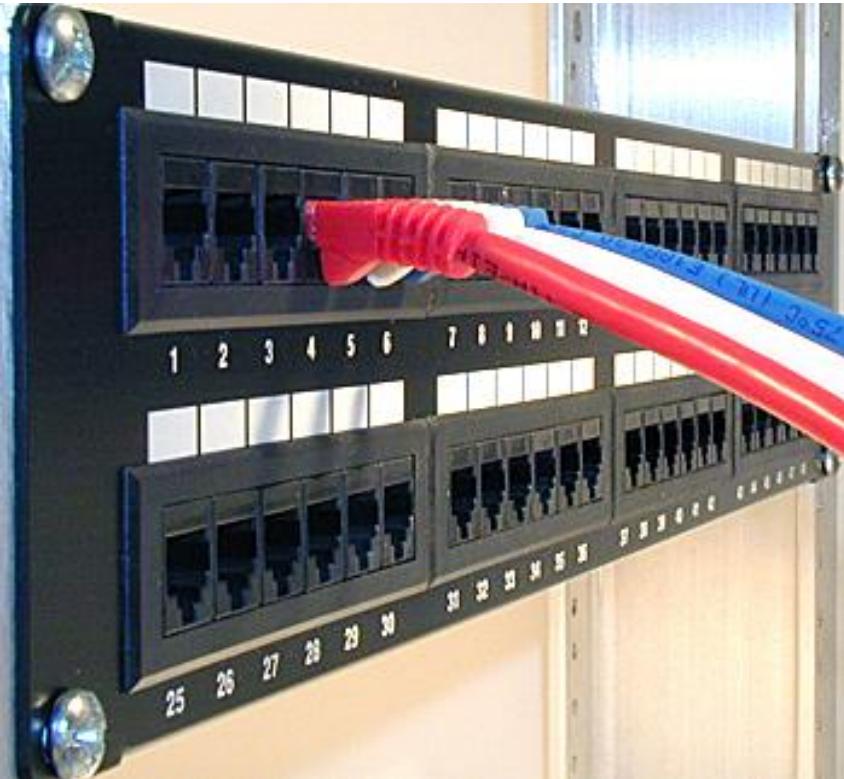


PATCH PANEL Blindado



Grupo Policom

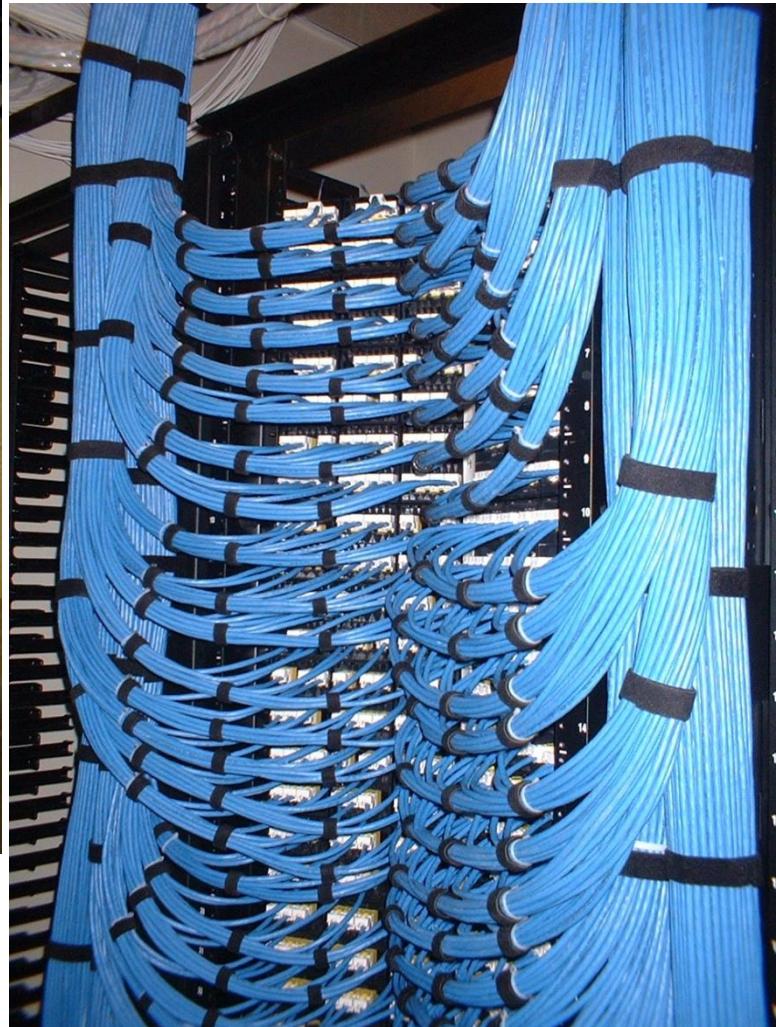
Montagem do PATH PANEL



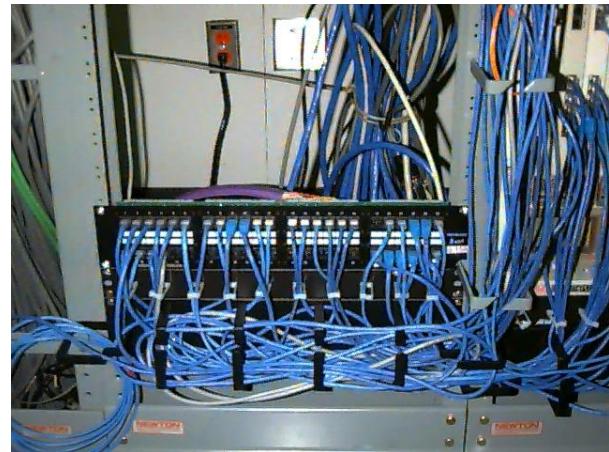
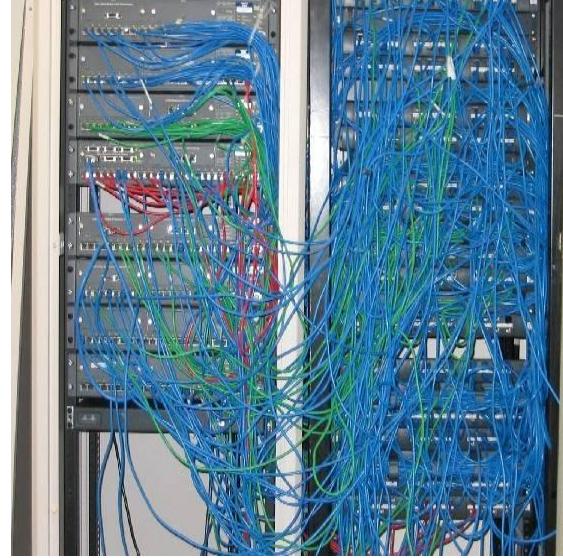
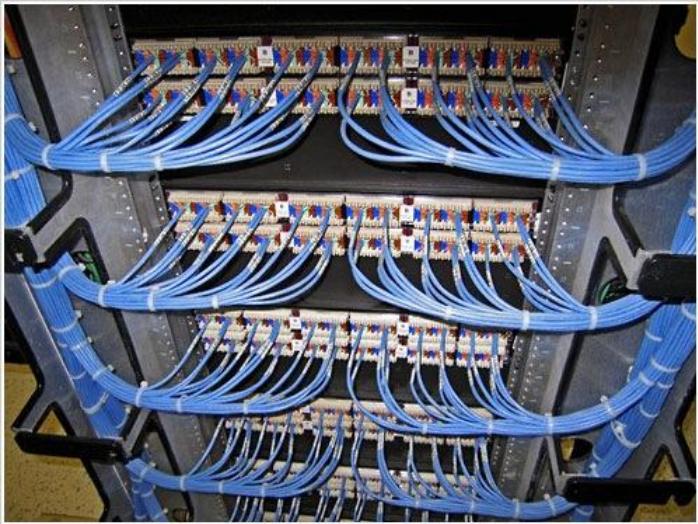
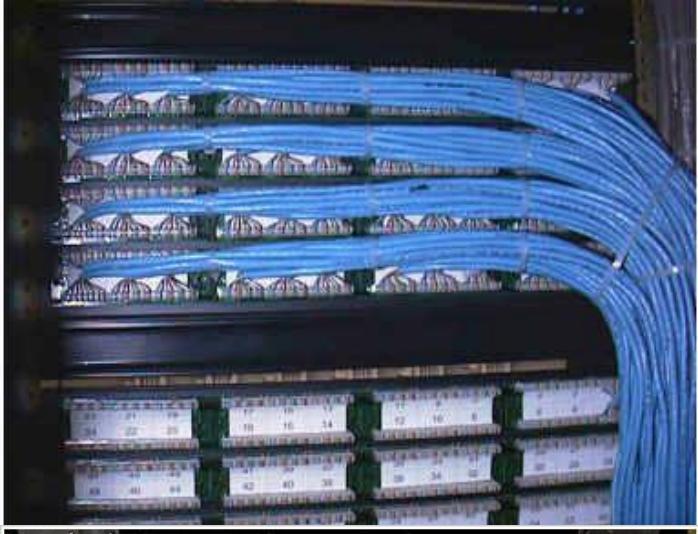
Montagem do PATH PANEL



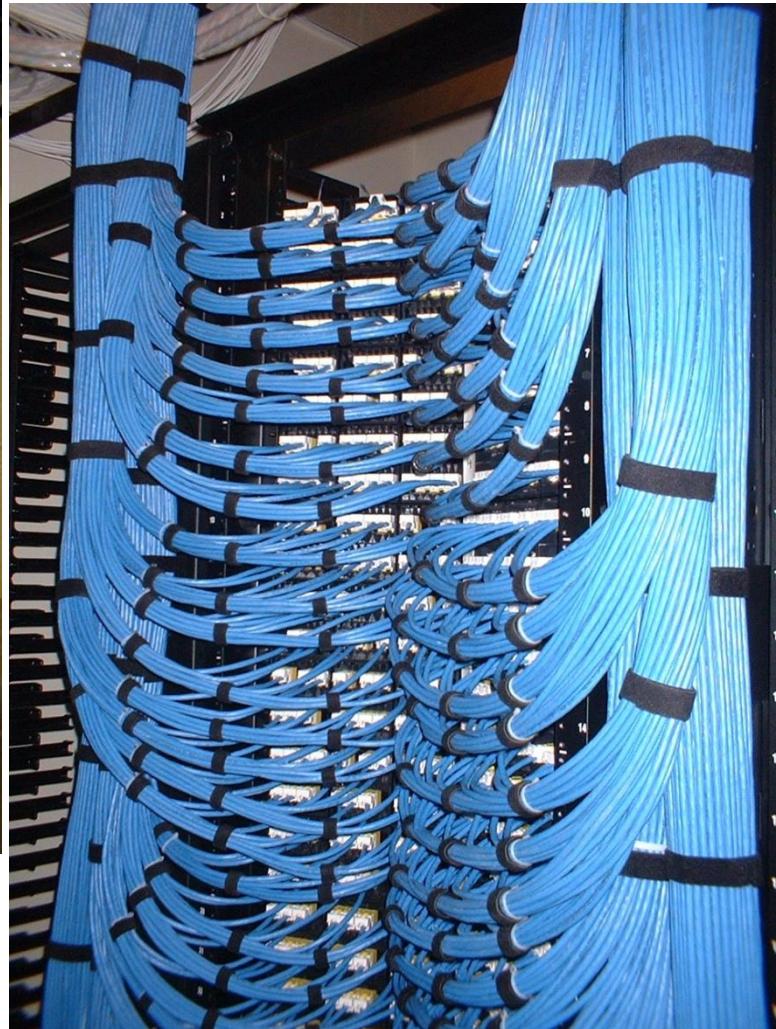
PATH PANEL



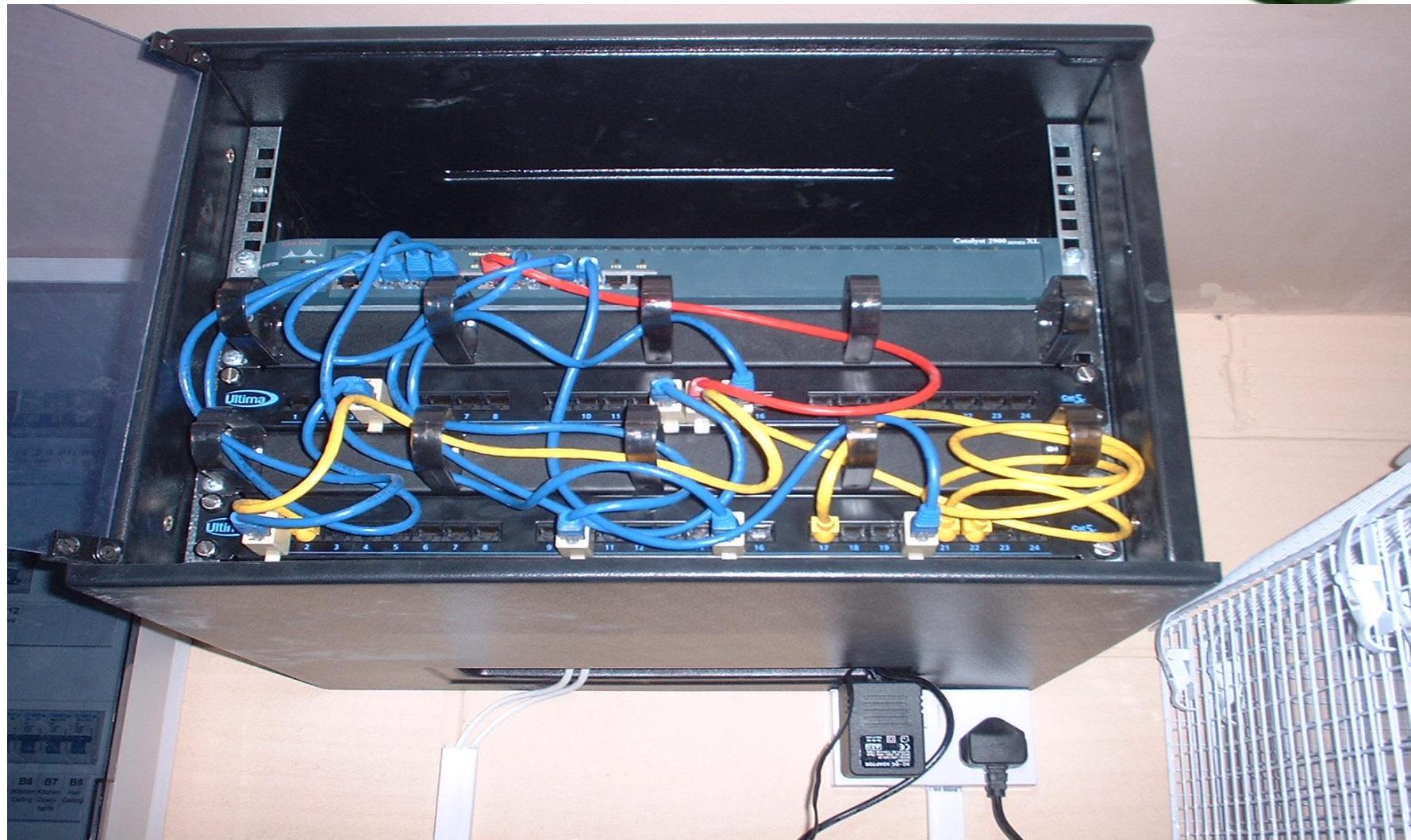
Montagem PATH PANEL



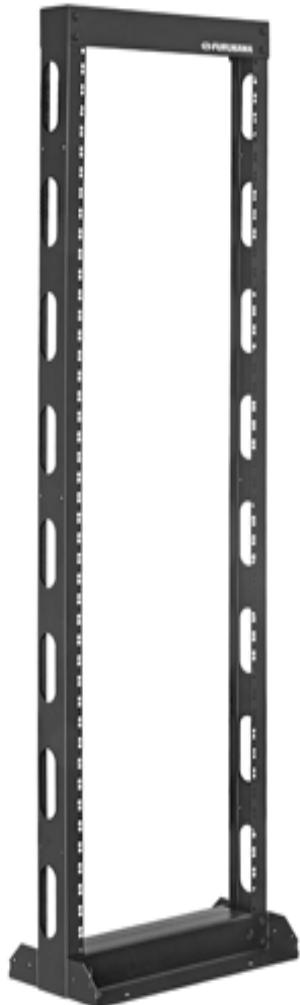
PATH PANEL



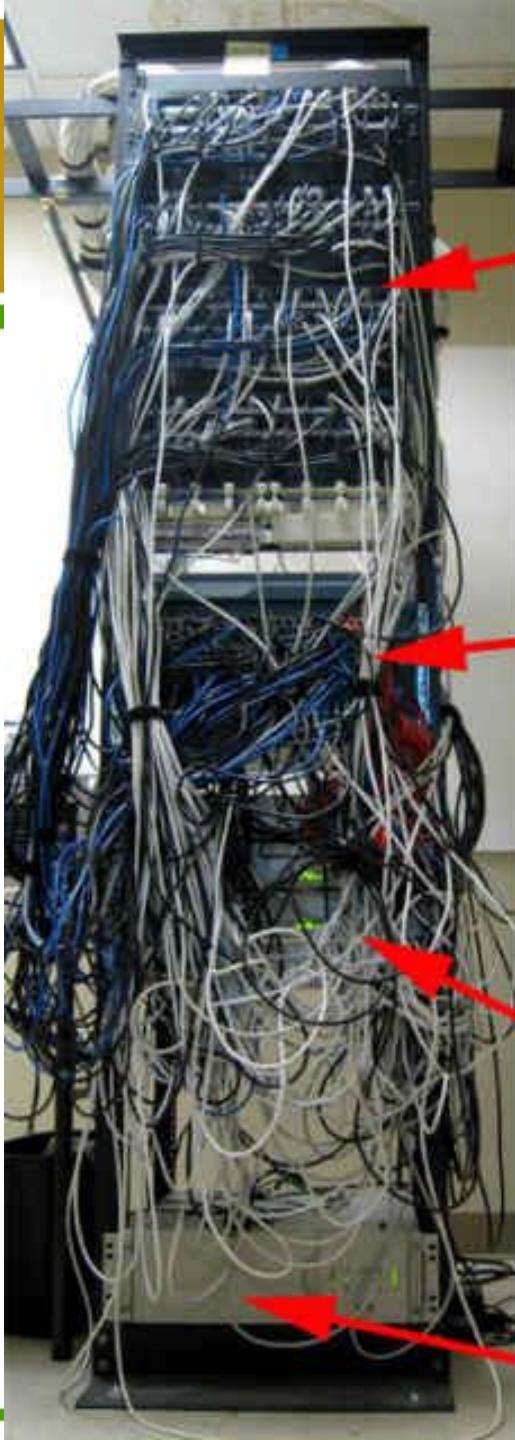
Não Faça Isso !!



Rack – U's



E isso !!!



Patch Panel

Where voice and computer comes together



Data Ports (black cables)

Provides Internet, computer, etc connections



Voice Ports (white cables)

Provides voice and FAX service

Emergency Power Supply

Provides electricity in the event of power loss

www.professorramos.com



Compartilhando o Conhecimento

2010



Leandro Ramos

v. 0.1