



ZR6FD logo

Drukwerk printing ZS6BAQ  
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# WATTS

09 - 2006

Year 76+9m

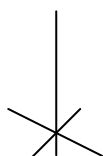
Monthly newsletter of the Pretoria Amateur Radio Club  
Maandelikse nuusbrieff van die Pretoria Amateur Radio Klub.



PARC, PO Box 73696 Lynnwood Ridge 0040, RSA



<http://www.qsl.net/zs6pta>



Bulletins : 145,725MHz 08:45 Sundays / Sondae

Relays : 1840, 3700, 7066, 10135, 14,200 MHz (Seasonal)

Swapshop : After bulletin 2m and 40m (also on-line)

Bulletin repeats : Mondays 19:45 on 145,725 MHz only

## AGM / AJV 2006. Warm fellowship on the coldest night of the year. p2-3



### In this issue

- AGM glimpses
- Editorial
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- Member news
- Technical
- Let's go complex part 5
- Page eight

ZS6PTA

### in hierdie uitgawe

- AJV blikke
- Redaksioneel
- Geskiedenis
- Ledenuus
- Tegnies
- Bladsy agt

### Next Meeting 6 Sep 2006

Time: 19:30 for 20:00  
PARC Clubhouse,  
South Campus,  
University of Pretoria.  
SE cnr University and  
Lynnwood roads.

## AGM Glimpses | AJV blikke



Hans v.d. Groenendaal ZS6AKV was our Guest of Honour and presented us with much food for thought



Almero ZS6JPL reading his Annual Report.



Richard ZS6UK reading the Financial Report



Trophy table. This is the first year wooden plaques were given out as permanent mementoes.



Nico ZR6VT ontvang die Ham Spirit Trofee vir sy milde en onbaatsugtige ondersteuning aan ons klub

**Further notes:** Tjerk ZS6P paid tribute to Hal ZS6WB who received Honorary Life Membership in absentia. Certificates also went to Pieter ZR6AHT and Hans Gurtel ZR6HVG in absentia.



## PARC Management team / Bestuurspan Aug 2006- Aug 2007:

Committee members

<b>Chairman,</b> SARL liason, Fleamarkets	Alméro Dupisani	ZS6LDP	<a href="mailto:almereo.dupisani@up.ac.za">almereo.dupisani@up.ac.za</a>	012-567-3722	082-908-3359
<b>Vice Chairman, Secretary</b> Rallies, Social, Hamnet	Johan de Bruyn	ZS6JHB	<a href="mailto:johandbr@absa.co.za">johandbr@absa.co.za</a>	012-803-7385	082-492-3689
<b>Treasurer,</b> Database, DF hunts	Richard Peer	ZS6UK	<a href="mailto:zs6uk@peer.co.za">zs6uk@peer.co.za</a>	012-333-0612	082-651-6556
<b>Public relations</b>	Craig Symington	ZS6RH	<a href="mailto:craigsym@global.co.za">craigsym@global.co.za</a>	012-997-4504	083-259-3233
<b>Repeaters, Technical</b>	Pine Pienaar	ZS6OB	<a href="mailto:janpienaar@ananzi.co.za">janpienaar@ananzi.co.za</a>	012-345-1801	082-447-7823

Co-opted / Geko-opteer:

<b>Repeaters, technical</b>	Johan Lehmann	ZS6JPL	<a href="mailto:jlehmann@csir.co.za">jlehmann@csir.co.za</a>	012-804-6173	083-300-8677
	Hans Gurtel	ZR6HVG	<a href="mailto:adele123@absamail.co.za">adele123@absamail.co.za</a>	082-940-0623	082-940-0623
	Pieter Human	ZR6AHT	<a href="mailto:humanp@telkom.co.za">humanp@telkom.co.za</a>	012-800-2888	082-565-6081
<b>Repeater Maintenance (70cm)</b>	Willie du Plessis	ZS6AEA	<a href="mailto:hesterdup@webmail.co.za">hesterdup@webmail.co.za</a>	012-565-5555	083-653-2101
<b>Auditor</b>	Position open				
<b>Newsletter/Kits</b>	Hans Kappetijn	ZS6KR	<a href="mailto:zs6kr@wbs.co.za">zs6kr@wbs.co.za</a> /arrl.net	012-333-2612	072-204-3991
<b>Asset control</b>	Andre v Tonder	ZS6BRC	<a href="mailto:andre.vtonder@absamail.co.za">andre.vtonder@absamail.co.za</a>	361-3292	082-467-0287
<b>Tydrenne/Rallies</b>	Johann de Beer	ZR6YV		011-918-1060	082-857-1561
<b>Klubfasiliteite, vlooiemark</b>	Willie Greyling	ZR6WGR	<a href="mailto:willie@up.ac.za">willie@up.ac.za</a>		082-940-2490
<b>Webmaster</b>	Edwin peer	ZR6ESP	<a href="mailto:zr6esp@peer.co.za">zr6esp@peer.co.za</a>	012-333-0612	
<b>Hamnet, projects</b>	Roy Newton	ZS6XN	<a href="mailto:newtonr@telkomsa.net">newtonr@telkomsa.net</a>	012-547-0280	
<b>Morse testing</b>	Position open				
<b>Historian/Awards</b>	Tjerk Lammers	ZS6P	<a href="mailto:zs6p@iafrica.com">zs6p@iafrica.com</a>	012-809-0006	
<b>Public Relations</b>	Jaco Lubbe	ZR6JLL			082-494-1959
	Thobile Koni	ZS6TKO	<a href="mailto:toko40@mweb.co.za">toko40@mweb.co.za</a>		082-493-2483
<b>Tea</b>	Molly Peer	ZR6MOL	<a href="mailto:molly@peer.co.za">molly@peer.co.za</a>	012-333-0612	
	Doreen de Bruyn	ZR6DDB		012-803-7385	

## Editorial- AGM Report

Our AGM went off smoothly and our Guest of Honour and Speaker Hans van den Groenendaal ZS6AKV gave warning that clubs and individuals should do something really tangible to draw young blood to the hobby. One cheap and effective way may be Software Defined Radio (SDR) obtainable as a cheap external hardware-40m receiver that plugs into any PC. This could be a start to something big. He further mentioned that it appeared that many of the older-generation amateurs had a touch of "techno-fear" which prevented them from being on the same wavelength as the younger generation. Our technique of enticement has to be tuned to current-day technology and preferences. Hans also elaborated on the PLC QRM threat and how the SARL involved itself to protect amateur interests. Convincing the powers-that-are that PLC is a bad means to an end is no mean task and slow progress is being made. We will hear more in months to come.

After the club annual- and financial reports new annual fees of R70 (R50 spouses and pensioners) were approved. The new committee and chairman (see above) were voted into office, and awards and certificates were given out to deserving members. Of note was a Honorary Life Membership to Hal ZS6WB who has done so much for the hobby, especially in VHF/UHF.

The AGM was rounded off with a social get-together and we eventually went home in the freezing cold of about 6°C.

## Redaksioneel- AJV Verslag

Ons AJV het weereens glad verloop en ons Eregas- en Spreker Hans van den Groenendaal ZS6AKV het gewaarsku dat klubs en individue iets tasbaars moet doen om jong bloed aan te trek. 'n Goedkoop en effektiewe manier mag dalk Sagteware-Gedefineerde Radio (SDR) wees, wat beskikbaar is as 'n goedkoop eksterne hardware-ontvanger vir die 40m band, en by enige persoonlike rekenaar kan inprop. Dit is dalk die begin van iets groters. He het verder vermeld dat it wou voorkom dat die ouer-generasie amateurs 'n mate van "tegnovrees" het, wat hulle verhoed om op die selfde golflengte as die jonger generasie te kom. Ons tegniek om hulle aan te trek moet in pas wees met hedendaagse tegnologie en voorkeure.

Hans het ook uitgewei oor die KLM QRM bedreiging en hoe die SARL hulle betrek om amateur belange te beveilig. Ons sal meer gedurende die komende maande daarvan hoor.

Na die klub jaar- en finansieële verslae is 'n nuwe ledegelde van R70 (R50 vir gades en pensioenarisse) goedgekeur. Die nuwe komitee en voorsitter (sien bo) is in hulle amp bevestig waarna toekennings en sertifikate uitgereik is aan verdienstelike lede. Opmerklik was 'n Ere-Lewenslange Lidmaatskap toegeken aan Hal ZS6WB wat soveel vir amateur radio gedoen het, veral in die gebied van VHF/UHF.

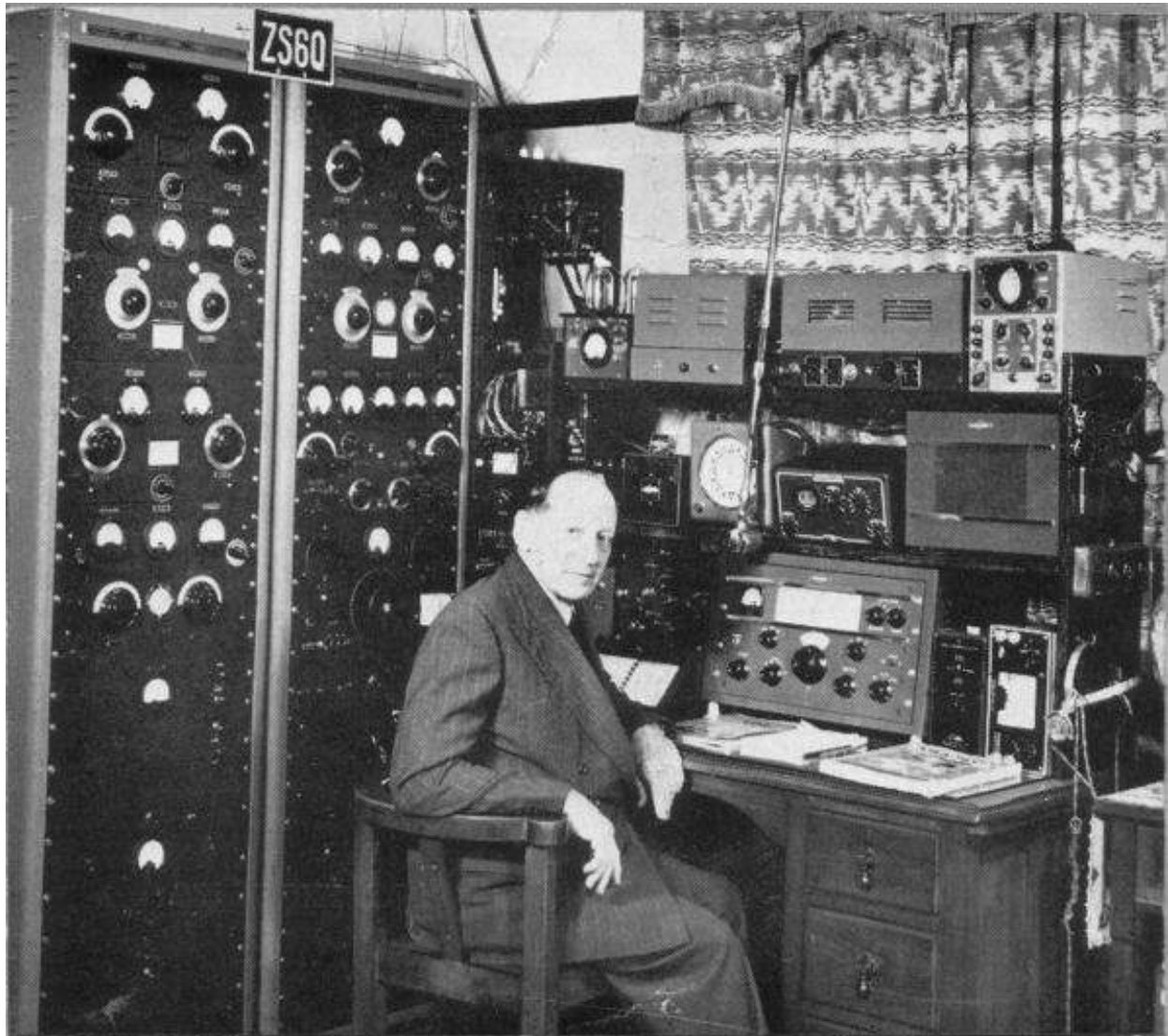
Die AJV isafgerond met 'n sosiale byeenkoms en ons het heelwat later in 'n yskoue 6°C huis-toe gegaan.

# ZS 6 PTA

1930-2006

ZS6Q – a callsign currently licensed to our club member Hein Fromman - pre-owned by a Mr. A Chenik in 1949.

Seated in front of a Collins 75A1 receiver



MAN OF THE MONTH — A. CHENIK, A.M.I.R.E.

From "Electrical and Radio Trades" May 1949

**M**R. A. CHENIK, A.M.I.R.E., Managing Director of Chenik & Barnett (Wireless), Ltd., was born in Melbourne, Australia, where he matriculated at the age of 13½. He is the pioneer of the Radio trade in South Africa, having opened the first radio business in the country in 1922.

Mr. Chenik is the Chairman of the S.A. Association of Radio & Refrigeration Industries. He was also a foundation member of the old Transvaal Radio Society which was formed before broadcasting came into existence in South Africa, and is one of the earliest amateur radio transmitters. He operates the well-known amateur transmitting station ZS6Q.

## Birthdays

## Verjaarsdae

Sept



- 02 Charrell ZR6GN
- 02 Lizette ZS6LZT, dogter van Magda ZS6MVW en Pieter ZS6PVW
- 04 Tony ZS6TFB
- 05 Bernie ZS6ANU
- 09 Bill ZS6WK
- 11 Johan ZS6JPL
- 15 Pamela, sw of Harry ZS6HRD
- 16 Issabel, dogter van Elza en Jan ZR6BKL
- 21 Johan ZS6JHB
- 24 Estie ZR6STB
- 25 Claire, daughter of Claire and Robert ZS6ARC
- 25 Susan, lv van Freddie ZS6JC

Sept

## Anniversaries

## Herdenkings

- 02 Lily and Harry ZS6AMP (56)
- 04 Martha Louisa en Attie ZS6REY (37)
- 09 Adele en Hans ZR6HVG (12)
- 27 Miemie en Hennie ZR6HEN (26)
- 28 Retha and Roy ZS6XN (21)

- 26 Bokkie ZR6CL
- 26 Graham ZR6GJR
- 26 Pieter ZR6KSA
- 27 Lodewyk, seun van elmarie ZR6AXF en Johan ZS6JPL
- 29 Charlize, dogter van Dawid ZS6DSG

## Sick Parade | Krukkelys

Mary, sw of Bil ZS6KO had a back problem attended to. We hear that his daughter underwent a similar procedure.

### Please note

In months to follow, only paid-up members will be listed  
**Let wel**  
 Slegs opbetaalde lede sal oor die die volgende maande gelys word

## PARC Diary | Dagboek

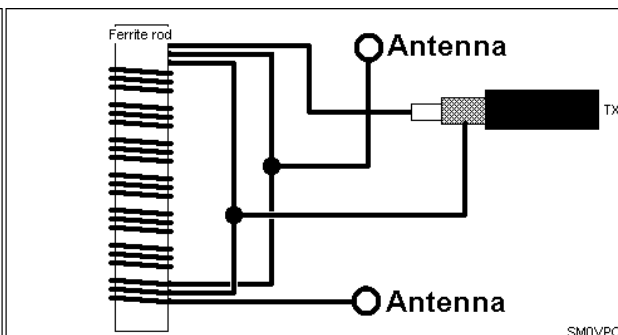
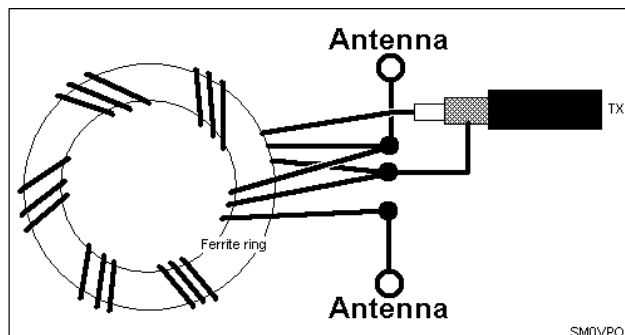
- Sept 06 PARC Club meeting**
- 15-17 SARL VHF/UHF Contest
  - 22 Schools close
  - 24 Heritage Day
  - 25 Public Holiday

- Oct**
- 30 Last day for SARL subscriptions
  - 01 RSGB 21/28 MHz Phone Contest
  - 02 Closing date for VHF/UHF contest logs
  - 02 Schools open
  - 04 PARC Club meeting**

## Snippets | Brokkies

The late **Bill Browne ex-ZS6FE** and **Bud Voortman ZS1B** as announced on HQ bulletins were both ex-Pretoria branch. **Erika, lv van Pine ZS6OB** het onlangs haar moeder verloor. Sterkte aan haar en haar familie.

**Our Monday-evening technical talk on 7 Aug was about baluns – Here's how to roll your own:**



## Long Term HF Propagation Prediction for Aug 2006

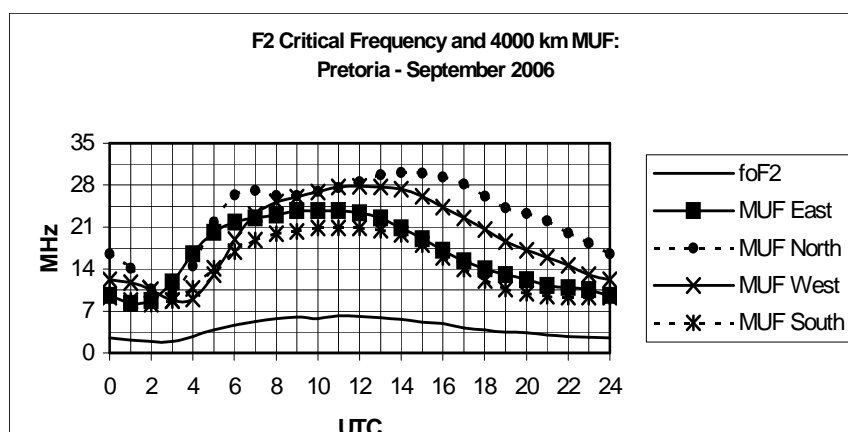
Vince ZS6BTY

### DX Operating

The graph shows the 4000 km maximum useable frequency (MUF) to the East, North, West and South from Pretoria for the first hop using the F2 layer.

### Local Operating

The F2 critical frequency (foF2) is the maximum frequency that will reflect when you transmit straight up. E-layer reflection is not shown.



## 9. SYMMETRICAL NETWORKS

T or Pi networks with equal component values in each leg will show equal behaviour in both directions. If we now also choose the component values according to the notation shown below we can open a new can of worms:

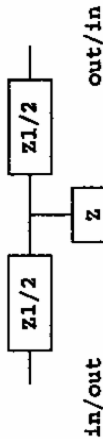


Fig.20 Symmetrical Tee

It does not matter which way round the network is used. When this network is terminated such that the input impedance is equal to that of the termination, we have the special case of what is known as an ITERATIVE NETWORK. The impedance level is then the CHARACTERISTIC IMPEDANCE. Using a quite simple analysis we find that from any side:

$$\text{Characteristic impedance } Z_0 = \sqrt{Z_{oc}Z_{sc}} \dots\dots\dots [20]$$

where  $Z_{oc}$  = input  $Z$  with load side open  
 $Z_{sc}$  = input  $Z$  with load side shorted

$$\text{Also } Z_1 = \frac{2(Z_{oc}-Z_0)}{Z_0} \\ Z_2 = \frac{2(Z_{oc}+Z_0)}{Z_0}$$

A signal applied to the input of the network will undergo some possible losses and a phase change before reaching the output. We can encompass both these effects through defining a complex propagation constant  $\phi$ . The real part of this quantity then represents losses and the imaginary part the phase change:

$$\text{By definition for any network } \frac{V_{out}}{V_{in}} = e^{-\phi} \dots\dots\dots [21]$$

where  $e = 2,7182$   
 where  $\phi$  = complex transfer or propagation constant  
 $\quad = a+j\beta$

$a$  = attenuation constant in nepers (lnp = 8,686dB)  
 $\beta$  = phase shift constant in radians (lrad= 57,295°)

## 10. CASCADED ITERATIVE NETWORKS

We are now at the stage where we can create a model of a transmission line. We can imagine a length of line to be a long network of cascaded T sections; the series arms representing distributed resistance and inductance while the shunt arms represent distributed capacitances.

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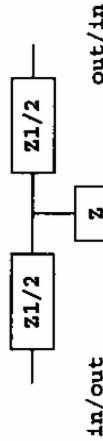


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# South African Radio History Hotchpotch

(Taken from the publication: RADIO - The Wireless Journal of South Africa. March 1925)

The year 1925 saw pleas to organize broadcast radio activities and to create a central governing board. Broadcasters of music and other fare were mainly private and were known as "JB", "PMG" etc. who had listeners and experimenters as 'subscribers'. Various people were transmitting and receiving and it was difficult if not impossible to class any one as a "ham" or "Radio-Amateur" although the word "amateur" appears to have been used without connotation to being "hams". (The first real ham license in SA was issued in 1904) Apparatus and changes thereto had to be approved by the PMG and already there was talk of "pirates" that had to be closed down.

Big broadcasters such as "JB" published the magazine RADIO which was the official organ of the Associated Scientific and Technical societies (A.S. and T. Broadcasting Co. Ltd) Johannesburg. This station even broadcast a relay from KDKA in Pittsburg during the midnight hours.

Opinions were sought from readers to using the ARRL and the SA Board of Control "to bring broadcasters and listeners into closer touch with each other".

## THE AMERICAN RADIO RELAY LEAGUE.

We have interesting information from Mr. C. Service, the assistant secretary of the above League. It is now time that South Africa was conducting organised experimental long-distance work, and providing sufficient interest is shown by our South African experimenters, we shall be pleased to organise local headquarters of the American Radio Relay League in Johannesburg. We hope next month to publish further particulars on this subject, and we shall be glad to receive any suggestions in the meantime from readers. Keeness, not numbers, is required to make this idea possible.

There were many local societies of radio enthusiasts in all provinces, the first being the Transvaal Radio Society in 1920. All had ardent listeners and experimenters who regularly reported on their successes in this magazine.

The Pretoria Radio Society however went defunct but its secretary went on with private transmissions. A ham Toby Innes 20B (ZS6D) was active with musical transmissions since 1922. He was one of 21 experimental stations who were reluctantly issued licenses by the PMG.

The SARL was formed by a Raymond Coombs in the same month as this publication, March 1925. The IARU came into being in Paris in April 1925. In 1926 "Wireless Review" listed 76 "A series" South African Amateur callsigns.

## PRETORIA RADIO SOCIETY.

We very much regret having to report that owing to lack of support the Pretoria Radio Society is now defunct. Mr. G. A. Mauch, the late Hon. Secretary, is transmitting, and will be pleased to experiment with our readers.

The following are particulars of his transmission:—Call sign, PGM, and Mauch Calling. Wavelength, 170 metres. Hours: Saturday evenings, 7.30-8.45 p.m.; Sunday afternoons, 4-5.30 p.m.; Sunday evenings, 7.30-8.30 p.m. Sending piano solos, gramophone records, and occasionally other instruments.

Mr. Mauch is received regularly with good strength at Premier Mine, Brits, Hartbeestpoort, and as far away as Bloemhof, from a Mr. Diel.

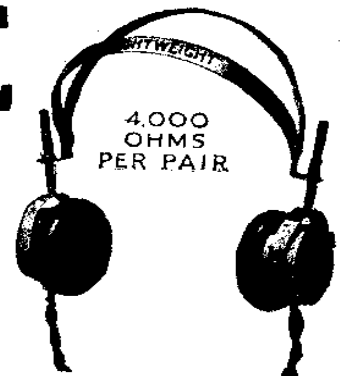
A postcard from listeners would be greatly appreciated if forwarded to his private address, 8, Ayton Street, Arcadia, Pretoria.



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