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TABLE OF CONTENTS

1. READER'S ADVICE	1
2. Executive Summary	2
2.1. Report Objective	2
2.2. Postpaid Packages	2
2.2.1. Batelco	2
2.2.2. Viva	5
2.2.3. Zain	7
3. ANNEX	11
3.1. Batelco bills	11
3.2. Viva bills	13
3.3. Zain bills	14



This study is published in accordance with Articles 3(b)(1), 3(c)(2), 3(c)(4) and Article 54 of the Telecommunications Law. The purpose of the study is to evaluate and benchmark Quality Levels offered by Mobile Network Operators, Batelco, Viva and Zain, in the Kingdom of Bahrain. The independent study was conducted with an objective End-user perspective by Cabinet Directique and does not represent any views of the Authority.

This study is the property of TRA. Any effort to use this Study for any purpose is permitted only upon the Authority's written consent.

This document contains information and statistics that have been obtained from sources believed to be reliable in regard to the subject matter covered.

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1. READER'S ADVICE

For a proper understanding of this report, readers are advised to take into account the following key elements:

Quality of Mobile Services Audit is a snapshot of the observed quality and performance offered by Mobile Operators at the time of the measurements campaign.

Mobile Operators are continuously performing modifications and upgrades (including during the audit). Performance at the time of reading the report may be different.

TRA deliberately chose to assess quality from the end user perspective, which involves for example carrying out measurements with mobile devices which are available in Mobile Operator shops, behaving like the user on the field and cross network testing.



2. Executive Summary

2.1. REPORT OBJECTIVE

The aim of this report is to evaluate, from an end-user perspective, the accuracy of the billing systems used by mobile network Operators Batelco, Zain and Viva for the following key services:

- National Calls
- National Short Message Services (SMS)
- Data
- International Calls
- Roaming

Subscriber identity modules (SIM cards) used in this study are post-paid packages.

The Authority selected Directique, an international consulting firm, to conduct the assessment using a test method designed to gather a faithful qualitative records from an End-users' point of view, avoiding assessing quality through a pure technical angle as this is performed by Mobile Operators themselves on a regular basis.

This audit was conducted from the 27th September to the 6th November 2018 inclusive.

2.2. POSTPAID PACKAGES

2.2.1. BATELCO

2 postpaid plans have been subscribed.

The tab here under gives for each line of the plan the effective billing and the correspondence with the actual consummation:

Batelco – Postpaid n°1 - 39068089

BD16 - no contract

- Free local minutes to all operators = 1 300
- Local call rates = 15 fils
- SMS rates = 30 fils
- 16GB Data on 4G network

Bill # 1810100011203

Monthly Rental Fees		St	tart Date	Er	nd Date		Total (BD)	Billing ok?
Month 1 - Super 16 no contract - Rental		28/09/2018 0		09/	09/10/2018		6.400	\checkmark
Month 2 - Super 16 no contract - Rental		10,	/10/2018	09/	11/2018		16.000	\checkmark
Usage	Total usag	ge	Allowan	ce	additional	ısage	Total (BD)	Billing ok?
						_	7 7	
National Calls	286 minut	es	1 300 min	utes	0 minut	es	0.000	\checkmark



Batelco – Postpaid n°2 - 39086855

BD16 - no contract

- Free local minutes to all operators = 1 300
- Local call rates = 15 fils
- SMS rates = 30 fils
- 16GB Data on 4G network

Bill # 1810280273957

Monthly Rental Fees	Start Date	End Date	Total (BD)	Billing ok?
Month 1 - Super 12 no contract - Rental	28/09/2018	27/10/2018	6.400	\checkmark
Month 2 - Super 12 no contract - Rental	28/10/2018	27/11/2018	16.000	\checkmark
20 GB Data Voucher	18/10/2018		10.000	\checkmark
8 GB Data Voucher	23/10/2018		5.000	$\overline{\checkmark}$

Usage	Total usage	Allowance	additional usage	Total (BD)	Billing ok?
National Calls Summary					
Calls to Batelco (Free)	1 300 min.	1 300 min.	0 min.	0.000	\checkmark
Calls to Batelco (Free)	158 min.	0 minute	158 min.	2.370	\checkmark
Extra Charges					
National Calls	1.458 min.	0 min.	1.458 min.	2.370	\checkmark
Roaming Calls	10 min.	0 min.	10 min.	2.260	\checkmark
Roaming SMS	10 SMS	0 SMS	10 SMS	0.230	\checkmark
Roaming GPRS	10.710 MB	0 MB	10.710 MB	2.461	\checkmark
SMS to Batelco (charged)	499 SMS	0 SMS	499 SMS	14.970	\checkmark
SMS to international (charged)	1 SMS	0 SMS	1 SMS	0.030	\checkmark



2.2.1.1. ROAMING DETAILS - DUBAI

TYPE	CALL_DATE	Operator	Receiver in :	Total UNIT	Amount (BD)	Price/unit (BD)	Billing ok?
Call	20/10/2018	DU-UAE	Bahrain	10	2.26	0.226	\checkmark
SMS	20/10/2018	DU-UAE	Bahrain	10	0.23	0.023	\checkmark
Data	20/10/2018	DU-UAE		10.698	2.461	0.230	\checkmark

Volumes of Call to Bahrain, Local calls and SMS are correctly calculated

In **Dubai**, the following SMS has been received when activating the SIM:

"Welcome to United Arab Emirates, peak rates per minute BD charges:

DU - Receive call 0.105, **Local call 0.094, Call to Bahrain 0.233, SMS 0.026, Data 0.320 per MB**

Rates may be subject to change, for more info visit www.batelco.com"

Tariffs - Batelco's website:

	Operator	Peak Rate	Off Peak Rate	SMS
Calling Bahrain	du	0.226	0.226	0.023

Conclusion: in Dubai, calls to Bahrain are billed <u>in accordance</u> with Batelco's price on their website, prices received by SMS are not updated.

2.2.1.2. ROAMING DETAILS - FRANCE

TYPE	CALL_DATE	Operator	Receiver in :	Total UNIT	Amount (BD)	Price/min (BD)	Billing ok?
Call	06/11/2018	Orange	Bahrain	3	3.9	1.300	\checkmark
Local Calls	06/11/2018	Orange	France	1	0.45	0.450	\checkmark
SMS	06/11/2018	Orange	Bahrain	2	0.284	0.142	$\overline{\checkmark}$

In **France**, the following SMS has been received when activating the SIM:

Orange - Receive call 0.320, Local call 0.450, Call to Bahrain 1.300, SMS 0.142, GPRS 2.363 per MB

Rates may be subject to change, for more info visit www.batelco.com"

Tariffs - Batelco's website:

	Operator	Peak Rate	Off Peak Rate	SMS
Calling localy in	Orange	0.450	0.450	0.142
Calling Bahrain	Orange	1.300	1.300	1.300

Conclusion: calls to Bahrain are billed in accordance with Batelco's price on their website, and tariffs received by SMS are not updated.



[&]quot;Welcome to France, peak rates per minute BD charges:

2.2.2. VIVA

2 postpaid plans have been subscribed.

The tab here under gives for each line of the plan the effective billing and the correspondence with the actual consummation:

Viva – Postpaid n°1 - 35403220

Viva new postpaid SIM only LTE BD 16 Plan

- Free local min. to all operators = 1 500
- Local call rates = 25 fils/min.
- SMS rates = 20 fils
- 22GB Data on 4G network

Bill ref: B1-122663986

Monthly Rental Fees	Start Date	End Date	Total (BD)	Billing ok?	
Viva Postpaid Connection fee	Viva Postpaid Connection fee			5.000	\checkmark
VIVA new postpaid SIM only LTE	BD 16 Plan	20/10/2018	19/11/2018	16.000	\checkmark
VIVA new postpaid SIM only LTE	BD 16 Plan	28/09/2018	19/10/2018	11.733	\checkmark
Usage	Total usage	Allowance	Add. usage	Total (BD)	Billing ok?
VIVA to VIVA Calls	833 min.	765 min.	118 min.	2.900	V
VIVA to Other Network Calls	217 min.	187 min.	30 min.	0.750	\checkmark
VIVA to VIVA SMS	396 SMS	0 SMS	396 SMS	7.920	\checkmark
National Data	tional Data 11.3353 GB		0 GB	0.000	\checkmark

Viva – Postpaid n°2 - 35404220

Viva new postpaid SIM only LTE BD 16 Plan

- Free local min. to all operators = 1 500
- Local call rates = 25 fils/min.
- SMS rates = 20 fils
- 22GB Data on 4G network

Bill ref: B1-122663937

Monthly Rental Fees	Start Date	End Date	Total (BD)	Billing ok?	
Viva Postpaid Connection fee		28/09/2018		5.000	\checkmark
VIVA new postpaid SIM only LTE BD	16 Plan	20/10/2018	19/11/2018	16.000	\checkmark
VIVA new postpaid SIM only LTE BD	16 Plan	28/09/2018	19/10/2018	11.733	\checkmark
Mobile data Once-Off 10HC	Mobile data Once-Off 10HC			10.000	\checkmark
Mobile data Once-Off 10HC Plus		18/10/2018		10.000	\checkmark
Usage	Total usage	Allowance	Add. usage	Total (BD)	Billing ok?
VIVA to VIVA Calls	424 min.	424 min.	0 min.	0.000	\checkmark
National Data	32.0178 GB	32.0178 GB	0 GB	0.000	\checkmark
Mobile Data Once-Off 5 HC			5.000	\checkmark	
Mobile Data Once-Off 5 HC Plus				5.000	$\overline{\checkmark}$



2.2.2.1. ROAMING DETAILS - DUBAI

ТҮРЕ	CALL_DATE	Operator	Receiver in :	Total UNIT	Amount (BD)	Price/U (BD)	Billing ok?
Call Bahrain	21/10/2018	ETILISAT	Bahrain	00:11:00	2.486	0.226	\checkmark
Local call	21/10/2018	ETILISAT	Dubai	00:02:00	0.18	0.090	\checkmark
SMS	21/10/2018	ETILISAT	Bahrain	11	0.253	0.023	\checkmark
Data	21/10/2018	ETILISAT	Bahrain	19.873 MB	4.491	4.425	X

Volumes of Call to Bahrain, Local calls and SMS are correctly calculated

In **Dubai**, the following SMS has been received when activating the SIM:

"For your reference, the peak roaming rates while in (UNITED ARAB EMIRATES) in BD/min: (Etisalat) Incoming Calls:0.083 ,Local:0.090 ,Bahrain:0.226 ,Call GCC:0.226 ,SMS:0.023 ,Data:0.489 per MB

Rates may be subject to change."

Billed amounts are in accordance with tariffs received by SMS for Calls and SMS, but **not for** Data

2.2.2. ROAMING DETAILS - FRANCE

ТҮРЕ	CALL_DATE	Operator	Receiver in :	Total UNIT	Amount (BD)	Price/min (BD)	Billing ok?
Call Bahrain	02/11/2018	Orange France	Bahrain	00:03:00	3	1.000	\checkmark
Local call	02/11/2018	Orange France	France	00:01:00	0.5	0.500	\checkmark
SMS	02/11/2018	Orange France	Bahrain	3	0.75	0.250	\checkmark
Data	02/11/2018	Orange France	Bahrain	25.899 MB	25.898	1.000	\checkmark

Volumes of Call to Bahrain, Local calls and SMS are correctly calculated

Billed amounts are in accordance with tariffs on Viva's website:

France							
Postpaid	ĺ.						
country	Operator	Incoming Call	Local Call	Calling Home	SMS	GPRS per MB	
France	Free Mobile	0.3	0.3	1.55	0.145	5.985	
France	Orange	0.5	0.5	1	0.25	5	
France	SFR	0.52	0.43	1.105	0.145	5.99	

In **France**, the following SMS has been received when activating the SIM:

"Dear customer, while roaming with France Orange following are the VIVA Postpaid charges: (calling within France BD 0.500/min, calling Bahrain BD 1.000/min, sending SMS BD 0.250, incoming calls BD 0.500/min, GPRS BD 5.000/MB."

Billed amounts are in accordance with tariffs received by SMS



2.2.3. ZAIN

2 postpaid plans have been subscribed.

The tab here under gives for each line of the plan the effective billing and the correspondence with the actual consummation:

Zain – Postpaid n°1 - 66638531

Package Charges Postpaid 15 – non-contracted

- Local Calls = 1 200 min.
- Local call rates = 15 fils/min.
- SMS rates = 30 fils
- 16GB Data on 4G network

Monthly Rental Fees	Start Date	End Date	Total (BD)	Billing ok?
Once off registration fee (One Off)			5.000	\checkmark
Package PostPaid 15	28/09/2018	30/09/2018	1.500	\checkmark
Package PostPaid 15	01/11/2018	30/11/2018	15.000	\checkmark

Usage	Total usage	Allowance	additional usage	BD	Billing ok?
Month 1					
Local calls	975 min.	975 min.	0 min.	0.000	\checkmark
SMS	1 SMS	1	0	0.000	\checkmark
Internet	18.429 GB	16 GB	2.429 GB	0.000	\checkmark
Month 2					
Call made while roaming	3:09	0	3:09	5:907	\checkmark
Other Services – GPRS roaming	56140 KB	56140 KB		38.414	\checkmark

Roaming Calls, SMS and data

France:

ТҮРЕ	CALL_DATE	Operator	Receiver in :	Total UNIT	Amount (BD)	Price/min (BD)	Billing ok?
Call	06/11/2018	Bouygues France	Bahrain	00:03:00	4.962	1.654	\boxtimes
Local call	06/11/2018	Bouygues France	France	00:01:00	0.559	0.559	\boxtimes
SMS	06/11/2018	Bouygues France	Bahrain	2	0.386	0.193	\boxtimes
data	06/11/2018	Bouygues France		23 090 KB	15.783	3.158	\times



Not one of billed amounts are in accordance with tariffs on Zain's website:

• Bouygues France:

PostPaid		
Roaming Tariff Rates	Peak	Off - Peak
Incoming Calls	0.613	0.563
Local	-	0.376
Local calls	0.417	0.417
Bahrain	1.46	1.46
SMS Rate	0.174	
GPRS Rate PER MB	3.338	

These rates are subject to change by the visited operator.

These rates may also be subject to currency exchange fluctuations and foreign taxes that may be applied by the visited country.

Those rates are indicative, as described on the disclaimer under the table. But no SMS has been received in France when activating the device.

Undue data wrongly billed

As shown in the tab here under, a total of 152 data sessions with no customer usage has been wrongly billed to the customer, for a total of 22.6BD. This amount should not be charged to the customer, as it does not correspond to an actual use of data while roaming.

TYPE	Nb billed sessions	Volume	Amount (BD)	Billing ok?
Data session	5	23.1MB	15.783	\boxtimes
Data unexpected usage	152	33.5MB	22.631	\boxtimes

Moreover, detailed bill shows that a lot of those sessions have been billed several times (up to 6 times):

Number v	Country ~	Date ↓↑	Time 🔻	Dur./Vol ▼	Type 🏋	Char _€ ▼
20820	FRAF3	02/11/2018	14:24:32	930KB	G	0.636
20820	FRAF3	02/11/2018	14:24:32	130KB	G	0.089
20820	FRAF3	02/11/2018	14:24:32	10KB	G	0.007
20820	FRAF3	02/11/2018	14:42:14	930KB	G	0.636
20820	FRAF3	02/11/2018	14:42:14	930KB	G	0.636
20820	FRAF3	02/11/2018	14:42:14	930KB	G	0.636
20820	FRAF3	02/11/2018	14:42:14	930KB	G	0.636
20820	FRAF3	02/11/2018	14:42:14	10KB	G	0.007
20820	FRAF3	02/11/2018	14:42:14	10KB	G	0.007
20820	FRAF3	02/11/2018	14:42:52	4620KB	test	3.158
20820	FRAF3	02/11/2018	14:42:56	4610KB	test	3.151
20820	FRAF3	02/11/2018	14:42:59	4620KB	test	3.158
20820	FRAF3	02/11/2018	14:43:02	4620KB	test	3.158
20820	FRAF3	02/11/2018	14:43:10	4620KB	test	3.158
20820	FRAF3	02/11/2018	14:43:18	930KB	G	0.636
20820	FRAF3	02/11/2018	14:43:18	930KB	G	0.636
20820	FRAF3	02/11/2018	14:43:18	930KB	G	0.636
20820	FRAF3	02/11/2018	14:43:18	180KB	G	0.123
20820	FRAF3	02/11/2018	14:43:18	10KB	G	0.007
20820	FRAF3	02/11/2018	14:43:18	10KB	G	0.007

There is clearly a problem of billing for data roaming which leads to a disproportionate extra amount for the customer.



Zain – Postpaid n°2 - 66638532

Postpaid 15 - non contracted

- Free local min. to all operators = 1 200
- Local call rates = 15 fils/min.
- SMS rates = 30 fils
- 16GB Data on 4G network

Monthly Rental Fees	Start Date	End Date	Total (BD)	Billing ok?
Once off registration fee (One Off)			5.000	\checkmark
Package PostPaid 15	28/09/2018	30/09/2018	1.500	\checkmark
Package PostPaid 15	01/10/2018	31/10/2018	15.000	\checkmark

Usage	Total usage	Allowance	additional usage	BD	Billing ok?
Month 1					
Local calls	2.293 min.	1200 min.	1 093 min.	16.395	\checkmark
SMS	604 SMS		604 SMS	18.120	\checkmark
Video calls	1 minute		1 minute	0.065	\checkmark
Calls made while roaming	12:18 min.		12:18 min.	3.773	\checkmark
Internet/WAP	46.884GB	16GB	30.884GB		
Other Services – GPRS roaming	48 930 KB		48 930 KB	10.800	\checkmark

All prices for roaming calls & SMS are in line with the announced tariffs by Zain.

Roaming Calls, SMS and data

Dubai:

ТҮРЕ	CALL_DATE	Operator	Receiver in :	Total UNIT	Amount (BD)	Price/min (BD)	Billing ok?
Call	21/10/2018	ETISALAT-UAE	Bahrain	00:14:00	3.164	0.226	\checkmark
Local call	21/10/2018	ETISALAT-UAE	Dubai	00:03:00	0.269	0.090	\checkmark
SMS	21/10/2018	ETISALAT-UAE	Bahrain	10	0.34	0.034	\checkmark
Data	21/10/2018	ETISALAT-UAE		48.93 MB	10.8	0.212	\checkmark
				TOTAL	14.573		$\overline{\checkmark}$

Volumes of Call to Bahrain, Local calls and SMS are correctly calculated.

But billed amounts for **SMS** are not in line with received SMS:

"For your reference, the peak roaming rates while in (UNITED ARAB EMIRATES)in BD/min: (Etisalat) Incoming Calls:0.083 ,Local:0.090 ,Bahrain:0.226 ,Call GCC:0.226 ,SMS:0.023 ,Data:0.489 per MB"



And also with tariffs on Zain's website:

ETISALAT-UAE:

PostPaid					
Roaming Tariff Rates	Peak	Off - Peak			
Incoming Calls	-	0.083			
Local	-	0.090			
Local calls	-	-			
Bahrain	-	0.226			
Call GCC	-	0.226			
SMS Rate	0.023				
GPRS Rate PER MB	0.226				

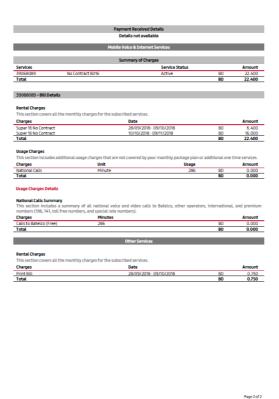
Furthermore, as no SMS was received to explain tariffs in **Dubai**, it is impossible for the consumer to evaluate the final cost of its communications.



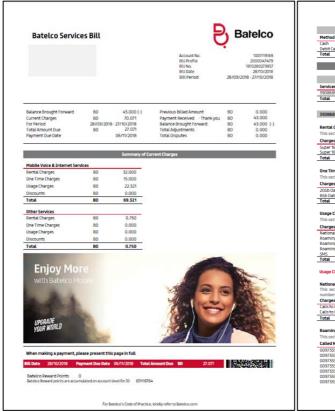
3. ANNEX

3.1. BATELCO BILLS

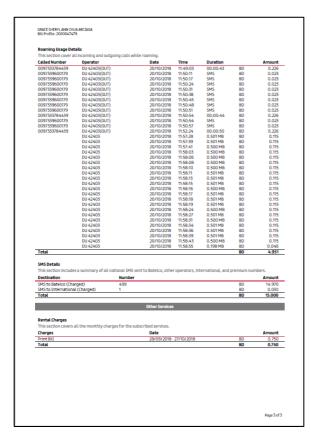








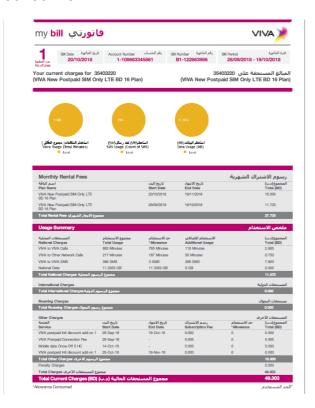
		Payment Received D	etails			
Method	Type	Date				Amount
Cash	Bill Payment	07/10/2018			BD	21.000
Debit Card	Bill Payment	21/10/2018			BD	22.000
Total					BD	43.000
		Mobile Voice & Internet	Services			
					_	
Services		Summary of Charges Service Status				Amount
39086855	No Contract BD16		Active		BD	69.321
Total					BD	69.321
39086855 - Bill Deta	lls					
Rental Charges This section covers al	l the monthly charges for t	he subscribed services.				
Charges		Date				Amount
Super 16 No Contract		28/09/2018 -			BD	16.000
Super 16 No Contract		28/10/2018 -	27/11/2018		BD	16.000
Total					BD	32.000
One Time Charges	charges for any additional	nnce off services subscrib	ed to			
Charges		Date				Amount
20Gb Data Voucher		18/10/2018			BD	10,000
BGb Data Voucher		23/10/2018			BD	5.000
Total					BD	15,000
Charges National Calls	additional usage charges ti Unit Mini	rte	a monary pa	Usage 1,458	BD	Amount 2.370
Roaming Calls	Mini			10	BD BD	2.260
Roaming SMS Roaming GPRS	Mes MB	sage		10.710	BD	2.461
ROBITITING OPRS	Mes	rana		500	BD	15,000
Total	1163	Ange		300	BD	22,321
numbers (196, 141, to	ary a summary of all nation il free numbers, and specia	l rate numbers).	to Batelco, of	ther operators, I	nternational	
Charges	Min					Amount
Calls to Batelco (Free Calls to Batelco (Char		U			BD BD	0.000
Total	9, 130				BD	2.370
Roaming Usage Deta	ils incoming and outgoing cal Operator	ls while roaming. Date	Time	Duration		Amount
0097333784439	DU 42403(OUT)	20/10/2018	11:37:42	00:00:59	BD	0.226
0097333784439	DU 42403(OUT)	20/10/2018	11:39:07	00:00:41	BD	0.226
	DU 42403(OUT)	20/10/2018	11:42:05	00:00:52 00:00:51	BD BD	0.226
0097333784439						
0097333784439 0097333784439	DU 42403(OUT)	20/10/2018			BD	
0097333784439 0097333784439 0097333784439 0097333784439	DU 42403(OUT) DU 42403(OUT) DU 42403(OUT)	20/10/2018 20/10/2018 20/10/2018	11:44:25	00:00:42 00:00:41	BD BD	0.226 0.226

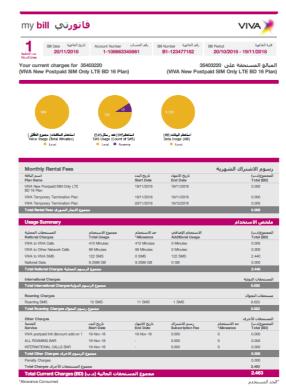




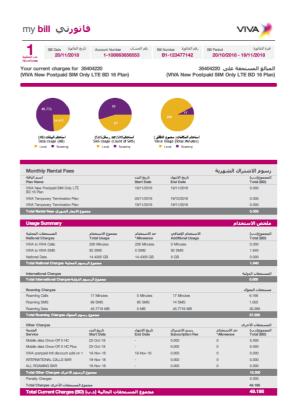
3.2. VIVA BILLS

35403220









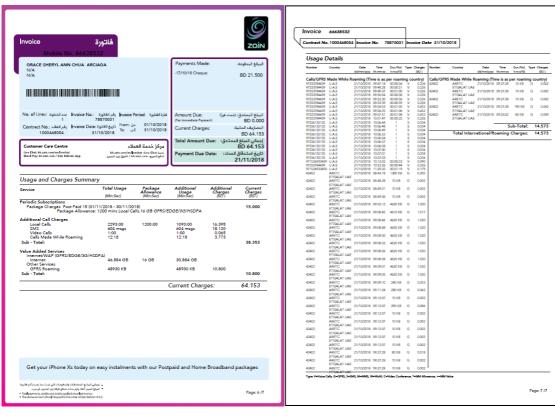


3.3. ZAIN BILLS











End of document

