

# IRAC

INTERNATIONAL REGULATORY AFFAIRS CONSULTING ESTABLISHMENT

PONUDBA ZA SVETOVANJE, PODBORO IN REVIZIJO PRI PODELITVI RADIJSKIH  
FREKVENC V  
800MHz, 900MHz, 1800MHz, 2100 MHz in 2600 MHz  
FREKVENČNIH PASOVIH

SUBMISSION DOCUMENTS

IRAC EST.  
EGERTASTRASSE 20  
FL-9490 VADUZ

IRAC EST.  
EGERTASTRASSE 20  
FL-9490 VADUZ

# IRAC

INTERNATIONAL REGULATORY AFFAIRS CONSULTING ESTABLISHMENT

APEK  
Stegne 7  
1000 Ljubljana  
Slovenia

## Submission for Tender:

**CONSULTATION SERVICES; SUPPORT AND REVISION FOR AWARDING RADIO FREQUENCIES IN THE 800MHz, 1800MHz, 2100MHz AND 2600MHz FREQUENCY BANDS**

**Issued by Agencija za postu in elektronske komunikacije Republike Slovenije, Stegne 7, 1000 Ljubljana, Slovenija**

Hereby, International Regulatory Affairs Consulting Establishment (IRAC Est.) submits their application for the respective tender for consultation services in connection with the upcoming assignment procedures for mobile communication frequencies.

We hope that our offer will be regarded as satisfactory and expect an intensive and challenging cooperation in this project. For clarifications, please contact our Senior Consultant [REDACTED] by phone [REDACTED] or by email [REDACTED]

Looking forward to your positive response and with best regards



Vaduz 16.05.2013

### List of Documents

1. Submission letter
2. Offer for Set A
3. Pro Forma Invoice for Set A
4. Draft Contract
5. Declaration of Compliance Form 4
6. IRAC Declaration (2.12.1.2, 2.12.2.1))
7. Criminal Record Certificate (2.12.1.1.)
8. Social Security Certificate (2.12.1.3.)
9. Commercial Register Extract (2.13.3.1.)
10. Tax Certificate (2.12.1.3.)
11. CV Heinrich Otruba (2.12.4.1)
12. Confirmation letters by AEK Macedonia (2.12.4.2.) and (2.15.2.1)
13. IRAC Statement on non existing conflicts of interest (2.12.4.3)
14. Confirmation letters Hutchison 3G Austria GmbH (2.15.2.1, project for operators)
15. Confirmation letters T-Mobile Austria GmbH (2.15.2.1, project for operators)
16. Purchase Order European Commission (2.15.2.1., Project for the European Commission))
17. Confirmation letter APEK (2.15.2.1, project for European Regulators)
18. Confirmation letter RTR Austria (2.15.2.1, project for European Regulators)
19. Project understanding (2.15.3.)

12.11.11  
TUGSARA WUDIPATI



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FORM-1

TENDERER  
IRAC Est.  
EGERTASTRASSE 20  
9490 VADUZ, FL

OFFER for SET...<sup>A</sup>

1. Subject of the Public Contract: <b>CONSULTATION SERVICES, SUPPORT AND REVISION FOR AWARDED RADIO FREQUENCIES IN THE 800 MHz, 900 MHz, 1800 MHz, 2100 MHz AND 2600 MHz FREQUENCY BANDS</b>	
2.1 Offer price in EUR without VAT:	- 61.800.-
2.2 Offer price in EUR including VAT:	n.a. IRAC Est. is not VAT liable
3. Offer validity until	20.12.2013
4. Tenderer's Data	
4.1 Company name:	International Regulatory Affairs Consulting Est.
4.2 Legal representative:	Dr. Heinrich OTRUBA
4.3 VAT ID:	n.a.
4.4 Registration Number:	FL-0002.168.682-6
4.5 International bank account Number:	L150 0880 5503 6441 7000 1
4.6 Address:	Egertastrasse 20, FL 9490, Vaduz
4.7 Telephone Number:	[REDACTED]
4.8 Fax Number:	[REDACTED]
4.9 Contact person:	[REDACTED]
4.10 E-mail:	[REDACTED]
4.11 Person responsible for signing the Contract:	Dr. Heinrich OTRUBA

Date: 18.05.2013





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TENDERER

IRAC Est.  
Egertastrasse 20  
9490 Vaduz, FL

FORM 2

PRO FORMA INVOICE for SET A

PREDMET JAVNEGA NAROČILA: CONSULTATION SERVICES, SUPPORT AND REVISION FOR  
AWARDING RADIO FREQUENCIES IN THE 800 MHz, 900 MHz, 1800 MHz, 2100 MHz AND 2600  
MHz FREQUENCY BANDS

No.	Description of supply/service	Unit	Quantity	Price per Unit without VAT:	VAT (%)	Price without VAT:
1.	Svetovalne storitve svetovalca za sklop A	dan	60	€ 1030.-	n.a.	n.a.
				Total price without VAT:		€ 61.800.-
				The amount of VAT:		-
				Total price in EUR including VAT:		€ 61.800.-

Date: 18.05.2013





DRAFT CONTRACT

Post and Electronic Communication Agency of the Republic of Slovenia, Stegne 7, 1000 Ljubljana, Registration No. 1332899, Tax ID SI10482369, represented by the director Franc Dolenc(hereinafter: "the Contracting authority")

and

FL-0002.168.682 International Regulatory Affairs Est. Company Registration No. 2168682, represented by Dr. Heinrich Olsufka(hereinafter: "the Provider"),

hereby enter into

CONTRACT No.: \_\_\_\_\_

INTRODUCTORY PROVISIONS

Article 1

- (1) The Contracting authority and the Provider establish that:
- the Contracting authority carried out the procedure to award a public contract for "Consulting services, support and revision for the purpose of awarding radio frequencies in the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz and 2600 MHz frequency bandwidths" on the Public Procurement Portal under publication No. .... on ..... and in the EU Official Journal under publication No. .... on .... pursuant to Article 25 of the Public Procurement Act (Official Gazette of the Republic of Slovenia No. 12/2013 - UPB5; hereinafter: ZJN-2);
- based on the public procurement referred to in the first paragraph and the tenders received, the Contracting authority selected the Provider as the most favourable tenderer for the award of the contract referred to in the first paragraph under Public Contract Award Notice No. .... dated .....
- the Provider has the necessary professional and technical competences for providing the Service as defined by this contract.

(2) The subject of this Contract shall be financed based on the provisional twelfths of the Contracting Authority's approved Financial Plan for year 2012 or based on the Financial Plan of Contracting Authority for the relevant year that forms the basis for the implementation of activities. The funds have been allocated to account No. 4020.

Article 2

Under this Contact the Parties shall define the general and specific conditions of the provision of the Service.

SUBJECT OF THE CONTRACT

Article 3



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REPO



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(1) The subject of this Contract shall be the Consulting services, support and revision for the purpose of awarding radio frequencies in the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz and 2600 MHz frequency bandwidths.

(2) The tender and complete contract documents shall form an integral part of this Contract.

#### Article 4

(1) The Contracting authority may, under this Contract, order additional services to the Provider that were not included in the initial contract award but have become necessary for the provision of the Service due to unforeseeable circumstances, or when such activities cannot be technically or economically separated from the main Service without causing difficulties to the Contracting authority, or in the event of services which the Contracting authority could award separately from the initial contract award but has decided not to do so due to their critical role in the subsequent phases of the implementation of this Contract and the successful provision of the Service defined by this Contract.

(2) In cases stated above, the Contracting authority shall implement a negotiated procedure without prior publication of a contract notice and add an Annex to this Contract or sign a new Contract with the Provider pursuant to Item 1 of the fifth paragraph of Article 29 of the ZJN-2.

### **OBLIGATIONS OF THE CONTRACTING AUTHORITY AND THE PROVIDER**

#### Article 5

The Contracting authority undertakes to:

- make available to the Provider all necessary information, data and documents available to the Contracting authority and related to the provision of the Service under this Contract,
- cooperate with the Provider's authorised representative,
- submit its requests to the Provider in due time to enable the normal implementation of contractual services,
- ensure the human, informational and financing resources required for the implementation of services,
- give the Provider all the support necessary for the provision of services according to the requirements of this Contract,
- inform the Provider of any and all changes and new conditions that could affect the provision of the contractual services,
- pay for services within the agreed deadlines.

#### Article 6

The Provider confirms that it has familiarised itself with the subject of this Contract as defined in the technical specifications that are an integral part of this Contract before submitting its tender and signing this Contract and undertakes to:

- perform the services in compliance with all the applicable regulations of the Republic of Slovenia and the European Union governing the subject of this Contract and according to professional standards,
- perform the services under this Contract in a professional and perfectly manner, at a high level of quality and in accordance with good business practices,
- ensure the highest quality of services regardless of the time and location of their implementation,
- perform the services in the most economical manner within the Contracting Authority's specifications,
- use advanced information technologies and methods in the implementation of the services,

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- cooperate with the Contracting authority's staff and other advisors employed by the Contracting authority,
- provide assistance in support and related services connected to the subject of this Contract
- fulfil all foreseen obligations in due time and in the required manner,
- notify the Contracting authority in written form of any circumstances that could make the correct and high-quality provision of the services difficult or impossible;
- notify the Contracting authority in written form of any new circumstances that could affect the substance or time aspects of the provision of the services,
- observe and implement the Contracting authority's requests as defined in the tender documentation pursuant to Article 1 of this Contract, comply with its tender dated \_\_\_\_\_, on the basis of which the Provider was selected, and act in accordance with the provisions of this Contract for its entire duration,
- draw up a report with specifications of completed tasks according to the technical requirements of the tender documentation after each completed phase,
- issue invoices for the services performed in accordance with the prices stated in its tender following the completion of such services and upon the Contracting authority's approval of its report.

The Provider undertakes that in time of validity of this contract he will not cooperate with potential tenderers in public tender procedures of awarding radio frequencies in the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz and 2600 MHz frequency bandwidths.

#### Article 7

(1) If the Contracting authority orders a service that in the Provider's opinion would be in contravention of regulations or cause disproportionate damage to the Contracting authority or a third party, the Provider may decline to perform such a service, without infringing the terms of this Contract, if the Provider submits valid argumentation for such a refusal and prove the existence and present facts in support of its refusal. If the request does not allow for the professionally optimal provision of services or requires solutions contrary to professional rules, the Provider shall notify the Contracting authority of this fact and propose a more suitable solution; however, if the Contracting authority insists on its request, the Provider shall be obligated to fulfil its task according to the Contracting authority's request.

(2) The Provider's unsubstantiated refusal to perform a requested task or a deviation from the requested method of implementation shall be deemed a breach of obligations assumed under this Contract, due to which the Contracting authority may terminate this Contract, provided that the Contracting authority has previously notified the Provider of the infringements in writing.

#### Article 8

The Contracting authority's requests and specifications shall be subject to change, amendment and supplementation by mutual arrangement during the term of the Contract, in which case the Provider shall not in any way be entitled to a reimbursement of any costs that modified requests may cause.

### COMPETENT AUTHORITIES

#### Article 9

(1) The administrator of the Contract for the Contracting Authority shall be \_\_\_\_\_

(2) The administrator of the Contract for the Provider \_\_\_\_\_ who shall also be responsible for the provision of services under this Contract.

### CONTRACT VALUE

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Article 10

- (1) The Provider shall charge the following prices for the services defined in Article 1 of this Contract:
1. Price of a counselling day of: EUR 1030.-, based on the Provider's tender No. \_\_\_\_\_
  2. Maximal number of counselling days is 60/20/20.
- (2) The Parties agree that this price shall include all of the Provider's costs. The price referred to in the previous paragraph shall include all duties, taxes and costs. The stated prices are DDP Client (Incoterms 2010).
- (3) The price shall be fixed for the entire duration of this Contract.

**TERMS OF PAYMENT**

Article 11

- (1) The Contracting Authority and the Provider agree that the payment will be conducted according to worked hours/days, but not less than 70% of the predicted amount, based on technical specifications, which are part of contract documents.
- (2) The Provider will issue invoices for services performed under this Contract to the Contracting Authority after every tenth day of consulting based on a report approved by the Contracting Authority and in accordance with the tender price.

Article 12

- (1) The Contracting Authority shall pay each issued invoice previously confirmed by the Contracting Authority's Contract Administrator within 30 days of the official date of receipt of the invoice into the following bank account of the Provider: IBAN 150 0880 5503 6441 7000 1 held at (name and BIC of the bank) VPB, VPBV12X.
- (2) If the deadline for payment is non-working day, it is considered that the deadline for payment is the first subsequent working day.

Article 13

In the event the Contracting Authority fails to pay the invoice in due time, the Provider shall be entitled to charge penalty interest for late payment from the due date to the date of payment of the invoice.

**PROVIDER'S GUARANTEES AND WARRANTY OBLIGATIONS**

Article 14

- (1) The Provider guarantees to provide high quality services in accordance with applicable regulations and standards and the requests specified by the Contracting authority.
- (2) In the event the Provider fails to provide a specific service under this Contract, the Contracting authority may order such services from other providers at the Provider's expense.

**FORCE MAJEURE**



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**Article 15**

(1) Force majeure shall mean any unforeseen and unexpected event arising independently from the Parties' intentions that could not have been foreseen on the day of the conclusion of this Contract and which in any way affects the fulfilment of contract obligations.

(2) The Provider undertakes to inform the Contracting authority of any case of force majeure within three days of such an event.

(3) Neither of the Parties shall be held responsible for failure to fulfil any of their obligations due to reasons beyond their control.

**BUSINESS SECRET**

**Article 16**

(1) The Parties agree that all data received through the implementation of this Contract shall constitute a business secret and undertake to duly protect such data and use it exclusively for the implementation of this Contract.

(2) The Contracting authority also undertakes to protect all of the Provider's business information received under this Contract.

(3) The Provider undertakes not to publish or use in any manner the Contracting authority's business secrets or confidential information to which the Provider was allowed access during or after the term of this Contract if such materials are designated as confidential or for internal use only, without obtaining prior explicit written approval from the Contracting authority.

(4) The Contracting authority shall be entitled to hold the Provider responsible for the full sum of all damages incurred by the publication or use of the Contracting authority's business secrets or confidential information.

**CONTRACTUAL PENALTY**

**Article 17**

(1) In the event that the provider fails to meet the time limit for the implementation of services for reasons that are not caused by the Contracting authority and which cannot be reasonably justified, the Provider shall be obligated to pay 20% of the contractual sum for one counselling day, up to a maximum of 20% of the sum total of all counselling days.

(2) If a delay or error during the implementation hinders the purpose of this contractual relationship, the Contracting authority shall be entitled to terminate this Contract and request damages.

**ANTI-CORRUPTION CLAUSE**

**Article 18**

If it is determined that during the course of the public tender on the basis of which this Contract was signed or during the implementation of this Contract anyone acting in the name or for the benefit of the one of the Parties offered, promised or awarded any undue advantage to a representative, authorised person or agent of the Contracting authority or another public sector body or organisation in order to be awarded the contract, receive special conditions or omit due supervision over the contractual obligations, or any other action or omission incurring damage to any public sector body or organisation, or allowing undue benefits to any representative or agent of a public sector body or



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organisation, the other Party or its representative, authorised person or agent, this Contract shall be deemed null and void.

#### **DISPUTE RESOLUTION**

##### **Article 19**

(1) In case of any dispute relating this Contract, the Contracting Parties shall seek a consensual solution.

(2) If such solution is not found, the dispute shall be resolved by the competent court in Ljubljana.

#### **FINAL PROVISIONS**

##### **Article 20**

(1) This Contract shall enter into force on the date it is signed by the last of the two Parties.

(2) The Contract may be changed or amended with a written annex agreed upon and signed by both Parties. If any of the provisions of this Contract is held to be invalid or later becomes so, the remaining provisions of this Contract shall not in any way be affected. An invalid provision shall be replaced with a valid provision that fulfils the intent of the provision rendered invalid as closely as possible.

##### **Article 21**

(1) Either of the Parties may withdraw from this Contract due to a breach of contractual obligations by the other Party if the breach continues after a written notice. In the event of withdrawal, the parties shall settle all mutual obligations under this Contract and any damages incurred.

(2) Either Party may withdraw from the Contract provided that the Party chooses an appropriate time to withdraw in consideration of the other Party and in view of the reasons for the withdrawal, and settles all costs incurred by such withdrawal.

##### **Article 22**

Mutual rights and obligations not explicitly defined by this Contract shall be governed by the provisions of the law regulating obligational relationships and other applicable provisions regulating mutual obligations under this Contract.

##### **Article 23**

(1) This Contract shall be entered into force for the period starting from the date it is signed until the date of the issuing of decisions on awarding the relevant radio frequencies, or 1 June 2014, at the latest.

(2) This Contract has been drawn up in four (4) identical copies, of which two (2) copies shall be handed to the Client and two (2) to the Provider.

PROVIDER:

IRACEst.

Date:

18.05.2013

CLIENT

Date:

APEK



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Franc Dolenc  
Director

Annexes:

- Tender, dated ....., including a preliminary cost estimate,
- Contract documents No. .... dated .....



TENDERER  
IRAC Est.  
Ezechiasz 20  
9490 Vaduz

DECLARATION

This Declaration is an evidence of compliance with those conditions set out in point 12 of the Chapter II of this Instructions, for which the Contracting Authority has indicated that submission of this Declaration is sufficient.

Tenderer shall circle as appropriate if he meets the condition or not.

No.	Under criminal and material responsibility we declare that:	Circle as appropriate	
1.	The Tenderer or its legal representatives in the case of legal persons have never been the subject of a conviction by final judgement of crimes listed in the first paragraph of Article 42 of the ZJN-2: acceptance of bribe during the election; fraud; abuse of a position of monopoly; false bankruptcy; defrauding creditors; commercial fraud; fraud affecting the European Union; deception in obtaining loan or advantages; fraud in securities trading; deception of purchasers; unauthorised use of another's mark or model; unauthorised use of another's patent or topography; forgery or destruction of business documents; disclosure and unauthorised acquisition of trade secrets; abuse of information system; abuse of insider information; abuse of financial instruments market; abuse of position or trust in business activity; prohibited acceptance of gifts; prohibited giving of gifts; counterfeiting money; fabrication and use of counterfeit stamps of value or securities; money laundering; abuse of non-cash means of payment; use of counterfeit non-cash means of payment; fabrication, acquisition and disposal of instruments of forgery; tax evasion; smuggling; disclosure of classified information; acceptance of bribes; giving bribes; accepting benefits for illegal intermediation; giving of gifts for illegal intervention; criminal association.	YES	NO
2.	The Tenderer is not on the day of submission of Offer disqualified from being awarded public Contracts due to the inclusion in the record of Tenderers with negative references in accordance with Article 77.a of ZJN-2.	YES	NO
3.	The Tenderer has on the date of submission of the Offer, in accordance with the regulations of the country in which he is established or regulations of the Contracting Authority no outstanding, unpaid obligations relating to the payment of social security contributions or in connection with the payment of taxes in the amount of 50 euros or more.	YES	NO
4.	The Tenderer has no any outstanding liabilities to Subcontractors in previous public Procurement procedures.	YES	NO
5.	The Tenderer has a valid registration to do business, which is the subject of this procedure (consulting services in the field of mobile industries and /or regulatory affairs) pursuant to the regulations of the Member State of his establishment.	YES	NO
6.	The Tenderer accepts all the conditions of this Tender Documentation.	YES	NO
7.	The information given in this Offer is accurate and not misleading.	YES	NO

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Tenderer shall complete:

A. The activity can be done on the basis of entry in the Court or Business Register, under entry number \_\_\_\_\_ or based on the entry in the Tax Office of the Republic of Slovenia unit in \_\_\_\_\_, number \_\_\_\_\_ or an entry in the register - Commercial number \_\_\_\_\_ in accordance with the law of the country.  
FL-0002.168.682-6

B. To carry out activities covered by this Contract, we have on the basis of \_\_\_\_\_ (law) obtain an authorization, number \_\_\_\_\_ issued at \_\_\_\_\_ on \_\_\_\_\_.

We are members of the following organizations: \_\_\_\_\_ (write only if the legal entity must conduct its business for the member of a particular organization, chambers of commerce, associations, etc. ..).

C. To carry out activities covered by this Contract we do not need special permission and can perform activity on the basis of entry in the Court or Business Register or based on the entry in the Tax Office of the Republic of Slovenia.

Under criminal and material responsibility we declare that all the above information is true and accurate.

This Declaration is an integral part of the Offer, which we are applying for a Public Contract "SELECTION OF TENDERER TO DELIVER PROFESSIONAL CONSULTING SERVICES AND ACCESS TO THE SOFTWARE FOR THE IMPLEMENTATION OF COMPLEX MULTIOBJECT MULTIROUND ELECTRONIC AUCTION FOR AWARDED RADIO FREQUENCIES IN THE 800 MHz, 900 MHz, 1800 MHz, 2100MHz AND 2600 MHz FREQUENCY BANDS".

Public Contract was published on the Procurement portal, publication date 03.04.13 publication number JN376/2013 and in the Official Journal of the EU, publication date ....., publication number .....

Date: 08.05.2013

IRAC EST.  
Stamp and signature



# IRAC

INTERNATIONAL REGULATORY AFFAIRS CONSULTING ESTABLISHMENT

## Declaration for Tender:

CONSULTATION SERVICES; SUPPORT AND REVISION FOR AWARDING RADIO  
FREQUENCIES IN THE 800MHz, 1800MHz, 2100MHz AND 2600MHz FREQUENCY  
BANDS



Issued by Agencija za postu in elektronske komunikacije Republike Slovenije, Stegne 7,  
1000 Ljubljana, Slovenija

Hereby, I solemnly and under oath declare that International Regulatory Affairs  
Consulting Est. seated in the Principality of Liechtenstein, Egertastrasse 20, 9490  
Vaduz :

- a) is on the date of submission of their offer not disqualified from being  
awarded public contracts and
- b) does not have any outstanding liabilities to Subcontractors in previous  
Public Procurement Procedures.

  
D. [Redacted]  
CEO IRAC  
FL-9490 VADUZ

Vienna, 18.05.2013

Signed in my presence  
by  18 October 1944  
Passport 



Wien PK Brigittenau f.d.2u. 20 Bez.

PAPPENHEIMG.33  
1200 WIEN

BEZUG: STRB B 2013 SB  
(REFERENCE NUMBER)

STRAFREGISTERBESCHEINIGUNG  
(CRIMINAL RECORD CERTIFICATE)

Dient nur zur Vorlage bei: APEK, Ljubljana

+



Mailing address: AHV-IV-FAK  
GERBERWEG 2, 9490 VADUZ

**AHV**

LIECHTENSTEIN OLD AGE AND  
SURVIVORS' INSURANCE  
INVALIDITY INSURANCE

Phone: +423/238 16 16  
Fax: +423/238 16 00

**IV** <Crest>

Website: www.ahv.li  
Email: ahv@ahv.li

**FAK**

FAMILY COMPENSATIONFUND

## CONTRIBUTIONS AND BENEFITS

Point of Contact:

Extension:

Fax:

Email:

IRAC International Regulary  
Affairs Consulting Est.  
Egertastrasse 20  
9490 Vaduz

Vaduz, 2<sup>nd</sup> May 2013

Settlement No.: 654.640

### Certificate

Dear Sir or Madam,

We hereby certify that the company **IRAC International Regulary Affairs Consulting Est., Egertastrasse 20, 9490 Vaduz**, has been paying its employee contributions in accordance with the social-insurance laws of the Principality of Liechtenstein on a regular basis, every quarter, since **1<sup>st</sup> July 2009**.

Sincerely

Liechtensteinische AHV-IV-FAK

<signature>

I, [redacted] sworn German-English translator appointed by the Frankfurt Regional Court, hereby certify that the above translation is accurate and complete.

Frankfurt a.M., Germany, 14<sup>th</sup> May 2013



Postadresse: AHV-IV-FAK  
GERBERWEG 2, 9490 VADUZ  
Telefon: +423/238 16 16  
Fax: +423/238 16 00  
Internet: www.ahv.li  
E-Mail: ahv@ahv.li

**AHV  
IV  
FAK**



LIECHTENSTEINISCHE ALTERS-  
UND HINTERLASSENENVERSICHERUNG  
INVALIDENVERSICHERUNG  
FAMILIENAUSGLEICHSKASSE

## BEITRÄGE UND LEISTUNGEN

Sachbearbeitung:

Direktwahl:

FAX:

E-Mail:

Vaduz, 02.05.2013

IRAC International Regulary  
Affairs Consulting Est.  
Egertastrasse 20  
9490 Vaduz

Abrechnungs-Nr: 654.640

## Bestätigung

Sehr geehrte Damen und Herren

Wir bestätigen hiermit, dass die Firma **IRAC International Regulary Affairs Consulting Est., Egertastrasse 20, 9490 Vaduz**, seit **01.07.2009** sowohl die Arbeitgeber- als auch die Arbeitnehmerbeiträge gemäss den entsprechenden Sozialversicherungsgesetzen im Fürstentum Liechtenstein regelmässig quartalsweise an uns entrichtet.

Mit freundlichen Grüssen

Liechtenstein, [Redacted] AHV-IV-FAK

Postadresse: AHV-IV-FAK  
GERBERWEG 2, 9490 VADUZ  
Telefon: +423/238 16 16  
Fax: +423/238 16 00  
Internet: www.ahv.li  
E-Mail: ahv@ahv.li

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IV  
FAK**



LIECHTENSTEINISCHE ALTERS-  
UND HINTERLASSENENVERSICHERUNG  
INVALIDENVERSICHERUNG  
FAMILIENAUSGLEICHSKASSE

## BEITRÄGE UND LEISTUNGEN

Sachbearbeitung:

Direktwahl:

FAX:

E-Mail:

IRAC International Regulary  
Affairs Consulting Est.  
Egertastrasse 20  
9490 Vaduz

Vaduz, 02.05.2013


Abrechnungs-Nr: 654.640

## Bestätigung

Sehr geehrte Damen und Herren

Wir bestätigen hiermit, dass die Firma **IRAC International Regulary Affairs Consulting Est., Egertastrasse 20, 9490 Vaduz**, seit **01.07.2009** sowohl die Arbeitgeber- als auch die Arbeitnehmerbeiträge gemäss den entsprechenden Sozialversicherungsgesetzen im Fürstentum Liechtenstein regelmässig quartalsweise an uns entrichtet.

Mit freundlichen Grüssen

Liechtenstein  AHV-IV-FAK

<Crest>

MINISTRY OF JUSTICE  
PRINCIPALITY OF LIECHTENSTEIN

COMMERCIAL-REGISTER EXTRACT

Registration No.	Legal status	Entry	Deletion	Transfer	
FL-0002.168.682-6	Establishment	1 <sup>st</sup> December 2005		from FL-0002.168.682-6/a to:	1

Current entries:

Entr.	Del.	Company and/or name	Ref	Headquarters
3		International Regulatory Affairs Consulting Establishment	1	Vaduz

Entr.	Del.	Company funds	Paid up	Company shares	Entr.	Del.	Representation/Address for service
2					2		c/o Wirtschaftskanzlei Trust reg. Egertastrasse 20 9490 Vaduz

Entr.	Del.	Purpose	Entr.	Del.	Business address
3		The company purpose is: Service / consultation within telecommunications as well as the assumption of representations, participations in and financing of other companies, trade with as well as agency, rental and administration of real estate and investments, commercial use of patents and licenses, as well as all other activities directly or indirectly related to this purpose which the board of directors deems as of interest to the company.			

Entr.	Del.	Remarks	Ref.	Date of Statutes
2		Conversion of the joint-stock company into an establishment. Resolution by the Shareholders' Meeting on 5 <sup>th</sup> October 2007.	1	30 <sup>th</sup> November 2005
3		Change of Statutes pursuant to the Resolution by the owner of the founding rights on 12 <sup>th</sup> February 2009	2	5 <sup>th</sup> October 2007
			3	12 <sup>th</sup> February 2009

Entr.	Del.	Special Facts	Ref.	Publication Organ
			1	Major newspapers

Entr.	Del.	Branch(es)	Entr.	Del.	Branch(es)

Sign	Ref.	TB-No.	TB-Date	Sign	Ref.	TB-No.	TB-Date
AA	1	24177	1 <sup>st</sup> DEC 2005				
BD	2	21211	29 <sup>th</sup> OCT 2007				
HJ	3	2730	12 <sup>th</sup> FEB 2009				

Entr.	Chan.	Del.	Management Information	Function	Authorized Signatory
1			TERRA SANA TREUHAND UND VERWALTUNG AKTIENGESELLSCHAFT, 9486 Schaanwald	External Auditor	
3			StA: Austria, 6844 Altach	Member of the Board of Directors And Managing Director	Sole Signature

Vaduz, 3<sup>rd</sup> May 2013 08:06 KM

<circular stamp with insignia:  
PRINCIPALITY OF LIECHTENSTEIN –  
MINISTRY FOR JUSTICE  
COMMERCIAL REGISTER>

Certified extract

Marina KINDLE  
<signature>

This extract from the commercial register of the Principality of Liechtenstein is not valid without the original adjacent authentication. It contains all current entries. Upon special request, an extract can be compiled containing both current and deleted entries.

I, [redacted] sworn German-English translator appointed by the Frankfurt Regional Court hereby certify that the above translation is accurate and complete.

Frankfurt a.M., Germany, 14<sup>th</sup>





# HANDELSREGISTER-AUSZUG

Registernummer FL-0002.168.682-6	Rechtsnatur Anstalt	Eintragung 01.12.2005	Löschung	Übertrag von: FL-0002.168.682-6/a auf:	1
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aktuelle Eintragungen

Ei	Lö	Firma bzw. Name	Ref	Sitz
3		International Regulatory Affairs Consulting Establishment	1	Vaduz

Ei	Lö	Anstaltsfonds	Liberierung	Anstaltsanteile	Ei	Lö	Repräsentanz/Zustelladresse
2					2		c/o Wirtschaftskanzlei Trust reg. Egertastrasse 20 9490 Vaduz

Ei	Lö	Zweck	Ei	Lö	Geschäftsadresse
3		Zweck der Anstalt ist: Dienstleistung / Beratungen im Telekommunikationsbereich sowie Übernahme von Vertretungen, Beteiligungen an und Finanzierung von anderen Unternehmen, Handel mit sowie Vermittlung, Vermietung und Verwaltung von Immobilien und Anlagen, kommerzielle Verwertung von Patenten und Lizenzen, sowie alle mit diesem Zweck direkt oder indirekt im Zusammenhang stehenden Tätigkeiten, die der Verwaltungsrat als im Interesse der Gesellschaft erachtet.			

Ei	Lö	Bemerkungen	Ref	Statutendatum
2		Umwandlung der Aktiengesellschaft in eine Anstalt lt. Beschluss der Generalversammlung vom 05.10.2007.	1	30.11.2005
3		Statutenänderung lt. Beschluss des Inhabers der Gründerrechte vom 12.02.2009.	2	05.10.2007
			3	12.02.2009

Ei	Lö	Besondere Tatbestände	Ref	Publikationsorgan
			1	Landeszeitungen

Ei	Lö	Zweigniederlassung (en)	Ei	Lö	Zweigniederlassung (en)

Zeil	Ref	TB-Nr	TB-Datum	Zeil	Ref	TB-Nr	TB-Datum
AA	1	24177	01.12.2005				
BD	2	21211	29.10.2007				
HJ	3	2730	12.02.2009				

Ei	Ae	Lö	Angaben zur Verwaltung	Funktion	Zeichnungsart
1			TERRA SANA TREUHAND UND VERWALTUNG AKTIENGESELLSCHAFT, 9486 Schaanwald	Revisionsstelle	
3			StA: Österreich, 6844 Altach	Mitglied des Verwaltungsrates und Geschäftsführer	Einzelunterschrift

Vaduz, 03.05.2013 08:06 KM

Dieser Auszug aus dem Handelsregister des Fürstentums Liechtenstein hat ohne die nebenstehende Originalbeglaubigung keine Gültigkeit. Er enthält alle gegenwärtig aktuellen Eintragungen. Auf besonderes Verlangen kann auch ein Auszug erstellt werden, der alle Eintragungen, die aktuellen und die gestrichenen, enthält.



Beglaubigter Auszug





# HANDELSREGISTER-AUSZUG

Registernummer	Rechtsnatur	Eintragung	Löschung	Übertrag von: FL-0002.168.682-6/a auf:	1
14002.168.682-6	Anstalt	01.12.2005			

aktuelle Eintragungen

Ei	Lö	Firma bzw. Name	Ref	Sitz
		<b>International Regulatory Affairs Consulting Establishment</b>	1	Vaduz

Ei	Lö	Anstaltsfonds	Liberierung	Anstaltsanteile	Ei	Lö	Repräsentanz/Zustelladresse
					2		c/o Wirtschaftskanzlei Trust reg. Egertastrasse 20 9490 Vaduz

Ei	Lö	Zweck	Ei	Lö	Geschäftsadresse
		Zweck der Anstalt ist: Dienstleistung / Beratungen im Telekommunikationsbereich sowie Übernahme von Vertretungen, Beteiligungen an und Finanzierung von anderen Unternehmen, Handel mit sowie Vermittlung, Vermietung und Verwaltung von Immobilien und Anlagen, kommerzielle Verwertung von Patenten und Lizenzen, sowie alle mit diesem Zweck direkt oder indirekt im Zusammenhang stehenden Tätigkeiten, die der Verwaltungsrat als im Interesse der Gesellschaft erachtet.			

Ei	Lö	Bemerkungen	Ref	Statutendatum
		Umwandlung der Aktiengesellschaft in eine Anstalt lt. Beschluss der Generalversammlung vom 05.10.2007.	1	30.11.2005
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			3	12.02.2009

Ei	Lö	Besondere Tatbestände	Ref	Publikationsorgan
			1	Landeszeitungen

Ei	Lö	Zweigniederlassung (en)	Ei	Lö	Zweigniederlassung (en)

Zeil	Ref	TB-Nr	TB-Datum	Zeil	Ref	TB-Nr	TB-Datum
AA	1	24177	01.12.2005				
	2	21211	29.10.2007				
	3	2730	12.02.2009				

Ei	Ae	Lö	Angaben zur Verwaltung	Funktion	Zeichnungsart
			TERRA SANA TREUHAND UND VERWALTUNG AKTIENGESELLSCHAFT, 9486 Schaanwald	Revisionsstelle	
			StA: Österreich, 6844 Altach	Mitglied des Verwaltungsrates und Geschäftsführer	Einzelunterschrift

Vaduz, 03.05.2013 08:06 KM

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Beglaubigter Auszug





STEUERVERWALTUNG  
FÜRSTENTUM LIECHTENSTEIN

International Regulatory  
Affairs Consulting Establ.  
c/o WKT Trust reg.  
Egertastrasse 20  
FL-9490 Vaduz

Sachbearbeitung

Telefon

Telefax

e-Mail

Vaduz

17.05.2013

#### Tax Residence

We confirm that the company

International Regulatory Affairs Consulting Establishment  
with its statutory seat in FL-9490 Vaduz,

is registered in the tax register under the number 2168682 and is liable to tax in Liechtenstein according to art. 44 ff of the Tax Act (Liechtenstein Law Gazette 2010, no. 340 of 18 November 2010). The company paid properly the taxes due.





**Recent Research and Consulting Topics:**



**Leadership experience**



**Languages**



**Degrees**



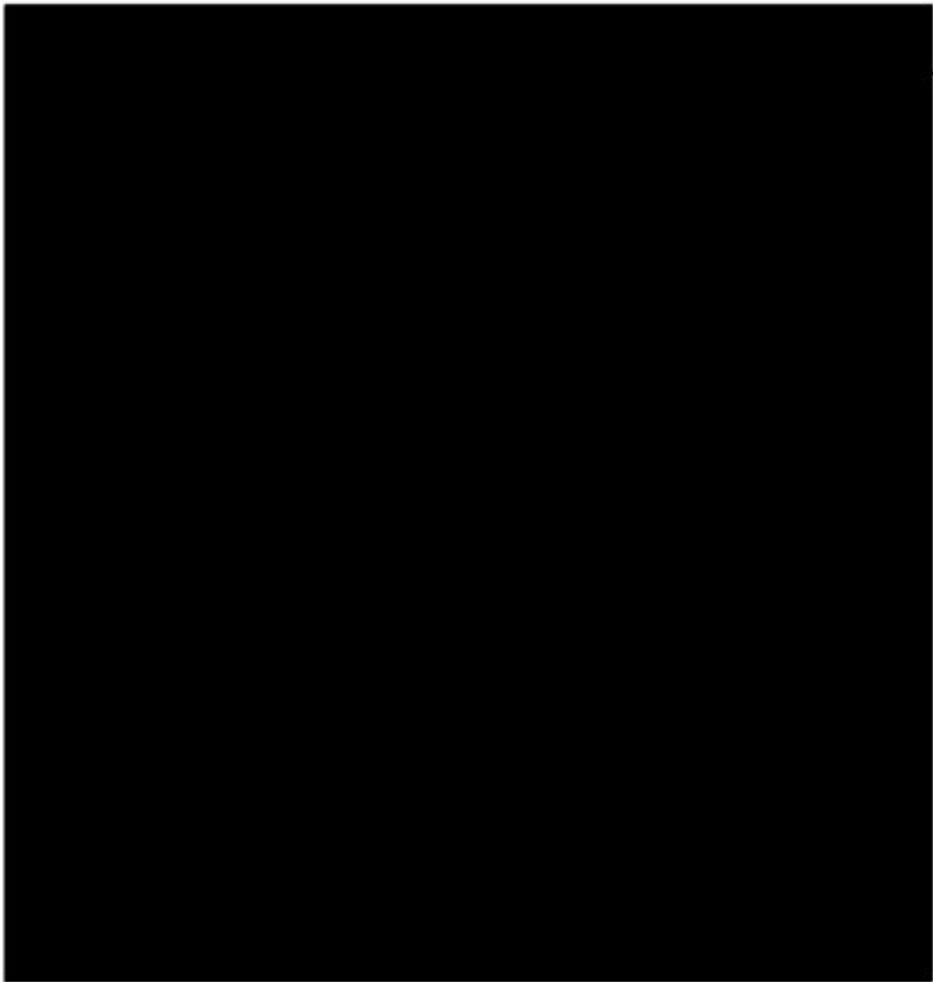
**Non Degree Programs**



**Selected Presentations**









Dimitrie Cuprovsk 13  
1000 Skopje  
Republic of Macedonia  
tel: +389 2 32 89 200  
fax: +389 2 32 24 611  
contact@aek.mk

РЕПУБЛИКА МАКЕДОНИЈА  
АГЕНЦИЈА ЗА ЕЛЕКТРОНИЧКИ КОМУНИКАЦИИ  
СКОПЈЕ

број 02-386/1

30.10.2017 година

Subject: Confirmation

intended to: APEK, Stegne 7, 1000 Ljubljana, Slovenija; All interested party

Hereby AEK confirms that International Regulatory Affairs Consulting (Project Leader: [redacted] on 13.09.2011 was awarded with a contract to develop a regulatory strategy for AEK. The final report contains strategies for fixed and mobile markets in Macedonia, in particular on frequency policy, to creating favorable conditions for the introduction of 4G services.

Best regards,

[redacted] Director AEK





Dimitrie Cupovski 13  
1000 Skopje  
Republic of Macedonia  
tel.: +389 2 32 89 200  
fax: +389 2 32 24 611  
contact@aec.mk

0201-1585 /  
13.05.2013

**Subject: Supplement to our Letter of Confirmation of 30.10.2012**

**Intended to:** APEK  
c/o Mrs. [redacted]  
Stegne 7 POB 418  
1001 Ljubljana  
Slovenia

On the request of [redacted] we confirm that the following project  
Development of a Regulatory Strategy and Action Plan 2012 to 2016,  
Project budget: € 176.750.--  
Project period : 13.09.2011 to 29.05.2012  
has been successfully completed by IRAC Est. (author [redacted])

Best regards

Prepared by: [redacted] [redacted]

Approved by: [redacted]

[redacted] Director AEK  
[redacted]

# IRAC

INTERNATIONAL REGULATORY AFFAIRS CONSULTING ESTABLISHMENT

## Statement for Tender:

CONSULTATION SERVICES; SUPPORT AND REVISION FOR AWARDING RADIO FREQUENCIES IN THE 800MHz, 1800MHz, 2100MHz AND 2600MHz FREQUENCY BANDS

Issued by Agencija za postu in elektronske komunikacije Republike Slovenije, Stegne 7, 1000 Ljubljana, Slovenija

Hereby, I declare that in 2013 neither International Regulatory Affairs Consulting Est. seated in the Principality of Liechtenstein, Egertastrasse 20, 9490 Vaduz, nor their Senior Consultant have been involved in any project of a potential auction participant in the Republic of Slovenia for the award of frequencies in 800MHz, 900MHz, 1800MHz, 2100MHz, 2600 MHz frequency bands.

D  
C

Vienna, 18.05.2013

Hutchison 3G Austria GmbH  
Gasometer C, Guglgasse 12/10/3  
1110 Wien, Österreich



Vienna, 26<sup>th</sup> of July 2011

### Confirmation

To whom it may concern,

Hereby, Hutchison 3G Austria GmbH confirms that International Regulatory Affairs Consulting Est. (IRAC Est.) seated in FL Liechtenstein, Egertastrasse 20, 9490 Vaduz, has successfully completed the project: Welfare Effects of the Implementation of LTE in Austria. The project deals with alternative regulatory strategies for the implementation of LTE under the special circumstances in Austria. The results of the project were a substantial part of our response to a consultation of RTR (Austrian Regulatory Authority for Telecommunications and Media) and were used in a hearing before the decision body (Telekom-Control-Kommission; TKK) to further explain H3G's position on these issues.

For further information, please do not hesitate to contact us, we will be happy to clarify open questions.

Best regards,

Head of Regulatory Affairs & Carrier Relations

Hutchison 3G Austria GmbH  
Gasometer C, Guglgasse 12/10/3  
1110 Wien, Österreich



APEK  
c/o Mrs.



Stegne 7 POB 418  
1001 Ljubljana  
Slovenia

Vienna, 12<sup>th</sup> of May, 2013

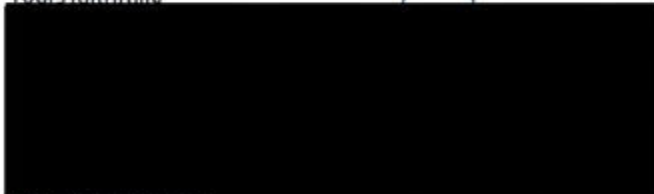
Supplement to our Letter of Confirmation of 26.07.2011

Dear Sir or Madam,

On the request of [REDACTED] we confirm that the project *Welfare Effects of the Implementation of LTE in Austria* has been successfully completed by IRAC Est. (author: [REDACTED])

- Project budget: € 59.300.--
- Project period: 05.07.2010 - 18.04.2011

Yours faithfully



Head of Regulatory

T-Mobile Austria GmbH  
A-1030 Wien, Rennweg 97-99

APEK  
c/o Mrs. [REDACTED]  
Stegne 7  
1000 Ljubljana

Wien, 30. Oktober 2012

Betreff: Confirmation

Dear [REDACTED]

We hereby confirm that International Regulatory Affairs Consulting Est. [REDACTED] is providing us with consulting services in the merger control case H3G/Orange.

The first part of the study has been successfully completed, the second part, depending on the further development of the legal procedures at the European Commission is pending. The subject of this contract is to evaluate legal aspects and the competitive effects of this merger on the Austrian mobile markets and on T-Mobile Austria, in particular with regards to the implementation of 4G services.

Best regards


[REDACTED]

T-Mobile  
T-Mobile Austria GmbH  
Rennweg 97-99  
A-1030 Wien

T-Mobile Austria GmbH  
A-1030 Wien, Rennweg 97-99  
Telefon (+43 1) 795 85-0  
UniCredit Bank Austria AG 52844 072 301, BLZ: 12000  
Ing. Robert Chvátal (Vorsitzender), Dipl. Wi.-Ing. Wolfgang Knieso (stv. Vorsitzender)  
Handelsgericht Wien, Sitz Wien, FN 171112k, UID ATU 45011703, DVR 0898295

Doc J1 (orig)

Version of January 2008 - R2

 <p><b>EUROPEAN COMMISSION</b></p>	<p align="center"><b>PURCHASE ORDER</b></p> <p align="center">(to be mentioned in all correspondence)</p> <p>No INFSO/B-2008/45705</p>		<p>Number of sheets</p> <p align="center">1</p>	<p>Sheet No</p> <p align="center">1</p>	<p>Date and reference of your quote</p> <p align="center">30/05/08</p>
	<p>Address</p> <p>DG and administrative unit: Information Society and Media Electronic Communications Policy Implementation of Regulatory</p> <p>Tel: +32-2-2953437 Fax: +32-2-2968394</p>	<p>Contractor code: [REDACTED]</p> <p>Country of origin: Austria</p> <p>Currency of payment: EUR</p> <p>Code country of origin/currency</p>	<p align="center">(Name and address of Contractor)</p> <p>Vienna University of Economics and Business Administration Augasse 2-6 A-1090 Wien</p>		
<p>This purchase order constitutes acceptance of the Contractor's quote submitted on 30/05/2008 by e-mail and is valid for 3 months from the date of issue.</p> <p>By agreeing to this contract, the Contractor states that he is familiar with and accepts the General Conditions hereby attached and waives all other terms of sale or performance of services.</p>					
<p align="center">DESCRIPTION OF THE GOODS OR SERVICES</p>			<p align="center">UNIT</p>	<p align="center">QUANTITY</p>	<p align="center">PRICE in €</p> <p align="center">UNIT PRICE      TOTAL</p>
<p>assistance in the development of an economic model to assess the impact of the Roaming Regulation on operators as well as the potential impacts of an extension in time and/or in scope to SMS and data services both on the industry in general and on consumer welfare in particular.</p>			<p align="center">days</p>	<p align="center">5</p>	<p align="center">5.000,00 €</p>
<p>Pursuant to the provisions of Articles 3 and 4 of the Protocol on the Privileges and Immunities of the European Communities, the Commission is exempt from all taxes and dues, including value added tax, on payments due in respect of this Contract.</p>			<p>Packaging Insurance Transport Assembly VAT</p>		
<p>Place of delivery/performance and/or Incoterm and opening hours: Media, Avenue de Beaulieu 33, 1160 Brussels/Belgium</p> <p>Delivery/performance dates: from 16/06/2008 to 20/06/2008 inclusive</p> <p>Payment: 30 days from receipt of the invoice</p> <p>Invoice to be sent to: European Commission Information Society and Media Directorate General Directorate B – Electronic Communications Policy for the attention of [REDACTED] B-1140 Brussels – Belgium</p> <p>Contractor's bank account: IBAN AT1200000710484494</p>			<p align="center"><b>Contractor's signature</b></p> <p>Name: [REDACTED]</p> <p>Position:</p> <p>Date: 18.06.2008</p>		
<p>Acceptance of the purchase order by the Commission:</p> <p>Date of issue: 16-2008</p> <p>Signature: [REDACTED]</p>			<p align="center">COMMISSION COMMUNAUTÉ EUROPÉENNE DG INFOS</p>		
<p>The request for payment shall be made only if the Contractor returns a signed copy of this purchase order with the invoice.</p> <p>This Contract shall be governed by the Community law complemented, where necessary, by Belgian law. Any dispute shall be brought before the courts of Brussels.</p>					





**APEK**

**Post and Electronic Communications  
Agency of the Republic of Slovenia**  
Stegne 7, POB 418  
SI-1001 Ljubljana, Slovenia  
Tel.: +386 1 583 63 00, Fax: +386 1 511 11 01  
E-mail: info.box@apek.si, http://www.apek.si  
Our Ref. No.: 4300-17/2012/22  
Date: 20.03.2013

**Subject: Confirmation letter for** [REDACTED]

To whom it may concern!

Hereby we confirm, that [REDACTED] has successfully given two Seminars on the recent 800MHz auctions in Europe, focussing on auction format and auction design. These Seminars took place from 27.07.2012 to 28.07.2012 and from 04.10.2012 to 05.12.2012 at the premises of APEK in Ljubljana, Slovenia.

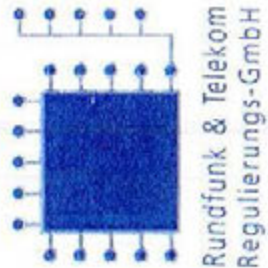
Yours faithfully,

M.Sc. [REDACTED]  
LTE Project Leader

**Franc Dolenc**  
Director [REDACTED]



By E-mail [REDACTED]



RTR

APEK  
c/o [REDACTED]  
Stegne 7  
1000 Ljubljana  
Slovenija

RN

Wien, am 31.10.2012

### Confirmation

Hereby we confirm that [REDACTED] in his capacity as CEO of RTR (former TKC) from 01.11.1997 to 31.10.2002 was the ultimately responsible project leader for the following auctions of mobile licenses:

GSM (2002): 2 x 18,8 MHz; concluded: 14.10.2002; price: € 14.800.000,00

GSM-1800 (2001): 2 x 21,2 MHz; concluded 07.05.2001; price: € 69.911.266,47

WLL 26 GHz (2001): 2 x 392 MHz; concluded 05.02.2001; price: € 1.351.714,72

UMTS 2 GHz (2000): 2 x 60 MHz; 1 x 25 MHz; concluded: 20.11.2000; price € 831.595.241,38

TETRA 400 MHz (2000): 2 x 1 MHz; concluded: 03.02.2000; price: € 4.832.743,47

GSM (1999): 2 x 14,6 MHz; concluded: 03.05.1999; price: € 98.108.326,13

Best regards

### RTR-GmbH

Rundfunk und Telekom  
Regulierungs-GmbH

[REDACTED]  
Leiter Finanzen, Personal & IT

RUNDFUNK UND TELEKOM  
REGULIERUNGS-GMBH

A-1060 Wien, Mariahilfer Straße 77-79  
Tel: +43 (0) 1 58058 - 0  
Fax: +43 (0) 1 58058 - 9191  
http://www.rtr.at  
e-mail: rtr@rtr.at  
FN: 208312t HG Wien  
DVR-Nr.: 0956732 Austria  
UID-Nr.: ATU43773001

## Project understanding

### 0. Introduction

According to section 2.15.3 of the Tender Documentation each tenderer has to "provide a short document of project understanding with his view and his role in granting the licenses for frequencies in 800 MHz, 900 MHz, 1800MHz, 2100MHz and 2600MHz frequency bands".

Applicants for services of Set A have to cover the following topics:

1. Solutions with descriptions for some critical tasks:
  - a. Infrastructure sharing and coverage conditions with aim of achieving competitive markets:
    - i. Proposal for the maximum allowed sharing scenario and proposal for coverage conditions
    - ii. Reasoning in relation with the above proposal
  - b. Relation between reserved price and spectrum caps with the aim of achieving a competitive market:
    - i. The relation with more or less relaxed spectrum caps and different values of reserved prices
    - ii. Reasoning in relation with the above statements
2. Short analysis of the influence of the above mentioned parameters (sharing, coverage, reserved price and spectrum caps)

The following sections will cover the requested topics and will give short explanations and reasoning for the suggested decisions of APEK. A final section will deal with the perceived role of IRAC during the process of setting up and executing the planned multifrequency auction.

### Solutions with descriptions for some critical tasks

#### 1. Infrastructure sharing and coverage conditions:

##### 1.1 Proposed strategy for maximum allowed sharing scenario and coverage conditions

IRAC suggests the following strategic decisions in this area:

- a. Maximum allowed sharing scenario:
  - i. According to the Slovenian Telecommunications Act, APEK has to enforce the sharing of passive infrastructure as masts, power supply, air conditioning, co-location in containers, feeder cables, antennas etc.
  - ii. APEK should not object to RAN-sharing if the competitive independency of the operators engaging in RAN-sharing activities is not endangered.

- iii. APEK should (if applicable) impose the obligation of RAN-sharing on the holder of those frequency blocks of the 800 MHz spectrum band, which carry special coverage obligations in "White Spots" (see section YYYY below).
  - iv. APEK should not allow frequency sharing, except in a strictly limited number of cases as tunnels, special big events (ski jumping, football games, pop concerts etc). These should be judged on a case by case basis.
  - v. APEK should establish institutionalized links to the National Competition Authority, which is the competent authority for competition cases, to provide legal certainty for mobile network operators.
- b. Coverage obligations:
- Under the assumption that there will be no new entrant to the Slovenian mobile communications markets and under the assumption that APEK decides to use the newly available frequencies in the 800 MHz band to significantly improve coverage with broadband services in accordance with RSPP (2012), Recital 23, IRAC proposes that
- i. The coverage conditions should specify "White Spots", defined as settlements with permanent habitations, which have no fixed or wireless access to broadband.
  - ii. APEK should designate one block of 2x5 MHz of 800 MHz frequencies to carry special coverage obligations.
  - iii. The mobile network operator having decided to buy this designated block should cover at least >95% of the otherwise uncovered permanent habitations in these White Spots with mobile broadband services with guaranteed 2 - 5mbit/sec downlink, indoor. In addition, the holder of the designated block shall offer wholesale broadband access and/or network sharing, including RAN-sharing restricted to the White Spots.
  - iv. If the mobile network operator buying this special block acquires an additional block of 2x5MHz of 800MHz spectrum at the multi-frequency auction or later by spectrum trading, these special coverage conditions shall also apply to this additional block. In any case, this operator may fulfil these coverage obligations by also using other frequencies in his frequency portfolio.
  - v. To have a clear perception of investments necessary to meet these coverage obligations, the final decision on coverage percentage and service quality should be based on a simulation of 4G equipment, implemented on the existing sites, taking into account signal/noise ratios and topological properties of the White Spots.
  - vi. With regards to 900MHz and already assigned 1800MHz and 2100MHz frequencies, APEK should request that existing voice and broadband coverage shall not decrease during the licensing period for frequency blocks acquired at the upcoming frequency auction, which means that the coverage obligations for voice will remain unchanged and coverage for broadband is oriented on the status quo on the day of license issue.
  - vii. As a safeguard for the efficient use of frequencies, APEK should request license holders of all frequencies, which will be assigned the first time

in the course of the upcoming licensing period to cover at least 50% of Slovenia's population in the first 5 years of the license period with voice and broadband. If the winning bidders fail to meet this obligation the frequencies should fall back to APEK without financial compensation.

- viii. APEK should impose the obligation that frequencies acquired at the upcoming multifrequency auction shall not be traded during the first 5 years of the license period. In the event of a merger in the first 5 years after license issuing, the merged entity shall be restricted in its frequency holding by the frequency caps of the upcoming frequency auction

## 2 Reasoning supporting the proposed strategy for maximum network sharing scenarios

The proposed measures and obligations for network sharing scenarios and coverage are derived from policy objectives and from considerations on effective competition in the Slovenian mobile communication markets.

The competitiveness of a mobile operator depends ceteris paribus on its cost. Since mobile communication technology is highly capital intense – fixed costs account for more than 80% of total cost – mobile operators highly welcome any opportunity to reduce these costs and to improve their competitive position in the markets they serve. Network sharing is one major source for potential cost savings. The recent joint BEREC-ECG Report ( BoR (11) 26, pp6) gives an interesting account of potential cost reductions for mobile operators depending on the intensity of infrastructure sharing. The Slovenian Telecommunication Act 2013 includes the obligation of network operators to share passive infrastructure (passive sharing). This includes the masts, power supply, air conditioning, co-location in containers, antenna feeders, antennas and other passive elements like ducts etc. Therefore, IRAC's recommendation can only deal with more intensive versions of network sharing. The most important options are RAN-sharing, core network sharing and frequency sharing. Again, these sharing options allow for significant cost reductions, which would improve the competitive position of participating operators. On the other hand, more intensive sharing scenarios would increase the risk of anti-competitive practices of participating operators. Competitive independence is regarded as the crucial characteristics of potential sharing scenarios. In the context of RAN-sharing competitive independence is seen as the technical capability of deployed systems to allow operators to independently specify the parameters (e.g. speed, overbooking, etc.) of their services they offer to the market. If the existing systems do not allow independent specification of service parameters they are forced to offer identical services, which have to be agreed upon by the sharing operators. Such a situation is prone to anti-competitive behaviour, in particular in the case of joint price setting. If operators cannot differentiate their products by quality differences, they are identical and will be perceived as identical by end users. Therefore, differences cannot prevail over longer time periods. Taking together, the need for cooperation of operators and their limited strategic opportunities for setting their prices create an environment, which is conducive for coordinated price setting behaviour, which is clearly forbidden by European Competition Law (in particular Art. 101 EU) and Slovenian Competition Law. RAN-sharing should – as proposed above in section a) lit ii – not in principle be opposed, if independent specification of parameters is a feature of the deployed systems. IRAC even recommends (see section a) lit ii) to impose RAN-sharing as obligation in those geographical areas, where the

obligations for broadband coverage are relevant (see sections b) lit. i – iii), if all sharing partners have command over relevant frequency blocks.

IRAC recommends not to allow core network sharing and frequency sharing with the exception of special cases as coverage in tunnels or provision of capacity for special events as big open air concerts, ski jumping etc. The reasoning is again based on the necessary close cooperation between operators, which increases the risk of anti-competitive behaviour.

The implementation of the proposed framework for network sharing falls into the competency of two different authorities. APEK is clearly competent for passive sharing. Active sharing is in the domain of competition law and therefore the Slovenian Competition Protection Agency is the competent authority. Since Competition Authorities will act ex post in these cases, it is of utmost importance to inform the market, what type of behaviour in active sharing arrangements will run the risk of being scrutinized by the Slovenian Competition Protection Agency. As already outlined in section a) lit. v, IRAC strongly recommends to establish close, institutionalized links to coordinate both Agencies in the field of active sharing. The starting point could be a joint Memorandum of Understanding, by which both authorities explain their competences in this area and their common understanding of the rules for active sharing agreements.

### *1.3 Reasoning supporting the proposed strategy for coverage conditions*

IRAC assumes that APEK intends to place special coverage conditions for broadband coverage on the newly available frequencies in the 800 MHz band, according to the Digital Agenda for Europe and the RSPD 2012. There are three underlying problems to be considered here. Firstly, APEK has to decide on the extent of these coverage conditions, with respect to population/habitation ("White Spots") coverage, service quality and roll-out speed. Secondly, APEK has to decide on the number of physical mobile infrastructures it wants to be deployed in these White Spots and thirdly, APEK has to consider competition issues related to these coverage obligations.

IRAC's proposed strategy is dealing with these problems in the following way.

In the first step, as suggested in section a, lit. i above, APEK shall determine on the basis of socio economic settlement statistics and information from fixed and mobile network operators those settlements, which are not covered with broadband services. Then it will have to take a decision on the coverage percentage of permanent habitations in these settlements. Permanent habitations should be defined as habitations, which could serve as a permanent seat, but may also be a weekend house or similar; garden sheds and similar habitations are to be excluded from these considerations. IRAC has suggested a coverage of >95% of permanent habitations in these White Spots and a service quality of 5mbit/sec indoor guaranteed. The final decision on coverage percentage and service quality should be taken on the basis of the simulation study suggested in section b, lit. iii. This simulation study should explore potential 4G coverage, under the assumption, that only existing sites are used. This study would help create a sound understanding of potential coverage and of additional infrastructure needed. Service quality should also be considered in this study, showing coverage and required new infrastructure in dependence from to the intended service quality. Fundamentally, IRAC suggests to base the simulations on 5mbit/sec download indoor coverage, to make sure that these potential users are receiving a satisfactory service quality. The roll-out speed will also depend on the outcome of the study. IRAC proposes that the roll-out speed dependent on the volume of required additional infrastructure. In case of little or no additional infrastructure in terms of new sites and backhaul, the shorter roll-out period.

With regard to the number of infrastructures to be deployed in White Spots, IRAC suggests in section b, lit ii to designate one block of 2x5 MHz of the 800 MHz band, which will carry the coverage obligation. All other 2x5 MHz blocks of the 800 MHz band shall not be burdened with coverage obligations with one notable exemption. In the case the operator acquiring the block, which carries the coverage obligation, buys a second block of 2x5 MHz of the 800 MHz spectrum, this additional block should be subject to the same coverage obligation as the designated block. This is not an overly burdensome obligation and has been previously implemented by the Austrian Regulatory Authority TKK/RTR. The competition problems are related to the coverage obligation itself and the fact that only one operator is expected to roll out 4G broadband services in the White Spots. APEK has to make sure that in the auction itself the block carrying the coverage obligation is in a different bidding category than all other blocks in the 800 MHz band. This will allow the potential bidders to "price in" the rollout costs into their bids for this block and thereby reducing the price of this block compared to all other blocks in the 800 MHz band. APEK has to make sure, that the way the coverage obligation is implemented, does not lead to a local monopoly in the White Spots. Therefore IRAC strongly recommends that wholesale bitstream access and/or RAN sharing with other operators restricted to the White Spots should be imposed as additional obligation.

## 2 Relation between reserved price and spectrum caps

### a. Spectrum Caps

IRAC recommends to set spectrum caps in a way, which allows all operators access to the core frequencies of the 800 MHz, 900 MHz, 1800 MHz bands, but still preserves competition for these frequencies. With regard to 2100 MHz FDD frequencies, IRAC proposes to restrict total holdings following the same principle. For 2100 MHz TDD, 2600 MHz FDD and 2600 TDD frequencies only very broad spectrum caps are recommended. The recommendations are in detail:

- i. 800 MHz: 2 blocks of 2x5 MHz
- ii. 800 MHz and 900 MHz taken together: 4 blocks of 2x5 MHz
- iii. 1800 MHz: 5 blocks of 2x5 MHz
- iv. 2100 MHz FDD: total holdings of maximum 4 blocks of 2x5 MHz
- v. Total cap on FDD spectrum of 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2600 MHz: 18 blocks of 2x5 MHz

### b. Reserve price

IRAC recommends to set reserve prices in all frequency bands based on a benchmark study, which investigates bidding behaviour of smaller operators. The findings have to be normalized for GDP/capita, population density and total population. The reasoning for this recommendation will be given below in section 1.3: Reasoning supporting IRAC's recommendations with regard to spectrum caps and reserve prices.

## Reasoning supporting IRAC's recommendations with regard to spectrum caps and reserve prices

Spectrum caps and reserve prices have a significant influence on the resulting allocation frequencies of a frequency auction. Their interdependence can be demonstrated by a

simple example. Without restrictions on generality, in this example we assume a single frequency band auction, with several bidders. The bidders differ in market share; in particular there is one very big bidder with a market share close to 50%, another big bidder with a market share of 30% and two smaller bidders with market shares around 10%. The two larger bidders enjoy a first mover advantage, which is known to be persistent in mobile market, which implies that latecomers have a permanent competitive disadvantage created by their late market entry. Each operator analyses its business case and calculates the present value of its expected net cash flows from buying 1, 2, 3 and more blocks of spectrum. One can expect, that the valuations of the bigger operators will be higher than those of the smaller operators, due to larger economies of scale and the first mover advantage, which reduces marketing expenses compared to new entrants or latecomers. It is also highly probable that the valuation of the bigger operators for the 4<sup>th</sup> or 5<sup>th</sup> block are still higher than the valuations of the smaller operators for the first or second block of the auctioned frequencies.

The strategic interaction of frequency caps and reserve prices can be shown the following simple "window" diagram:

*Diagram 1: Interaction between frequency caps and reserve prices*

	Tight frequency cap	Generous frequency cap
High reserve price	<b>C</b>	<b>D</b>
Low reserve price	<b>A</b>	<b>B</b>

This diagram displays 4 different combinations of reserve prices and frequency caps. The boundary between low and high reserve prices is defined as the lowest value of a frequency block attributed by any operator participating in the auction. Following the reasoning above, this lowest valuation would come from one of the smaller latecomers. The boundary between tight and generous frequency caps is defined by the potential



outcomes of the auction. If a frequency cap does not allow significant deviations from an *equal distribution of frequencies it is considered as a "tight" frequency cap. All frequency caps, which do allow significant deviations, are considered as "generous".*

In field A, there is a situation with low reserve price and tight frequency caps. This implies by definition of the boundary for reserve prices that at the beginning of the auction all operators will demand an amount of frequency blocks equal to the frequency caps. Excess demand will be equal to 4 (number of operators) times the frequency cap minus the total available amount of frequencies. Since the frequency cap is tight, there will only be limited excess demand. The auction will end, again by definition, when excess demand for frequency blocks has reached a value of zero, i.e. prices have risen to a level, where some of the operators have reduced their demand in accordance to their valuations. In the settings of this example, it will be the smaller latecomers, which will have reduced their demand, due to their generally lower evaluations. In effect, the auction will result in a frequency distribution, where the two bigger operators buy frequency blocks equal to the frequency cap. The smaller operator will receive a number of frequency blocks, which is equal to the total number of frequency blocks minus two times the frequency caps.

The situation of field B is similar to field A, with the notable change that frequency caps are more generous. This implies under the assumptions of the example, that excess demand at the start of the auction will be higher than in field A. Consequently, the auction will stop at higher prices for frequency blocks, implying that the latecomers will probably win fewer frequency blocks than in field A. Depending on individual valuations and the actual frequency caps one or both of the small latecomers might even be driven out of the market.

In field C the reserve price is higher than the minimum valuation of frequency blocks. Depending on the actual level of the reserve price the smaller operators will not be in the position to bid on the full number of blocks allowed by the frequency caps. *Consequently, the initial amount of excess demand will be lower than in A and could well be zero or even negative.* A reserve price, significantly higher than the valuations of the smaller operators (in extreme cases also higher than the valuations of the bigger operators) may lead to an auction result with higher inequalities in frequency allocations of the participating operators. The higher the reserve price the fewer frequency blocks will be bought by smaller operators. As a consequence, the risk of market exit is higher than in A.

Field D describes a situation with high reserve price and generous frequency caps. This situation combines the features of scenarios B and C. Smaller operators will not be able to compete for many frequency blocks and might be outbid by the bigger operators, which are not restricted by frequency caps.

This example shows that in a market situation –as in Slovenia - with two big and two smaller operators, differences in scale of operations and first mover advantages support either tight frequency caps and reserve prices lower than the expected lowest valuation of frequency blocks to ensure effective competition on the end user markets. This result is reflected in IRAC's recommendations in sections a) and b) of this chapter.

There might be the need to specify a lower reserve price for the designated block of 2x5 MHz of 800 MHz, which has to carry the coverage obligations specified above. The level

of this lower price will depend on the estimated rollout costs for the additional infrastructure needed to meet the coverage requirements and the estimated revenues in the White Spots.

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## 2. Competition effects of the proposed specifications of infrastructure sharing, coverage obligations, reserve prices and frequency caps

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There is general agreement among economists that effective competition creates an efficient resource allocation by eliminating inefficiencies in production and that effective competition promotes innovation and investment. On the other hand monopolies and practices restricting competition are seen as a source of inefficiency and slow economic progress.

Mobile communications technology shows significant economies of scale and scope, with the consequence that in almost all countries the number of mobile network operators is generally low, between two and five. In addition to the technological situation, there are other entry barriers as availability of suitable frequencies, restrictive usage conditions for frequencies, which make mobile communications markets non-contestable to a high degree. The low number of operators and the non-contestability carries the risk of anti-competitive practices and implicit collusion, both infringing competition law. Although economists do not agree at which number of operators the risk of moving from competition to some kind of collusion or even cartel is significantly increasing, there is no doubt that a situation of two operators will be highly conducive to collusive behaviour. In such a situation there is high transparency on the market, the joint profit maximum is definitely known by both operators, defecting from collusion is readily detectable and can be retaliated immediately. Therefore, setting the boundary conditions and the parameters of a multiband frequency auction is a delicate task and each decision has to be checked against its effects on competitive relations among the few competitors.

### 3.1 infrastructure sharing and coverage obligations

Infrastructure sharing promises significant cost reductions for mobile network operators. This would increase competitiveness of all participating operators and would offer end users better choice, higher quality and better value for their money, if competitive forces would make sure that these cost savings are handed over to the end user. Under competitive conditions these positive effects will happen beyond any doubt. But there are still serious concerns about the effects of closer network cooperation on the competitive relations. The increase of the degree of cooperation between network operators necessary to implement any type of network sharing is the source for significant risks for effective competition. Under network sharing, network operators have to establish permanent links on technical, operational and management levels to manage network sharing. These links get closer with increasing degrees of network sharing. To restrict contacts and topics to the necessary tasks of establishing and running shared equipment is a major problem. In practice network sharing may lead to permanent links not designated only for network sharing purposes. It is exactly these considerations which give rise to considerable doubts about competitive independency even if on the technical and network management level all prerequisites for competitive independency are given as required in IRAC's recommendations.

Coverage obligations beyond a commercially viable degree of coverage create additional capital and operative expenditure for operators. If these coverage obligations are equal

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for all operators, there are no relevant competition concerns. These concerns will arise, if they are asymmetrical, meaning that one group of operators have more burdensome obligations than other operators. This is the case in the suggested strategy for assignment of 800 MHz frequencies. In IRAC's suggestion only one block of 800 MHz frequencies will carry additional coverage obligations, which would put the respective operator at a disadvantage against other operators. Designating this frequency block as a separate category with a different price will counteract this potential disadvantage. This special arrangement will allow operators to price this block taking separate account of the coverage obligation.

## 2.2 Frequency caps and reserve price

As described in section 1.3 above, there are massive implications of frequency caps and reserve prices and their interactions on the outcome of a frequency auction. The resulting frequency distribution defines the competitive position of all participating mobile network operators. Mobile communication markets function as so-called asymmetric Bertrand oligopolies. The Bertrand model describes a market with only a small number of competitors, which compete for customers of a homogeneous, commoditized good/service. In such a market, the price is determined by the Long Run Average Costs of the operator with the least favourable cost situation. In mobile markets, which show significant economies of scale and scope, the smaller operators are normally the operators with the highest LRAC. This implies that in such a Bertrand oligopoly, where the market price is equal to their LRAC, they will be able to earn their capital cost but cannot make profits, whereas operators with a more favourable cost situation will earn profits. The cost situation of each operator depends ceteris paribus also on the frequencies available. This means bandwidth as well as frequency range. If an operator has not enough bandwidth, he has to roll out a denser network with a higher number of base stations and consequently incurring higher cost. The same is true for the availability of frequencies in different bands. The sub 1GHz band has propagation properties, which are very favourable for coverage and for deep in-house penetration. The frequency bands above 2GHz are particularly well suited for provision of local capacity, but not for provision of coverage. The 1800 MHz is some kind of hybrid, which could be used for both basic purposes – coverage and capacity – but still has some disadvantages for coverage. If an operator cannot command over a proper set of frequencies from all frequency ranges, he again will suffer from higher costs. If the auction rules are set in a way, which creates risks for certain operators to be able to compete for sufficient bandwidth in all relevant frequency ranges, exactly these cost disadvantages will hit those operators. In effect, they will be facing higher LRAC than other operators not only because they are small and cannot enjoy economies of scale and scope to a desirable extent, but also because their frequency endowment implies higher costs. The auction design has to take into account these considerations, in addition to the reasoning on the relation between frequency caps and reserve prices developed above. This string of reasoning came to the conclusion that reserve prices lower than the lowest valuation of frequency blocks and rather tight frequency caps would create a level playing field for all operators participating in the planned frequency auction. Having established, that the combination of rather low reserve prices and tight frequency caps would lead to a balanced frequency distribution, one can finally conclude that cost differences deriving from size effects and first mover effects – at least in the longer run – will not be exacerbated by unbalanced frequency assignments.

### 3. IRAC's role in the process of preparing and executing the planned multi-frequency auction

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The general setup of the project and its timetable, with an internal team of APEK and several external, specialized consultants for the preparation of the auction and other tasks as studies on reserve prices and questions related to coverage obligations for 800 MHz operators puts significant pressure on the project team and requires substantial support for the internal team leader in all organizational issues and in the different subject matters. In particular,

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- Important decisions on the major parameters of the auction as: coverage obligations, network cooperation, auction design, including the basic design, frequency caps, reserve prices et.al;
- the "Information Memorandum", which will contain all relevant information for potential bidders, is the first major part of the project, where external support is necessary to create a consistent and comprehensive document, which should be stable in any respect and should not undergo significant changes in the course of consultation;
- the "hot" phase of preparing the auction, training sessions, mock auctions with operators etc;
- the auction itself and
- the post auction procedures

will require intensive discussions inside the APEK team and between external consultants, operators and the team, coordination efforts and last but not least broad competences and experience on the side of the project leader and the members of the project team.

This is the point, where IRAC is offering its consulting services. IRAC's Senior Consultant Prof. Dr. Heinrich Otruba has vast experience with large projects and with frequency auctions both nationally and internationally. His experience and his deep knowledge of the economic and legal aspects of regulation in general and frequency auctions in particular, paired with 35 years of research and teaching experience, as well as 15 years of experience as the President of the Wirtschaftsuniversität Wien, the Head of the Austrian National Telecoms Regulatory Authority (RTR) and the Secretary General of the ERG (now BEREC) is a perfect match with the support required by APEK's team leader. He will act as a resource person in subject matters, will take responsibilities for the content of the major official documents, will support the team leader in all subject and organizational matters and he is prepared to support the Director of APEK in his decision making and communication tasks as far as possible.

As a final note, IRAC believes, that a presence of 60 days at APEK during the whole process will not be sufficient to meet all requirements specified by this tender. IRAC suggests to provide for an increase by 10 to 15 additional days of presence at APEK.



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