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## **RWANDA – CUTTING-EDGE VAT COMPLIANCE**

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## RWANDA – CUTTING-EDGE VAT COMPLIANCE

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On August 26, 2013 the Ministerial Order on Modalities of Use of Certified Electronic Billing Machine, No. 002/23/10TC of 31/07/2013, was published in the Official Gazette of Rwanda.<sup>3</sup> This Order has set loose a technology revolution in VAT compliance that promises business efficiencies, and revenue enhancements that are only imagined in more developed countries.

To open the door to technology Rwanda has taken the traditional digital invoice security model,<sup>4</sup> and connected it to a central security portal at the Rwanda Revenue Authority (RRA).<sup>5</sup> Rwanda will now be able to securely monitor transactions in close to real-time (oversight is on-demand). It will be able to perform far more effective on-site audits, and will have the ability to supplement these audits with remote audit capability. Essentially, the RRA will be able to oversee an entire certified commercial chain from their offices in Kigali.<sup>6</sup>

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<sup>3</sup> The mandate for Electronic Billing Machines derives from Article 24 of the VAT law published in the Official Gazette of 05/02/2013 as Law No. 37/2012 OF 09/11/2012.

Value added tax registered persons are obligated to use a certified billing machine that generates invoices indicating the tax as agreed by the tax administration.

The VAT rate is 18%. There are over 7,000 VAT-registered taxpayers in the country

<sup>4</sup> The traditional model is in use in Quebec, Sweden, Greece, Italy, Tanzania, Kenya, and Ethiopia for example. It is currently being adopted in Belgium. See: Richard T. Ainsworth, *Digital Invoicing in the EU and Brazil*, 12 CCH GLOBAL TAX WEEKLY – A CLOSER LOOK 20 (January 31, 2013); Richard T. Ainsworth, *German VAT Compliance - Moving One Step Closer to Automated Third-Party Solutions*, 64 TAX NOTES INT'L 497 (November 14, 2011); Richard T. Ainsworth & Urs Hengartner, *Quebec's Module d'Enregistrement des Ventes (MEV: Fighting the Zapper, Phantomware and Tax Fraud with Technology)*, 57 CANADIAN TAX JOURNAL 715 (2009) Richard T. Ainsworth, *Zappers: Technology-assisted Tax Fraud, the SSUTA, and Encryption Solutions*, 61 THE TAX LAWYER – STATE AND LOCAL EDITION 1075 (2008).

<sup>5</sup> The only jurisdiction that does something similar is Croatia, which is centrally processing all invoices (digitally secure, encrypted, signed documents) in the economy in real-time. The first numbers came in January 2013, and they summarized the transactions from January 1 through January 9. According to the Croatian Tax Authority, up until 10 am on January 9<sup>th</sup> the servers received 27,555,206 invoices from 12,739 taxpayers in the first phase of implementation. *Fiskalne blagajne: U ovom gradu zabilježeno je najviše prekršaja (Fiscal coffers: In this city, there were the most violations)* POSLOVNI DNEVNIK (September 1, 2013) available at:

[http://translate.google.com/translate?sl=hr&tl=en&js=n&prev=\\_t&hl=en&ie=UTF-8&u=http%3A%2F%2Fwww.poslovnih.hr%2Fhrvatska%2Ffiskalne-blagajne-u-ovom-gradu-zabiljezeno-je-najvise-prekršaja-226753](http://translate.google.com/translate?sl=hr&tl=en&js=n&prev=_t&hl=en&ie=UTF-8&u=http%3A%2F%2Fwww.poslovnih.hr%2Fhrvatska%2Ffiskalne-blagajne-u-ovom-gradu-zabiljezeno-je-najvise-prekršaja-226753) (Croatian, translated by Google).

<sup>6</sup> Kigali is Rwanda's capital. The head office of the RRA is located in this city of 1 million, Rwanda's largest.

The RRA will be one of the few tax administrations in the world to have the ability to identify corrupted devices within 24 hours, remotely abolish the certification, and terminate the ability to issue valid receipts.<sup>7</sup> Effectively, Rwanda will be able to stop VAT frauds as they happen, or at least as soon as the RRA becomes aware of them.<sup>8</sup>

Rwandan legislation requires all VAT registered taxpayers to have a certified electronic billing machine (EBM).<sup>9</sup> An EBM has two components

- (a) a Sales Data Controller (SDC) and
- (b) a Certified Invoicing System (CIS).

The SDC is the data storage part of the EBM. It may be an external module. It may be embedded in another machine, like an electronic cash register. Or, it may be manufactured together with the CIS as a single unit. The CIS by itself is any cash register, point of sale system, or similar business machine that prints receipts or invoices and functions as an analytical sales device and stock control system.

The SDC records every transaction received from the CIS, and ensures that an electronic signature is provided for each physical and digital receipt or invoice. Every transaction is required to have a receipt/invoice. After it is “digitally signed” the SDC stores all data internally, and will transmit the data on demand or on a regular schedule into the RRA’s database.<sup>10</sup> The Technical Specification for CIS/SDC set out the manufacturing requirements and allows a brief sketch of the intended operation.

## **1. Manufacturer must comply with statutory requirements of manufacture.<sup>11</sup>**

- a. Real-time time clock is installed and set at the factory,<sup>12</sup>

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<sup>7</sup> There are three mechanisms Rwanda can use in this regard. Essentially the RRA can deactivate any SDC in the country. This will prevent a business from issuing a valid receipt in a B2B transaction. In a B2C context this would amount to revocation of the business license. The three mechanisms are:

- Publicly announce the revocation of a certificate to a version of the SDC (to remove an entire class of devices from the market). See: [http://www.rra.gov.rw/rra\\_article1038.html](http://www.rra.gov.rw/rra_article1038.html)
- Personally notify an individual taxpayer by telephone, e-mail or certified letter that the RRA has concerns and will deactivate the SDC from the system if concerns are not resolved.
- In severe cases the RRA could seize the devices immediately, and follow-up with investigative audit personnel.

<sup>8</sup> The huge fraud carousels in the EU, many times orchestrated by organized crime known by the acronyms MTIC and MTEC could be shut down quickly. These frauds cost the EU an estimated €100 billion a year. A similar proposal for the EU can be found here: Richard T. Ainsworth, *Stopping EU VAT Fraud with a Third Invoicing Directive*, 71 TAX NOTES INT’L. 545 (August 5, 2013).

<sup>9</sup> Currently there are many businesses that are suspected of not registering when they should be registered. The threshold for registration is 20,000,000 RFW in annual turnover. It is expected that many of these businesses will be required to install an EBM to prove that they are under the registration threshold. The RRA has the authority to do this under Article 3, paragraph 2 of the Ministerial Order.

<sup>10</sup> Consumers and businesses both benefit from this system as a digital record of all transactions are preserved in the RRA data-base and can be accessed in cases where there are commercial disputes.

<sup>11</sup> In most cases the manufacturer will not be a Rwandan business. These rules can only be enforced after importation. However, to be able to sell their equipment in Rwanda manufacturers will be compliant.

<sup>12</sup> The clock is the anchor of the security system. It is installed at the factory and is required to be tamper-proof. An accurate and dependable clock is critical for auditing. Adjustment of the real-time clock accuracy is permitted via NTP server.

- b. Unique serial number (ID) is created and saved to the device during production
  - i. The ID number is (SDC number) + (manufacturer's certification number) + (serial number)
  - ii. A label is fixed to the outside of the device indicating:
    - 1. Manufacturer's name and model
    - 2. Serial number of the device
    - 3. Software version used
    - 4. Hardware version used
    - 5. Certificate designation for the device
- c. Manufacturer reports to the RRA for each device shipped to a Rwandan destination – the report notes the estimated delivery date, the TIN of the buyer, and the SDC ID.<sup>13</sup>
  - i. RRA will record all devices destined for Rwanda in the central data-base.
  - ii. When delivery is made in Rwanda a record is preserved in the RRA data-base.

**2. Buyer re-sells SDC to a Rwandan taxpayer/End-user.**

- a. Taxpayer/End-user submits a form to the RRA requesting SDC activation.<sup>14</sup>
- b. RRA will confirm:
  - i. SDC has configurable setting for remote audit
  - ii. SDC provides the RRA with the means to configure security settings and encryption keys for the generation of a receipt/invoice signature.
  - iii. RRA encryption keys are stored in the SDC (making the risk of being compromised low)
  - iv. Secure storage within the SDC memory is at a location where encryption keys cannot be modified or read by any means.
- c. SDC is personalized and configured.
  - i. *Personalization* means the user's name and TIN are permanently stored in the SDC
  - ii. *Configuration* means the programming parameters are set for accessing the RRA server and programming of the security key is completed.
- d. The TIN and SDC ID must be confirmed as accurate before the RRA activates the SDC. After activation the SDC is registered in the RRA database.

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<sup>13</sup> The RRA takes control of all SDCs entering the jurisdiction. Thus in instances where a single manufacturer sells to different buyer/re-sellers in Rwanda the RRA will be able to track the devices from the factory through the wholesaler, and on to the taxpayer who will use it.

<sup>14</sup> This step is critical. It is the end user, not the wholesaler, and not the manufacturer that requests activation. The RRA collects data about the exact location and the specific end user, and associates this data with the specific machines in use.

### 3. Taxpayer connects SDC to a Certified Invoicing System (CIS)

- a. Some CIS systems will come already connected to a SDC as a certified electronic business machine (EBM),
- b. Other establishments may already have had an invoicing system – in this case the taxpayer must make sure that the invoicing system is compliant (certified), and then connect it to the SDC.
- c. RRA Auditors can perform on-site audits using certified receipts/invoices
  - i. SDC generates signature data in two parts:
    1. *Internal data* (encrypted data) showing:
      - a. Total sale VAT amount
      - b. Total return VAT amount
      - c. Total number of Z reports generated by SDC up to the current receipt/invoice
    2. *Receipt signature* that verifies data integrity and authenticity.
  - ii. Only the RRA Auditor is able to decrypt data, verify integrity and authenticity. Verification of integrity is also available to public via RRA website (<http://ebm.rra.gov.rw/backoffice/Verifier>).
- d. RRA can now perform remote audits by requiring the SDC to select data from the internal memory and transmit it on demand to the RRA.<sup>15</sup>
  - i. SDCs are required to be constructed so that normal operations and RRA transmissions can occur simultaneously,
  - ii. SDC will copy all internal data in encrypted form to a Secure Digital (SD) card when RRA auditor performs local audit.
  - iii. Status data is always created – SDC software version used, SDC hardware version used, last remote audit date and time, last local audit data and time, as well as the last command.

What makes Rwanda so interesting from a tax compliance perspective is that it is very clear that the government has moved beyond focusing on “the device” and has instead begun thinking about security in terms of programming functionality and operation of the device. Because any device that passes certification review is acceptable to the RRA, the Rwandan system is one step away from a *virtual* system. In principle it should not matter to the RRA the name, shape or size of the SDC. The device is just the container for collecting the data the RRA wants.

Rwanda’s SDC is at the other end of the spectrum from Quebec’s MEV, which is a device designed and built to government specifications. Quebec requires the MEV to be purchased by each restaurant in the province. However, as technology advances the MEV remains rooted in the past (unless, of course, Quebec decides to re-design the MEV).

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<sup>15</sup> Each morning on activation the SDC will communicate with the RRA data-base. Essentially it is a good-morning wake-up call. The SDC identifies itself and tells the RRA that it is working and in full operating condition.

Rwanda instead, lets the *market* determine the kind of device used. The Rwandan concern is with results, not the method used to achieve those results. Like Croatia, Rwanda could soon accept a fully digital solution, if the marketplace offers the same degree of security as is found in the physical EBMs of today.<sup>16</sup>

What the future holds in this area of security and tax compliance is not entirely clear, but what does seem clear is that Rwanda will be at the forefront. When the electronic cash register is quickly being replaced by iPhones and iPads, it is not a large step imagine that the SDC will simply be an embedded functionality of firmware in these devices. Much of what the RRA looks for in its certification process could simply be downloaded apps from iTunes.

Rwanda is simply looking for reliable documentation of transactions. It is not concerned with how it gets it, just that it is accurate, complete, available on-demand, and highly secure.

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<sup>16</sup> See: Richard T. Ainsworth & Goran Todorov, *VAT – East African Community: the Tradable Services Problem - World-class Solution*, (August 15, 2013) at 31, Boston Univ. School of Law, Law and Economics Research Paper No. 13-38. Available at SSRN: <http://ssrn.com/abstract=2310659> or <http://dx.doi.org/10.2139/ssrn.2310659> (indicating that the RRA is currently testing an online invoicing system, which will provide option for taxpayer's to be compliant without the need of any specialized devices).